

1 Q. Please provide a complete copy of the contract to purchase and supply the 100 MW  
2 combustion turbine.

3

4

5 A. Please see GT-DD-NLH-001 Attachment 1.

Vendor's Fax No. 713-413-3600

**ACKNOWLEDGEMENT COPY**

May 16, 2014

ProEnergy Services, LLC  
2001 ProEnergy Blvd.  
Sedalia, MO, 65301  
U.S.A.

Dear Sirs:

**Re: 2014-57952: Engineering Procurement and Construction for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station.**

Your tender dated April 21, 2014 in the total amount of **\$ 99,827,669.00 (Canadian Funds)** for the above has been accepted and you are awarded this contract.

This contract is being awarded in three parts:

1. Consolidation Agreement to PROENERGY SERVICES ENERGY PARTS SOLUTIONS, LLC, a company organized under the laws of the State of Missouri, United States, and having its head office at 2001 ProEnergy Blvd., Sedalia, Missouri 65301 USA. This contract has no contract total, and ties the two contracts above into one
2. Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxiliary Equipment for the Holyrood Terminal PROENERGY SERVICES ENERGY PARTS SOLUTIONS, LLC, a company organized under the laws of the State of Missouri, United States, and having its head office at 2001 ProEnergy Blvd., Sedalia, Missouri 65301 USA. This contract covers **\$54,739,757.00 (\$CAN)** portion of the contract total.
3. Engineering On-site Procurement and Construction Services for a 100 MW (Nominal) Combustion Generator at the Holyrood Thermal Generating Station to ProEnergy Global Solutions Canada Limited, 1000-840 Howe St., Vancouver, B.C., Canada V6Z 2M1 This contract covers **\$ 45,087,912.00 (\$CAN)** portion of the contract total.

Within the time restraints and terms of the contracts above and prior to mobilization of the work, please forward to the undersigned the following documents:

1. Where applicable per the terms of the contracts above, proof of Insurance coverage as per Article SC 6 - Insurance – Special Conditions, as evidenced by completion of the attached Certificate of Insurance, duly

*June 4/14 Replaced  
Consolidation agreement to  
the signing page with email  
from S. D. Echall dated May 29/14  
12:22 p.m.*

signed by an Officer or Authorized Representative of the Insurer. Required coverages are indicated by (X) mark, which include:

- a. **Commercial General Liability Insurance** of not less than \$1,000,000.00 per occurrence to cover bodily injury, death and/or property damage, including Newfoundland & Labrador Hydro as an Additional Insured and cross liability. Coverage is also required for Fire Fighting Expense.
- b. **Automobile Liability Insurance** to a minimum limit of \$1,000,000.00 for any one occurrence including personal injury, death and/or property damage or loss.
- c. **All Risk Direct Damage Insurance** in an amount not less than the sum of the amount of the Tender based on estimated quantities.
- d. **Environmental Impairment Liability Insurance** for not less than \$1,000,000.00 for any one occurrence.
- e. **Professional Error and Omission Liability Insurance** in the amount not less than \$5,000,000.00 and shall ensure that each consultant who has a professional liability exposure and who is engaged by the Contractor in the performance of the SERVICES is covered against professional errors and omissions in an amount not less than five million.

All insurances shall be maintained in full force during the performance of the work.

**Nalcor Energy has no liability and no coverage under its insurance for contractor's equipment used in carrying out the work.**

2. A letter evidencing the Tenderer's good standing with the Workplace Health, Safety and Compensation Commission.
3. A Certificate of Recognition from the Newfoundland and Labrador Construction Safety Association or similar accreditation / safety program acceptable to Purchaser.
4. A 50% Performance Bond and a 50% Labour & Materials Bond assuring completion of the work under the contract, or such other security as outlined in Article IT 22 - Performance Security of – Instruction and Information to Tenderers. **Bonds must be submitted on forms provided in tender document, and must be signed and witnessed where indicated.**
5. Proof of completion, by Tenderer's Supervisors and Managers, of the Environmental Awareness Program of the Newfoundland and Labrador Construction Safety Association or a similar program acceptable to Owner

We enclose two (2) copies of the contracts relative to the above, and request that both copies be signed by the appropriate signing officials of your companies with your corporate seal affixed. Both sets of documents should be promptly returned for execution by the Corporation. In turn one original document will be returned to you for your records.

Your contracts will be in the form of a Blanket Orders, which will be forwarded to you once the required documents are received.

Please sign the acknowledgement copy of this letter and return it to the undersigned along with the requested documentation at your earliest opportunity.

Regards,

Theresa Barnes

Theresa Barnes, Buyer  
Supply Chain Management  
Newfoundland and Labrador Hydro  
A Nalcor Energy Company

/tab

cc: T. Collins  
J. Maclsacc  
S. Parsons  
T. Newhook

ACKNOWLEDGED BY: Jeff Blum

ON BEHALF: Pro Energy Services  
(company)

DATE: 5/16/14

### CERTIFICATE OF INSURANCE

DELIVER TO NEWFOUNDLAND & LABRADOR HYDRO SUPPLY CHAIN, 500 COLUMBUS DRIVE, OR MAIL TO ABOVE ADDRESS

DESCRIPTION & LOCATION OF WORK: ENGINEERING ON-SITE PROCUREMENT & CONSTRUCTION SERVICES FORR A 100MW (NOMINAL) COMBUSTION GENERATOR AT THE HOLYROOD THERMAL GENERATING STATION (ONSHORE)

CONTRACT NO. 2014-5952      AWARD DATE: May 16, 2014      VALUE (incl. OWNER-FURNISHED MATERIALS)

**INSURER**

NAME: PROENERGY GLOBAL SOLUTIONS CANADA LTD

ADDRESS:

**BROKER**

NAME:

ADDRESS:

**INSURED**

CONTRACTOR'S NAME:

ADDRESS:

**ADDITIONAL INSURED** (Excluding Automobile Liability Policy)

Newfoundland and Labrador Hydro

THIS DOCUMENT CERTIFIES THAT THE FOLLOWING POLICIES OF INSURANCE AND INDICATED COVERAGES ARE AT PRESENT IN FORCE SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS AS CONTAINED THEREIN COVERING THE OPERATIONS OF THE INSURED IN CONNECTION WITH THE ABOVE NOTED CONTRACT MADE BETWEEN THE NAMED INSURED AND NEWFOUNDLAND & LABRADOR HYDRO.

POLICY TYPE	NUMBER	INCEPTION DATE	EXPIRY DATE (Y/M/D)	LIMITS OF LIABILITY
1. <input checked="" type="checkbox"/> Commercial General Liability <b>OR</b> <input type="checkbox"/> Wrap-up Liability  Including where indicated: <input type="checkbox"/> Blasting <input type="checkbox"/> Pile Driving or Caisson Work <input type="checkbox"/> Removal or Weakening of Support <input type="checkbox"/> Environmental Impairment <input type="checkbox"/> Forest Fire Fighting Expense (min. \$250,000) <input type="checkbox"/> Hook/Hoist/Rigging (min. \$        )				MINIMUM \$1,000,000.00
2. <input type="checkbox"/> Builders' Risk "Broad Form" <b>OR</b> <input type="checkbox"/> Installation Floater "Broad Form" <b>OR</b> <input type="checkbox"/> Piers, Wharves & Docks Rider				\$100% OF VALUE
3. <input checked="" type="checkbox"/> Automobile Liability Insurance				MINIMUM \$1,000,000.00
4. <input type="checkbox"/> Aircraft and/or Watercraft Liability Insurance (If Applicable)				MINIMUM \$1,000,000.00

THE INSURER AGREES TO NOTIFY NEWFOUNDLAND & LABRADOR HYDRO, IN WRITING, THIRTY (30) DAYS PRIOR TO CANCELLATION OR MATERIAL CHANGE OF ANY POLICY, EXCEPT IN THE EVENT OF NON-PAYMENT WHERE POLICY CONDITIONS DEALING WITH TERMINATION WILL APPLY.

NAME (print):	SIGNATURE:	DATE
INSURER'S OFFICER OR AUTHORIZED REPRESENTATIVE		TEL. NO.

ISSUANCE OF THIS CERTIFICATE SHALL NOT LIMIT OR RESTRICT THE RIGHT OF NEWFOUNDLAND & LABRADOR HYDRO TO REQUEST AT ANY TIME DUPLICATE CERTIFIED COPIES OF SAID INSURANCE POLICIES.

**CERTIFICATE OF INSURANCE**

DELIVER TO NEWFOUNDLAND & LABRADOR HYDRO SUPPLY CHAIN, 500 COLUMBUS DRIVE, OR MAIL TO ABOVE ADDRESS

DESCRIPTION & LOCATION OF WORK: PROCUREMENT FOR A 100MW (NOMINAL) COMBUSTION TURBINE GENERATOR & AUXILIARY EQUIPMENT AT THE HOLYROOD THERMAL GENERATING STATION (OFFSHORE)

CONTRACT NO. 2014-5952      AWARD DATE: May 16, 2014      VALUE (incl. OWNER-FURNISHED MATERIALS)

**INSURER**

NAME: PROENERGY SERVICES ENERGY PARTS SOLUTIONS

ADDRESS:

**BROKER**

NAME:

ADDRESS:

**INSURED**

CONTRACTOR'S NAME:

ADDRESS:

**ADDITIONAL INSURED (Excluding Automobile Liability Policy)**

Newfoundland and Labrador Hydro

THIS DOCUMENT CERTIFIES THAT THE FOLLOWING POLICIES OF INSURANCE AND INDICATED COVERAGES ARE AT PRESENT IN FORCE SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS AS CONTAINED THEREIN COVERING THE OPERATIONS OF THE INSURED IN CONNECTION WITH THE ABOVE NOTED CONTRACT MADE BETWEEN THE NAMED INSURED AND NEWFOUNDLAND & LABRADOR HYDRO.

POLICY TYPE	NUMBER	INCEPTION DATE	EXPIRY DATE (Y/M/D)	LIMITS OF LIABILITY
1. <input checked="" type="checkbox"/> Commercial General Liability <b>OR</b> <input type="checkbox"/> Wrap-up Liability  Including where indicated: <input type="checkbox"/> Blasting <input type="checkbox"/> Pile Driving or Caisson Work <input type="checkbox"/> Removal or Weakening of Support <input type="checkbox"/> Environmental Impairment <input type="checkbox"/> Forest Fire Fighting Expense (min. \$250,000) <input type="checkbox"/> Hook/Hoist/Rigging (min. \$         )				MINIMUM \$1,000,000.00
2. <input type="checkbox"/> Builders' Risk "Broad Form" <b>OR</b> <input type="checkbox"/> Installation Floater "Broad Form" <b>OR</b> <input type="checkbox"/> Piers, Wharves & Docks Rider				\$100% OF VALUE
3. <input checked="" type="checkbox"/> Automobile Liability Insurance				MINIMUM \$1,000,000.00
4. <input type="checkbox"/> Aircraft and/or Watercraft Liability Insurance (If Applicable)				MINIMUM \$1,000,000.00

THE INSURER AGREES TO NOTIFY NEWFOUNDLAND & LABRADOR HYDRO, IN WRITING, THIRTY (30) DAYS PRIOR TO CANCELLATION OR MATERIAL CHANGE OF ANY POLICY, EXCEPT IN THE EVENT OF NON-PAYMENT WHERE POLICY CONDITIONS DEALING WITH TERMINATION WILL APPLY.

NAME (print):	SIGNATURE:	DATE
INSURER'S OFFICER OR AUTHORIZED REPRESENTATIVE		TEL. NO.

ISSUANCE OF THIS CERTIFICATE SHALL NOT LIMIT OR RESTRICT THE RIGHT OF NEWFOUNDLAND & LABRADOR HYDRO TO REQUEST AT ANY TIME DUPLICATE CERTIFIED COPIES OF SAID INSURANCE POLICIES.

To Signatures  
page.

**CONSOLIDATION AGREEMENT**

**THIS CONSOLIDATION AGREEMENT** (*Agreement*) is dated May 16, 2014,

**BETWEEN:**

(1) **NEWFOUNDLAND AND LABRADOR HYDRO**, a corporation constituted by statute and an agent of Her Majesty the Queen in right of the Province of Newfoundland and Labrador, Canada, and having its head office at Hydro Place, St. John's, in the said Province (*Owner*), on the one part;

**And**

(2) **PROENERGY SERVICES, LLC**, a company organized under the laws of the State of Missouri, United States, and having its head office at 2001 ProEnergy Blvd., Sedalia, Missouri 65301 USA (*Supplier*);

(3) **PROENERGY GLOBAL SOLUTIONS CANADA LIMITED**, a company organized under the laws of the Province of British Columbia, Canada, and having its registered office at 1000-840 Howe Street, Vancouver, BC V6Z 2M1a (*Installation Contractor*), collectively *Supplier* and *Installation Contractor* on the other part.

**WHEREAS:**

**PRELIMINARY STATEMENTS**

(A) *Owner* desires to engage, on a fixed-price, turnkey basis, an experienced and reputable general contractor to perform obligations with respect to the design, engineering, procurement, construction, commissioning and start-up of its 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station.

(B) *Supplier* and *Installation Contractor* have significant expertise in the design, engineering, procurement, construction, commissioning, testing and start-up of power generation facilities and, subject to the terms and conditions of this Agreement, shall, either by themselves or through subcontractors, provide design, engineering, procurement, construction, commissioning and start-up services, as further specified herein, on a stipulated, fixed-price basis.

(D) *Supplier* and *Installation Contractor* shall complete the Project Works in accordance with the terms and conditions contained in the Turnkey Documents.

(E) As of the date hereof, *Installation Contractor* is entering into the Installation Contract with *Owner* and *Supplier* is entering into the Supply Contract with *Owner*.

**NOW THEREFORE**, in consideration of the mutual promises set forth herein, *Owner*, *Supplier* and *Installation Contractor* agree as follows:

**ARTICLE 1 - DEFINITIONS**

**1.1 Definitions**

Capitalized terms used herein shall have the meanings set forth below:

**CERTIFICATE OF INSURANCE**

DELIVER TO NEWFOUNDLAND & LABRADOR HYDRO SUPPLY CHAIN, 500 COLUMBUS DRIVE, OR MAIL TO ABOVE ADDRESS

DESCRIPTION & LOCATION OF WORK: PROCUREMENT FOR A 100MW (NOMINAL) COMBUSTION TURBINE GENERATOR & AUXILIARY EQUIPMENT AT THE HOLYROOD THERMAL GENERATING STATION (OFFSHORE)

CONTRACT NO. 2014-5952      AWARD DATE: May 16, 2014      VALUE (incl. OWNER-FURNISHED MATERIALS)

**INSURER**  
 NAME: PROENERGY SERVICES ENERGY PARTS SOLUTIONS  
 ADDRESS:

**BROKER**  
 NAME:  
 ADDRESS:

**INSURED**  
 CONTRACTOR'S NAME:  
 ADDRESS:

**ADDITIONAL INSURED (Excluding Automobile Liability Policy)**  
 Newfoundland and Labrador Hydro

THIS DOCUMENT CERTIFIES THAT THE FOLLOWING POLICIES OF INSURANCE AND INDICATED COVERAGES ARE AT PRESENT IN FORCE SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS AS CONTAINED THEREIN COVERING THE OPERATIONS OF THE INSURED IN CONNECTION WITH THE ABOVE NOTED CONTRACT MADE BETWEEN THE NAMED INSURED AND NEWFOUNDLAND & LABRADOR HYDRO.

POLICY TYPE	NUMBER	INCEPTION DATE	EXPIRY DATE (Y/M/D)	LIMITS OF LIABILITY
1. <input checked="" type="checkbox"/> Commercial General Liability OR <input type="checkbox"/> Wrap-up Liability Including where indicated: <input type="checkbox"/> Blasting <input type="checkbox"/> Pile Driving or Caisson Work <input type="checkbox"/> Removal or Weakening of Support <input type="checkbox"/> Environmental Impairment <input type="checkbox"/> Forest Fire Fighting Expense (min. \$250,000) <input type="checkbox"/> Hook/Hoist/Rigging (min. \$        )				MINIMUM \$1,000,000.00
2. <input type="checkbox"/> Builders' Risk "Broad Form"      OR <input type="checkbox"/> Installation Floater "Broad Form"      OR <input type="checkbox"/> Piers, Wharves & Docks Rider				\$100% OF VALUE
3. <input checked="" type="checkbox"/> Automobile Liability Insurance				MINIMUM \$1,000,000.00
4. <input type="checkbox"/> Aircraft and/or Watercraft Liability Insurance (if Applicable)				MINIMUM \$1,000,000.00

THE INSURER AGREES TO NOTIFY NEWFOUNDLAND & LABRADOR HYDRO, IN WRITING, THIRTY (30) DAYS PRIOR TO CANCELLATION OR MATERIAL CHANGE OF ANY POLICY, EXCEPT IN THE EVENT OF NON-PAYMENT WHERE POLICY CONDITIONS DEALING WITH TERMINATION WILL APPLY.

NAME (print):	SIGNATURE:	DATE
INSURER'S OFFICER OR AUTHORIZED REPRESENTATIVE		TEL. NO.

ISSUANCE OF THIS CERTIFICATE SHALL NOT LIMIT OR RESTRICT THE RIGHT OF NEWFOUNDLAND & LABRADOR HYDRO TO REQUEST AT ANY TIME DUPLICATE CERTIFIED COPIES OF SAID INSURANCE POLICIES.

**Aggregate Limit** shall have the meaning set forth in Section 7.1.

**Agreement** shall mean this Consolidation Agreement including Exhibit A hereto, the Tender and Bid Submission, as the same may be amended, modified or supplemented from time to time in accordance with the provisions of this Agreement.

**Change** shall have the meanings set forth in the Installation Contract and the Supply Contract.

**Change Order** shall have the meanings set forth in the Installation Contract and the Supply Contract.

**Combined Contract Price** shall mean the sum of the Supply Contract Price and the Installation Contract Price.

**Contract** shall mean the Supply Contract and the Installation Contract, as applicable.

**Contract Price** shall mean the Supply Contract Price or Installation Contract Price, as the context requires.

**Contract Works** shall mean the Supply Contract Works or Installation Contract Works, as the context requires.

**Contractor** shall mean Supplier or Installation Contractor, as the context requires.

**Contractors** shall mean together Supplier and Installation Contractor.

**Contracts** shall mean together the Supply Contract and the Installation Contract.

**Dispute** shall mean any dispute between or among the Parties concerning one or more of the Turnkey Documents.

**Facility** shall have the meaning set forth in the Preliminary Statements.

**Force Majeure** shall have the meaning set forth in the Contracts.

**Goods** shall mean the equipment, goods, parts, and materials to be supplied by Contractors under the Contracts.

**Installation Contract** shall mean the Installation Contract dated as of the date hereof, by and between Owner and Installation Contractor, as the same may be amended, modified or supplemented from time to time in accordance with its terms.

**Installation Contract Price** shall have the meaning set forth in the Installation Contract.

**Installation Contract Works** shall mean the Work (as defined in the Installation Contract) and all other obligations to be performed by Installation Contractor pursuant to the Installation Contract.

**Installation Contractor** shall have the meaning set forth in the preamble to this Agreement.

**Parties** shall mean Owner, Supplier and Installation Contractor.

**Party** shall mean Owner or Supplier or Installation Contractor, as the context requires.

**Project Schedule** shall have the meaning set forth in the Installation Contract.

**Project Works** shall mean the Installation Contract Works and Supply Contract Works.

**Supply Contract** shall mean the Supply Contract dated as of the date hereof, by and between Owner and Supplier, as the same may be amended, modified or supplemented from time to time in accordance with its terms.

**Supply Contract Price** shall have the meaning set forth in the Supply Contract.

**Supply Contract Works** shall mean the Work (as defined in the Supply Contract) and all other obligations to be performed by Supplier pursuant to the Supply Contract.

**Turnkey Documents** shall mean collectively this Agreement, the Contracts, including Exhibit A hereto, the Tender and Bid Submission, and, when delivered, all documents (after approval or agreement in respect thereof in accordance with this Agreement and the Contracts) to be delivered on or after the date hereof, in accordance with this Agreement and the Contracts and all amendments made thereto in accordance with their terms.

## 1.2 Rules of Interpretation

The following principles shall be observed in the interpretation and construction of this Agreement:

- (a) references to the singular include the plural and vice versa, and references to one gender include the other gender;
- (b) references to the Preamble, Preliminary Statements, Articles, Sections and Exhibits are, unless the context indicates otherwise, references to the Preamble, Preliminary Statements, Articles, Sections and Exhibits of this Agreement;
- (c) in carrying out its rights, obligations and duties under this Agreement, each Party shall have an obligation of good faith;
- (d) unless otherwise stated or unless the context indicates otherwise, the terms *include* and *including* shall be interpreted to mean *including without limitation*, and the word *or* does not imply exclusivity;
- (e) references to any statute or statutory provision shall include any statute or statutory provision which amends or replaces or has amended or replaced it and shall include any subordinate legislation made under any such statute;
- (f) references to any Party shall include its permitted successors and assigns; and
- (g) definitions used in either Contract shall apply to capitalized terms used in the other Contract and this Agreement unless otherwise specifically provided herein.

## **ARTICLE 2 - PROJECT WORKS AND COMBINED CONTRACT PRICE**

### **2.1 Scope of Work**

The scope of work (*Project Works*) means all works of design, supply, procurement, engineering, services, equipment, materials, construction, plant and civil works necessary to design, engineer, procure, construct, commission, start-up, test and complete the Facility in compliance with (a) the Turnkey Documents.

### **2.2 Supply Contract Price**

Supplier will execute and complete the Supply Contract Works in accordance with the Turnkey Documents for the Supply Contract Price.

### **2.3 Installation Contract Price**

Installation Contractor will execute and complete the Installation Contract Works in accordance with the Turnkey Documents for the Installation Contract Price.

### **2.4 Combined Contract Price**

The total amount payable by Owner to Contractors for the performance of the Project Works in accordance with the Turnkey Documents is the Combined Contract Price, which shall be payable by Owner in accordance with the Contracts and which may be varied only in the manner set forth in each of the Contracts.

## **ARTICLE 3 - COORDINATION OF PROJECT WORKS**

Supplier will perform and complete the Supply Contract Works in such a manner as to permit Installation Contractor to timely achieve the Installation Contract Works in accordance with the Project Schedule.

## **ARTICLE 4 - TURNKEY OBLIGATIONS OF CONTRACTORS**

### **4.1 Obligations of Contractors**

Notwithstanding the obligations of Supplier to execute and perform the Supply Contract Works and Installation Contractor to execute and perform the Installation Contract Works, each Contractor agrees with the Owner that:

- (a) it will execute and complete or ensure the execution and completion of the Project Works on a turnkey, lump-sum basis;
- (b) it shall ensure that the Project Works are completed according to the Project Schedule; and
- (c) it shall comply with all terms of the Turnkey Contracts.

### **4.2 Inclusion in Works**

In the event that any design, engineering, supply, procurement, services, equipment, materials, construction, plant or civil works that each Contractor is to provide or procure pursuant to Section 4.1 are not expressly included within its respective Contract, the provision of such design, engineering,

procurement, services, equipment, materials, construction, plant or civil works shall be deemed to be included within its respective Contract Works, and its respective Contract Price shall be deemed to include all design, engineering, supply, procurement, services, equipment, materials, construction, plant or civil works which it is to provide or procure pursuant to this Article 4.

#### **ARTICLE 5 - JOINT AND SEVERAL LIABILITY**

Each Contractor agrees with the Owner that it shall be jointly and severally liable to the Owner for each and every obligation of the other Contractor under the other Contractor's Contract and this Agreement as if the same were to be performed by the first Contractor pursuant to its own Contract or this Agreement.

#### **ARTICLE 6 - TURNKEY DOCUMENTS**

The Turnkey Documents constitute a single, integrated agreement governing the Parties' rights and obligations as set forth herein and therein. Contractors and Owner shall perform their respective obligations under the Turnkey Documents as if the Turnkey Documents were one single turnkey, lump-sum contract between one owner and one contractor to perform the Project Works and timely completion of and warrant the Facility on a turnkey, lump-sum contract basis, and the liability of Owner and Contractors under the Turnkey Documents shall be the same as if the Turnkey Documents had been one single turnkey, lump-sum contract between one owner and one contractor. If either of the Supply Contract Scope of Work or the Installation Contract Scope of Work as a result of the split nature of the Turnkey Documents is deficient so that any activity which is necessary to perform the Project Works is omitted from either the Installation Contract or the Supply Contract then Contractors undertake to perform that omitted work and will have no claim against Owner in respect of such omitted work.

#### **ARTICLE 7 - LIMITATION OF LIABILITY**

##### **7.1 Maximum Liability**

The maximum aggregate liability of any Party under the Turnkey Documents for damages (the *Aggregate Limit*) shall be one hundred per cent (100%) of the Combined Contract Price. The Aggregate Limit shall apply to liability for warranty obligations, tort (including negligence and strict liability) and breach of contract (including any breach resulting in termination).

##### **7.2 Consequential Damages**

In no event shall either of Contractors or Owner be liable to the other, either individually or jointly and irrespective of whether alleged to be by way of indemnity or as a result of breach of contract, breach of warranty, tort (including negligence), strict liability, or any other legal theory, and whether arising before or after completion of the Facility, and all Parties hereby waive any right to, damages that constitute consequential damages, or incidental, special, indirect, or consequential damages of any nature whatsoever, including, but not limited to, losses or damages caused by reason of unavailability of the Facility, shutdowns or service interruptions, loss of use, non-operation of the Facility or any equipment, loss of power or cost of replacement power, loss of profits or revenue, loss of contracts, cost of capital, inventory or use charges, cost of purchased or replacement power, loss of fuel, interest charges or claims of customers.

### **7.3 Releases Valid in All Events**

Releases, disclaimers and limitations on liability expressed herein shall apply even in the event of the negligence, strict liability, fault or breach of contract (including other legal bases of responsibility such as fundamental breach) of the Party whose liability is released, disclaimed or limited.

### **ARTICLE 8 - CHANGE ORDERS**

The existence of an event or circumstance that entitles one of Contractors to a Change under its Contract shall also operate as an event or circumstance which entitles the other Contractor to a Change under its Contract to the extent that the schedule, price, performance, warranties or other terms of that Contract are affected by the relevant event or circumstance; provided that the relief to which that Contractor is then entitled, when aggregated with the relief afforded under the Change granted pursuant to the other Contract is no greater than the relief to which Contractors would have been entitled if the Turnkey Documents had consisted of a single turnkey contract with one contractor.

### **ARTICLE 9 - INSURANCE**

Any insurance that a Party is required to provide under each of the Contracts shall satisfy the requirements of the Turnkey Documents with respect to amounts of coverage, deductibles and other provisions thereof and the limits of coverage and the amounts of deductibles shall not be combined or aggregated. Any such insurance shall include both Contractors and Owner as named insureds for their respective interests. Contractors and Owner shall ensure that Contractor and Owners (under any insurance purchased pursuant to each Contract) shall be regarded by the insurers as one insured party for the purpose of the calculation of the deductible applicable to any claim on any such insurance arising out of any act, omission or default of either of Contractors or Owner.

### **ARTICLE 10 - COORDINATION OF CONTRACT ADMINISTRATION AND DOCUMENT SUBMISSIONS**

#### **10.1 Contractors' Project Manager**

Contractors undertake to appoint a single person to act as the Contractors' project manager under each Contract.

#### **10.2 Coordination of Contracts - Contractors**

Contractors shall use all reasonable endeavors to facilitate the management and administration of the Turnkey Documents by Contractors on a coordinated basis and, where there is provision in more than one Contract for the submission of the same or similar document, to submit a single, coordinate document in respect of all such Contracts. Owner acknowledges that the obligations of each of the Contractors in connection with the submission of drawings, documents and other information and the performance of work under any of the Contracts may be satisfied by the submission of drawings, documents and other information or the performance of work under any of the other Contracts.

#### **10.3 Owner's Project Manager**

Owner undertakes to appoint a single person to act as Owner's project manager under each Contract.

#### **10.4 Coordination of Contracts - Owner**

Owner shall use all reasonable endeavors to facilitate the management and administration of the Turnkey Documents by Contractors on a coordinated basis and, where there is provision in more than one Contract for the submission of the same or similar document, to submit a single, coordinate document in respect of all such Contracts. Each of the Contractors acknowledge that the obligations of the Owner in connection with the review of drawings, documents and other information and the performance of the review by Owner under any of the Contracts may be satisfied by the Owner performance of the review under any of the other Contracts.

#### **10.5 Project Schedule**

Any change in respect of the Project Schedule required by a Contractor in compliance with the provisions of one of the Contracts, shall be deemed to have been requested by both Contractors pursuant to the corresponding provisions of the other Contract.

### **ARTICLE 11 - CLAIMS**

#### **11.1 Limitation of Liability**

In the event that one or more of an Owner or a Contractor or their partners, shareholders, directors, officers, employees, agents, affiliates or their directors, officers or employees assert a claim or claims under or pursuant to any Turnkey Document against any other Party or any other Party's partners, shareholders, directors, officers, employees, agents, affiliates or their directors, officers or employees, the aggregate recovery of the asserting Party or Parties pursuant to such claim or claims shall be limited by the waivers and disclaimers of liability, releases from liability, limitations on liability, indemnities, and exclusive remedy provisions set forth in the Turnkey Documents.

#### **11.2 Liability Under Turnkey Documents**

Owner, Installation Contractor and Supplier undertake not to contend, whether in legal proceedings or otherwise, that they are not liable in respect of any claim made under any of the Turnkey Documents on the grounds that such claim should properly have been made under another of the Turnkey Documents. Owner and each Contractor undertake not to contend, whether in legal proceedings or otherwise, that they are not liable in respect of any claim made under any of the Turnkey Documents on the grounds that such claim should properly have been made by or against the other Contractor.

### **ARTICLE 12 - FORCE MAJEURE/EXCUSED PERFORMANCE**

The occurrence of an event of Force Majeure or other excused performance under one of the Contracts shall also operate as an event of Force Majeure or excused performance under the other Contract to the extent that the relevant Contractor is rendered unable to fulfill its obligations under the Turnkey Documents, by reason of Force Majeure or other excused performance; provided that the relief to which Contractors are collectively entitled in respect of Force Majeure or excused performance is no greater than the relief to which Contractors collectively would have been entitled if the Turnkey Documents had consisted of a single turnkey lump-sum contract between one owner and one contractor.

#### **ARTICLE 13 – DEFAULT/BREACH**

Any default/breach by a Contractor under its Contract shall be deemed to be a default/breach by the other Contractor under its Contract and any default/breach by Owner under a Contract shall be deemed to be a default/breach by the Owner under the other Contract.

#### **ARTICLE 14 - INTERACTION**

Neither Contractor shall rely upon the act, omission or default of the other Contractor in respect of any claim under any of the Turnkey Documents including any of the following:

- (a) any extension of time, adjustment to its Contract Price, application for any Change Order, entitlement to terminate its Contract or to suspend performance of the Project Works or any part thereof;
- (b) relief or adjustment or defense to any of its warranty or completion obligations; or
- (c) any other relief under its Contract or any other Turnkey Document or any other relief from any other obligation imposed by its Contract or any other Turnkey Document.

#### **ARTICLE 15 - TERMINATION**

##### **15.1 Termination of Contracts**

- (a) if there shall be grounds for termination of one of the Contracts by Owner, it shall constitute grounds for termination by the Owner of the other Contract, and the existence of grounds for termination of one of the Contracts by the respective Contractor shall constitute grounds for termination by the other Contractor of its Contract; and
- (b) a notice of termination or cancellation issued by Owner under either of the Contracts shall be deemed a notice of termination or cancellation issued by the Owner under the other Contract and the issue of a notice of termination by a Contractor under its Contract shall be deemed to be a notice of termination by the other Contractor under its Contract.

##### **15.2 Termination of Agreement**

In the event that the Contracts are terminated, cancelled or otherwise no longer in effect, this Agreement shall also terminate. In the event that the Turnkey Documents, taken together as a single integrated contract, are terminated, cancelled or otherwise no longer in effect and this Agreement is also terminated, the Parties shall not be entitled in respect of such termination or cancellation to any greater benefit, right or obligation than they would be entitled to if the Turnkey Documents were one single turnkey, lump-sum contract between one owner and one contractor to design, engineer, supply, construct, guarantee performance and timely completion of and warrant the Facility on a turnkey lump-sum contract basis.

#### **ARTICLE 16 - TAXES**

- .1 In the absence of any express provision to the contrary,

(a) Owner shall be the "importer of record" for the purpose of importing the Goods into Canada and shall pay all GST/HST and Canadian Import Taxes payable upon the importation of the Goods into Canada.

(b) Contractor shall supply Owner with a North American Free Trade Agreement (NAFTA) certificate prior to exporting the Goods to Canada.

(c) If through further review by the applicable authority, the Goods do not meet NAFTA criteria, Owner and Contractor agree to equally be responsible for any and all duties payable related to the importation of the Goods.

(d) Contractor shall pay for all permits and shipping charges, levies, imposts and assessments of whatsoever nature and kind, imposed by federal, provincial and local laws, except that Owner shall provide and pay for all building permits and any other permits and licenses and easements required for right-of-entry and for permanent structures, or changes thereto.

(e) Contractor shall indemnify and save harmless Owner, and shall promptly reimburse Owner for payments made by Owner, in connection with any payments made or required to be made under the provisions of paragraph (c) and paragraph (d) above.

.2 Contractor shall not factor into the Contract Price any amount in respect of a Tax payable by Contractor to the extent that such Tax is recoverable, in any manner whatsoever, by the Contractor.

.3 If and to the extent that Contractor is entitled to reimbursement from Owner under the Turnkey Documents for any expense incurred by the Contractor, Contractor shall not include any Taxes which are recoverable (in any manner whatsoever) by Contractor in any claim for reimbursement of such expense.

.4 In the absence of any express provision to the contrary, the Contract Price shall not be adjusted to reflect any significant change in cost to perform the Work due to changes in rates of all Taxes and duties or the imposition of new Taxes, which occur after receipt of Tender.

.5 Contractor shall forthwith provide all documentation and information requested by Owner or by any governmental authority to substantiate rates of Taxes, and without restricting the generality of the

foregoing, copies of all contracts, subcontracts and any other documents relating to the Contract Price paid for the Work.

.6 Contractor shall ensure that the terms of this Agreement applicable to the payment of Taxes shall apply to all agreements with its Subcontractors.

.7 For greater certainty, Contractor and Owner acknowledge that, notwithstanding any other provision of the Turnkey Documents, amounts payable by Owner to Contractor pursuant to the Turnkey Documents are exclusive of any HST payable pursuant to the Excise Tax Act (Canada). If Contractor is required to collect from Owner an amount of HST with respect to the provision of any goods or services supplied pursuant to this Contract, then Owner, subject to compliance by Contractor with this Clause, shall pay the amount of such HST to Contractor.

.8 Installation Contractor represents and warrants that it is now, and shall remain, registered for the purposes of the HST in accordance with Part IX of the Excise Tax Act (Canada) for the duration of this Agreement and that its HST Registration number is provided in Schedule A Tender Submission.

.9 Contractor shall provide, at all times when any HST is required to be collected, such documents and particulars relating to the supply as may be required by Owner to substantiate a claim for any input tax credits as may be permitted pursuant to the Excise Tax Act (Canada) in respect of such HST. Without limiting the foregoing, Contractor shall include on all invoices issued pursuant to this Clause all of the following particulars:

- (a) HST registration number of Contractor;
- (b) the subtotal of all taxable supplies;
- (c) the applicable HST rate(s) and the amount of HST charged on such taxable supplies; and
- (d) a subtotal of any amounts charged for any "exempt" or "zero-rated" supplies as defined in Part IX of the Excise Tax Act (Canada).

.10 Owner shall be entitled to withhold payment or to deduct from Contractor's compensation to the extent necessary to protect Owner in respect of failure of Contractor to remit or pay any Tax or make any other payment required under applicable laws where Owner, acting reasonably, determines that any such remittance or payment may be assessed against the Owner.

.11 Contractor agrees to prepare and to file in a timely manner all Tax returns or declarations required by any applicable authority or applicable laws having jurisdiction over this Agreement or any portion thereof. Contractor shall lawfully discharge its Tax obligations.

.12 Subject to the obligation of the Owner to pay HST pursuant to this Clause, Contractor shall pay all Taxes and shall use its best efforts to ensure payment by subcontractors of all Taxes which may be lawfully assessed upon Contractor or any subcontractor by any authority having jurisdiction over Contractor, subcontractor or this Agreement.

.13 Installation Contractor represents and warrants that it is a resident of Canada for the purposes of Canadian income tax legislation. Contractor shall advise Owner, in writing, of any change to the country where Contractor is a resident for Canadian income tax purposes at least sixty (60) days prior to any such change. If Contractor becomes a non-resident of Canada for Canadian income tax purposes, Contractor acknowledges that Owner may withhold Taxes, in accordance with applicable laws, from payments to it of the Contract Price.

.14 Notwithstanding any other provision of this Agreement, to the extent that Contractor is otherwise permitted to assign its interest in this Agreement to another person, it shall not be permitted to do so where the other person is not resident in Canada for Canadian income tax purposes, except with the prior written consent of the Owner.

.15 If required by the applicable laws of any country having jurisdiction, Owner shall have the right to withhold amounts, at the withholding rate specified by such applicable laws, from any compensation payable for the Work performed by Contractor, and any such amounts paid by Owner to an authority pursuant to such applicable laws shall, to the extent of such payment, be credited against and deducted from amounts otherwise owing to Contractor hereunder. Contractor shall note on each invoice whether any portion of the Work covered by such invoice was performed inside or outside of Canada for the purposes of Canadian income tax legislation or such other information requested or required by Owner to properly assess withholding requirements. At the request of the Contractor, Owner shall deliver to Contractor properly documented evidence of all amounts so withheld which were paid to the proper authority for the account of Contractor.

.16 Contractor shall supply and arrange for all Contractor personnel to supply Owner with all information relating to the activities under the Turnkey Documents that is necessary to enable Owner or its Affiliates to comply with the lawful demand for information by any authority. In the event Contractor does not supply or take all steps to arrange for any subcontractor to supply such information and, as a result, an Authority imposes a Tax or fine upon Owner or any of its Affiliates, Contractor shall forthwith pay or reimburse Owner for such Tax or fine.

.17 Subject to the obligation of Owner to pay HST and import duties pursuant to the Turnkey Documents. Contractor shall be responsible for all Taxes which Contractor or Owner is obliged pursuant to applicable laws to pay for the purchase, sale, installation, construction, importation, exportation or for any other matter in respect of the Work, including in respect of all Contractor's property, personnel and

subcontractors. Contractor shall obtain for the benefit of Owner all available exemptions from or recoveries of Taxes and shall employ all prudent mitigation strategies to minimize the amounts of Taxes required to be paid in accordance with applicable laws. In the event Contractor obtains any rebate, refund or recovery in respect of any such Taxes, it shall immediately be paid to Owner to the extent that such amounts were paid by Owner or reimbursed to Contractor by Owner.

#### **ARTICLE 17 - SET OFF**

Owner may set-off all sums owed by a Contractor under a Contract against any sums owed by the Owner to the other Contractor under the other Contract.

#### **ARTICLE 18 - CONSOLIDATION OF DISPUTES**

Each of the Parties hereby consents to the consolidation, if requested by either of the other Parties, of any Dispute submitted to arbitration under this Agreement with any related Dispute submitted to arbitration pursuant to any of the other Turnkey Documents. If a Dispute pursuant to this Agreement or any of the other Turnkey Documents, as the case may be, is resolved by determination by an arbitral tribunal, the determination of the arbitral tribunal with respect to the issues in such Dispute shall thereafter be binding, mutatis mutandis, upon the Parties in the performance and operation of this Agreement or any of the other Turnkey Documents and in any subsequent arbitration proceeding between the Parties.

#### **ARTICLE 19 - MISCELLANEOUS PROVISIONS**

##### **19.1 Governing Law**

This Agreement shall be governed by, and construed in accordance with, the local domestic laws of the Province of Newfoundland and Labrador, Canada (including the laws of Canada applicable therein) without reference to its conflict of law rules.

##### **19.2 Notice**

Notices given by the Owner or either of the Contractors in compliance with the provisions of any one of the Contracts shall be deemed to have been given pursuant to the corresponding provisions of the other Contract so affected. Owner or Contractors shall not contend, whether in legal proceedings or otherwise, that such a notice given is improperly served or has not been given under the terms of any of the Contracts. Notices given or received by Owner or a Contractor in compliance with the provisions of one of the Contracts shall be deemed to have been given or received by Owners or by both Contractors pursuant to the corresponding provisions of the other Contract.

##### **19.3 Assignment**

This Agreement may be assigned only with the prior written consent of the other Parties.

##### **19.4 Entire Agreement**

The Turnkey Documents contain the entire understanding of the Parties with respect to the subject matter contained in the Turnkey Documents and supersede any and all prior agreements and commitments with respect thereto. There are no other oral understandings, terms or conditions and no Party has relied upon any representation, express or implied, not contained in the Turnkey Documents.

**19.5 Amendments**

No change, amendment or modification of any Turnkey Document shall be valid or binding upon the Parties thereof or hereto unless such change, amendment or modification is duly executed in writing by the Parties.

**19.6 Joint Effort**

Preparation of this Agreement has been a joint effort of the Parties and the resulting document shall not be construed more severely against one of the Parties than against the other.

**19.7 Headings**

The headings contained in this Agreement are for convenience and reference only and in no way define, describe, extend or limit the scope of intent of this Agreement or the intent of any provision contained herein.

**19.8 Severability**

The invalidity of one or more phrases, sentences, clauses, sections or articles contained in this Agreement shall not affect the validity of the remaining portions of the Agreement so long as the material purposes of this Agreement can be determined and effectuated.

**19.9 No Waiver**

Any failure of any Party to enforce any of the provisions of any Turnkey Document or to require compliance with any of its terms at any time during the pendency of this Agreement shall in no way affect the validity of the Turnkey Document, or any part thereof or hereof, and shall not be deemed a waiver of the right of such party thereafter to enforce such provisions or require compliance with such terms.

**19.10 Successors and Assigns**

This Agreement shall be binding upon and shall inure to the benefit of the Parties and their successors and permitted assigns.

**19.11 Relationship of Parties**

Nothing contained in this Agreement shall be construed as constituting a joint venture or partnership between Contractors on the one hand and Owner on the other.

**19.12 Further Assurances**

Contractors and Owner agree to provide such information, execute and deliver any instruments and documents and to take such other actions as may be necessary or reasonably requested by the other Party which are not inconsistent with the provisions of this Agreement and which do not involve the assumptions of obligations other than those provided for in this Agreement, in order to give full effect to this Agreement and to carry out the intent of this Agreement.

**19.13 Priority**

In the event of any conflict between or among this Agreement and one or both of the Contracts or among the Turnkey Documents, this Agreement shall prevail.

**19.14 Confidentiality**

The Parties shall at all times use their best reasonable endeavors to keep all information regarding the terms and conditions of this Agreement confidential and not to share such information or the terms hereof to other third parties.

**19.15 Counterparts**

This Agreement may be signed in any number of counterparts and each counterpart shall represent a fully executed original as if signed by all Parties.

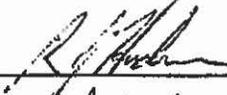
*[SIGNATURE PAGE TO FOLLOW ON NEXT PAGE]*

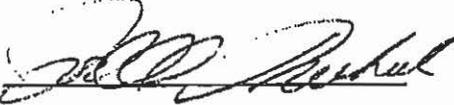
IN WITNESS WHEREOF the Parties have duly executed this Agreement as of the date first written above.

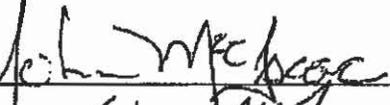
Signed and delivered in the presence of:

  
Print Name: Todd Newjack  
(Witness) Victory Public LLC

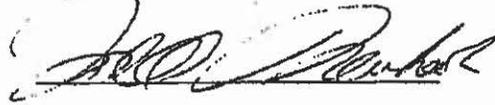
**NEWFOUNDLAND AND LABRADOR HYDRO**  
(Owner)

By:   
Print Name: R.J. Henderson  
Title: VP-NLH

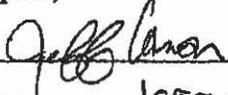
  
Print Name: \_\_\_\_\_  
(Witness) Victory Public LLC

By:   
Print Name: John MacIsaac  
Title: VP PEIS/AM

Signed and delivered in the presence of:

  
Print Name: \_\_\_\_\_  
(Witness) Victory Public LLC

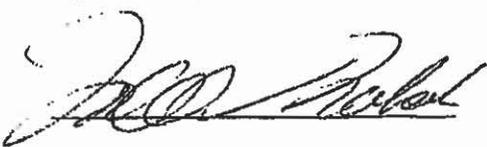
**PROENERGY SERVICES, LLC**  
(Supplier)

By:   
Print Name: JEFF CANON  
Title: CEO

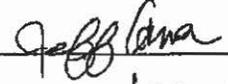
\_\_\_\_\_  
Print Name: \_\_\_\_\_  
(Witness)

By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Signed and delivered in the presence of:

  
Print Name: \_\_\_\_\_  
(Witness)

**PROENERGY GLOBAL SOLUTIONS CANADA LIMITED**  
(Installation Contractor)

By:   
Print Name: JEFF CANON  
Title: CEO

\_\_\_\_\_  
Print Name: \_\_\_\_\_

By: \_\_\_\_\_  
Print Name: \_\_\_\_\_

IN WITNESS WHEREOF the Parties have duly executed this Agreement as of the date first written above.

Signed and delivered in the presence of:



Print Name: Todd Newsham

(Witness) Notary Public NL

**NEWFOUNDLAND AND LABRADOR HYDRO**  
(Owner)

By: 

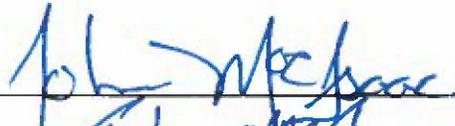
Print Name: R.J. Henderson

Title: VP - NLH



Print Name: \_\_\_\_\_

(Witness)

By: 

Print Name: John MacIsaac

Title: VP PETS/A.M.

Signed and delivered in the presence of:



Print Name: \_\_\_\_\_

(Witness)

**PROENERGY SERVICES, LLC**  
(Supplier)

By: 

Print Name: JEFF CANON

Title: CEO

\_\_\_\_\_

Print Name: \_\_\_\_\_

(Witness)

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signed and delivered in the presence of:

\_\_\_\_\_

Print Name: \_\_\_\_\_

(Witness)

**PROENERGY GLOBAL SOLUTIONS CANADA LIMITED**  
(Installation Contractor)

By: 

Print Name: JEFF CANON

Title: CEO

\_\_\_\_\_

Print Name: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

(Witness)

Title: \_\_\_\_\_



**Exhibit A**

**Tender and Bid Submission Documents**

# TENDER SUBMISSION

Presented To:

**Nalcor Energy**

for

100 MW Simple Cycle EPC:

Contract: 2014-57952-TB

Prepared By



## Binder 1

April 21, 2014

This document is privileged and contains confidential information intended for use only by  
Nalcor Energy.



1. **Introduction**
2. **Tender Submission – (Schedule A to the Contract)**
3. **Specifications – (Schedule E to the Contract) – Tender Submission**
  - a) General Arrangement Drawing
  - b) List of Major Components
  - c) Performance Specifications
  - d) CTG Starting Technology
  - e) Plant Start-Up Time
  - f) Project Execution Schedule
  - g) Emissions and Heat Rate Guarantee
  - h) Warranty Details and Terms
  - i) Gas Generator and Turbine Cooling Systems
  - j) Information On Air Pre-Heat Requirements
  - k) Recommended Spare Parts
  - l) Noise Rating for Start-Up and Operation
4. **Additional Tender Submission Documentation**
  - a) Tender Security
  - b) Previous Experience List
  - c) Work in Progress List
  - d) Additional Proposed Subcontractors
  - e) Monthly Man Power by Trade
  - f) Example Equipment Rate Schedule
  - g) Certificate of Insurance
  - h) Certificate of Recognition (COR) from Newfoundland and Labrador Construction Safety Association or Owner Approved Equivalent.
  - i) Third Party Safety Program Certifications
  - j) Clearance Letter from the Workplace, Health, Safety and Compensation Commission indicating the contractor is in good standing
  - k) Browz ID number
  - l) Clarifications and Exceptions to to Contract 2014-57952-TB
5. **Equipment Proposal**
6. **EPC Proposal**
7. **Supplemental Information**
  - a) Siemens SGT6-3000E (501D5A) CTG Drawings
  - b) Pictures of the SGT6-3000E Equipment
  - c) CTG Maintenance Records
  - d) GSU Transformer Information
  - e) ProEnergy Services Capabilities



---

## 1. Introduction

ProEnergy Services, LLC is pleased to submit this tender response to Nalcor Energy for Contract: 2014-57952-TB: Engineering Procurement and Construction for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station.

Given the extreme urgency of this project, this tender submission has been customized to accommodate a commercial operation date of December 6, 2014. If at any point during the project ProEnergy identifies an opportunity to improve upon the execution schedule, we will immediately provide the necessary details and any costing impacts to Nalcor for approval prior to executing the action.

Separate Equipment and EPC proposals have been attached to this tender submission in order to demonstrate how ProEnergy would typically prefer to structure a project of this nature. We look forward to discussing how best to organize this project with Nalcor.

ProEnergy is committed to safety, quality, and customer service, and recognizes the importance and magnitude of this project to Nalcor. We are ready and committed to make available all of our combined resources, expertise, and experience to ensure that the execution of this project is completed in as safe and timely a manner as possible.



5

---

**2. Tender Submission – (Schedule A to the Contract)**

5

**SCHEDULE A  
TENDER SUBMISSION  
(This will become  
Schedule A to the  
Contract)**

5

**CONTRACT TITLE: Engineering Procurement and Construction for a Turnkey 100 MW (Nominal)  
Combustion Turbine Generator at the Holyrood Thermal Generating Station**

	<u>Page</u>
TENDER .....	1
Appendix I: Form of Tender Bond.....	4
Appendix II - Letter of Credit .....	5
Appendix III: Surety's Consent .....	6
Appendix IV: Form of Performance Bond No. ....	7
Appendix V: Form of Labour and Materials Bond .....	9
Appendix VI: Tender Information .....	12
Appendix VII: Construction Data .....	17
Appendix VIII: Schedule of Equipment Rental Rates .....	25
Appendix IX: Permission Letter – Safety Record .....	27
Appendix X: Schedule of Prices.....	28
APPENDIX XI: Certificate of Insurance .....	30
Appendix XII: Schedule of Payments .....	31
Worksheet C – Contractor Safety & Health Questionnaire - Standard .....	32
Worksheet D – Contractor Risk Assessment Form .....	39
Worksheet E - Contractor Personnel & Qualifications Form.....	42
Worksheet L: Contract Safety Statistics - Monthly Report.....	44
Worksheet G - Contract Closeout and Evaluation Form .....	45

This page is left blank intentionally

**TENDER**

Tender by ProEnergy Services, LLC a Company duly incorporated under the laws of  
Missouri or:

a partnership, joint venture or consortium carrying on business under the firm name and style above stated, the names, addresses and places of incorporation, if any, of all the partners or members of the firm being the following:

and having its head office at \_\_\_\_\_

to: NEWFOUNDLAND AND LABRADOR HYDRO  
P.O. Box 12400  
Supply Chain Management  
4th Level, Hydro Place  
St. John's, Newfoundland and Labrador  
A1B 4K7

Attention: Theresa Barnes, Buyer  
Supply Chain

**CONTRACT 2014-57952-TB**

**NAME AND ADDRESS OF TENDERER**

ProEnergy Services, LLC  
**(Name of TENDERER)**

2001 ProEnergy Blvd.  
**(Address of TENDERER)**

Sedalia, Missouri, USA

POSTAL CODE: 65301

TELEPHONE: ProEnergy Services, LLC

FAX: ProEnergy Services, LLC

GST/HST REGISTRATION NO. 82916 7642

(a) Tenderer has carefully examined the Contract Documents, including the following addenda:

Addenda Numbers:	<u>          </u>	#	dated	<u>          </u>
	<u>          </u>	#	dated	<u>          </u>
	<u>          </u>	#	dated	<u>          </u>

relating to a Contract for the Work and Tenderer hereby accepts and agrees that all Addenda form part and parcel of the said Contract and agrees that Owner shall not be responsible for any errors or omissions in this Tender.

- (b) Tenderer hereby tenders and offers to enter into the Contract, and to do all of that which is set out in the Contract Documents, on the terms and conditions and under the provisions set out in the Contract Documents, at the rates and prices set out in Appendix X, Schedule of Prices.
- (c) Tenderer agrees to carry out Change Orders if required by Owner, as provided for in the Contract Documents.
- (d) Tenderer encloses herewith
- i. A Tender Bond No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ issued by \_\_\_\_\_  
that is licensed to conduct business under the Laws of the Province of Newfoundland and Labrador, subject to being acceptable to Owner, in the form set out in Schedule A - TENDER SUBMISSION Appendix I Form of Tender Bond. OR
  - ii. A certified cheque in the amount of \$ USD 6,400,000 drawn on a Canadian chartered bank payable to Owner, OR
  - iii. An irrevocable Letter of Credit in the amount of \$ \_\_\_\_\_ from a Canadian chartered bank substantially in the form set out in Schedule A - TENDER SUBMISSION, Appendix II, made payable to Owner and with an expiry date ninety (90) days following the date set herein for receipt of Tenders. Drafts drawn upon the Letter of Credit shall be exercised by advice to the Bank of Nova Scotia, Water Street Branch, St. John's, Newfoundland and Labrador, Canada, with all charges payable by Tenderer.
- which shall be and remain the property of Owner in the event of failure of Tenderer to execute the Contract or, if requested by Owner, provide the Performance Security as herein required.
- (e) Tenderer agrees that this Tender is open to acceptance and irrevocable for sixty (60) days and that Owner may, at any time within sixty (60) days from the date and time specified in the Contract Documents for the receipt of Tenders, accept this Tender whether any other Tender has been previously accepted or not.
- (f) Tenderer agrees that within fourteen (14) days of receipt of notification of acceptance of this Tender, it shall provide all deliverable set out in Letter of Award with the time periods noted therein and execute the Contract substantially in the form of the draft.
- (g) The Tender Security and all Appendices accompanying this Tender form part of this Tender.



5

**Appendix I: Form of Tender Bond**

\$ \_\_\_\_\_  
 \_\_\_\_\_ No.

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_ hereinafter called "PRINCIPAL", and \_\_\_\_\_, a corporation created and existing under the laws of \_\_\_\_\_ and duly authorized to transact the business of Suretyship in the Province of Newfoundland and Labrador, hereinafter called "SURETY", are held and firmly bound unto NEWFOUNDLAND AND LABRADOR HYDRO as Obligee, hereinafter called "OBLIGEE", in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) lawful money of Canada, for the payment of which sum, well and truly to be made, PRINCIPAL and SURETY, jointly and severally, bind themselves and each of them and their and each of their heirs, executors, administrators, successors and assigns firmly by these presents.

**WHEREAS, PRINCIPAL** has submitted a written Tender to OBLIGEE dated the \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, for \_\_\_\_\_.

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that if the aforesaid PRINCIPAL keeps the Tender open for acceptance for sixty (60) days from the closing date of Tender and the aforesaid PRINCIPAL shall have the Tender accepted within such sixty (60) day period, and the aforesaid PRINCIPAL shall, within the time required, enter into a formal Contract and give the specified security to secure the performance of the terms and conditions of the Contract, then this obligation shall be null and void; otherwise PRINCIPAL and SURETY shall pay unto OBLIGEE the difference in money between the amount of the Tender of the said PRINCIPAL and the amount for which OBLIGEE legally contracts with another party to perform the Work if the latter amount be in excess of the former.

PRINCIPAL and SURETY shall not be liable for a greater sum than the specified amount of this Bond. Any suit under this Bond must be instituted before the expiration of six months from the date of this Bond. **IN WITNESS WHEREOF, PRINCIPAL and SURETY** have Signed and Sealed this Bond this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

THE COMMON SEAL of PRINCIPAL was hereon affixed in the presence of: _____ (Witness)	) ) ) )	By _____ And _____ (Seal) (PRINCIPAL)
----------------------------------------------------------------------------------------------	------------------	---------------------------------------------

THE COMMON SEAL of SURETY was hereon affixed in the presence of: _____ (Witness)	) ) ) )	By _____ And _____ (Seal) (SURETY)
-------------------------------------------------------------------------------------------	------------------	------------------------------------------

**SURETY's Address** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

5

**Appendix II - Letter of Credit**

\_\_\_\_\_  
(Bank)

\_\_\_\_\_  
(Date)

Irrevocable Standby Documentary Credit

Ref. No. \_\_\_\_\_  
To: NEWFOUNDLAND AND LABRADOR HYDRO  
P.O. Box 12400  
Hydro Place  
St. John's, Newfoundland and Labrador  
Canada A1B 4K7

Pursuant to the request of our customer \_\_\_\_\_ (hereinafter called **Contractor**), we hereby establish an Irrevocable Standby Documentary Credit in your favour, in connection with performance of requirements stipulated in Contract 2014-57952-TB, "Engineering Procurement and Construction for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station", issued by you, for a sum not exceeding a total of \_\_\_\_\_ Dollars ( \$ \_\_\_\_\_ ).

All or part of the amount available under this Credit is payable to you on demand upon presentation of your drafts at sight drawn on the Bank of Nova Scotia, Water Street Branch, St. John's, Newfoundland and Labrador, Canada.

The effective date of this Credit is \_\_\_\_\_. This Credit will expire at our office at \_\_\_\_\_ on \_\_\_\_\_.

All of your drafts drawn under and in compliance with the terms of this Credit will be honoured if duly presented at before-said branch office of the Bank of Nova Scotia on or before the expiration date notwithstanding any notice that may be given by the Contractor or any other party or person to us not to pay the same.

After the expiration date, we shall not have any further liability to NEWFOUNDLAND AND LABRADOR HYDRO.

This Credit is subject to the Uniform Customs and Practice for Documentary Credits (1993 Revision), International Chamber of Commerce, Paris, France, Publication No. 500), as amended.

Yours very truly, \_\_\_\_\_  
for \_\_\_\_\_

(Bank)

**BANK'S Address** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5

**Appendix III: Surety's Consent**

We, \_\_\_\_\_,

hereinafter called "SURETY", hereby undertake on behalf of Tenderer,

\_\_\_\_\_  
(Name of Tenderer)

hereinafter called "PRINCIPAL", of \_\_\_\_\_ to become bound to  
(Place)

NEWFOUNDLAND AND LABRADOR HYDRO as OBLIGEE for PRINCIPAL in a Performance Bond and a Labour and Materials Bond as quoted on below should the Tender of PRINCIPAL be accepted for Contract 2014-57952-TB, "Engineering Procurement and Construction for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station" and the execution of other Work relating to such Contract and we understand that the said Performance Bond and Labour and Materials Bond shall be given in the form included in the Form of Tender and shall remain in effect until the expiration of two (2) years from the date on which final payment under the Contract falls due.

The rates per thousand dollars (\$1,000.00) to be charged by us for the said Bonds are:-

- 50% Performance Bond \$ \_\_\_\_\_
- 50% Labour and Materials Bond \$ \_\_\_\_\_

If the aforesaid Tender is accepted, application for the said Performance Bond and Labour and Materials Bond must be made to SURETY within thirty (30) days of the execution of the Contract awarded to PRINCIPAL.

For the purpose of this undertaking the terms "Contract" and "Contract Price" shall have the meanings assigned to those terms in the AGREEMENT.

**IN WITNESS WHEREOF SURETY** has hereunto its hand and Seal subscribed and set this \_\_\_\_\_ day

of \_\_\_\_\_, 20 \_\_\_\_\_.

**BY** \_\_\_\_\_

**AND** \_\_\_\_\_

\_\_\_\_\_  
(Witness)

**SURETY's Address** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Appendix IV: Form of Performance Bond No.**

\$ \_\_\_\_\_  
\_\_\_\_\_ No.

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_ hereinafter called "PRINCIPAL", and \_\_\_\_\_ a corporation created and existing under the laws of \_\_\_\_\_ and duly authorized to transact the business of Suretyship in \_\_\_\_\_, hereinafter called "SURETY", are held and firmly bound unto NEWFOUNDLAND AND LABRADOR HYDRO, hereinafter called "OBLIGEE", in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) lawful money of Canada, for the payment of which sum, well and truly to be made, **PRINCIPAL** and **SURETY**, jointly and severally, bind themselves and each of them and their and each of their heirs, executors, administrators, successors and assigns firmly by these presents.

**WHEREAS, PRINCIPAL** has submitted a written Contract to **OBLIGEE**, dated the \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, for Contract \_\_\_\_\_ in accordance with the Specifications and Drawings submitted therefor which Contract, Specifications and Drawings, are by reference made part hereof and hereinafter referred to as the Contract.

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that if **PRINCIPAL** shall promptly and faithfully perform the Contract then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever **PRINCIPAL** shall be, and declared by **OBLIGEE** to be, in default under the Contract, **OBLIGEE** having performed **OBLIGEE's** obligations up to the time of default thereunder, **SURETY** may promptly remedy the default, or shall promptly:

- (1) complete the Contract in accordance with its terms and conditions; or
- (2) obtain a bid or bids for submission to **OBLIGEE** for completing the Contract in accordance with its terms and conditions, and upon determination by **OBLIGEE** and **SURETY** of the lowest responsible bidder, arrange for a contract between such bidder and **OBLIGEE** and make available as work progresses (even though there should be a default, or a succession of defaults, under the contract or contracts of completion, arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price; but not exceeding, including other costs and damages for which **SURETY** may be liable hereunder, the amount hereinbefore set forth. The term "balance of the Contract Price", as used in this paragraph, shall mean the total amount payable by **OBLIGEE** to **PRINCIPAL** under the Contract, less the amount properly paid by **OBLIGEE** to **PRINCIPAL**.

Any suit under this Bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract is due.

**SURETY** shall not be liable for a greater sum than the specified amount of this Bond.

No right of action shall accrue on this Bond to, or for the use of, any person or corporation other than **OBLIGEE** named herein, or the heirs, executors, administrators or successors of **OBLIGEE**.

**PROVIDED, HOWEVER**, that no variation or alteration which may be made in the said Contract, or in the extent, nature, or method of performance of the Work to be performed thereunder, and no extension of time given by **OBLIGEE** for the performance of the said Contract, nor any waiver, forbearance or forgiveness on the part of

either **PRINCIPAL** or **OBLIGEE** to the other shall in any way release **PRINCIPAL** and **SURETY**, or either of them, their heirs, executors, administrators, successors and assigns from their liability hereunder; notice to **SURETY** of such variation, alteration, extension, waiver, forbearance or forgiveness being hereby expressly waived.

**AND IT IS HEREBY DECLARED AND AGREED** that **SURETY** shall be liable under this obligation as fully as if it were **PRINCIPAL** and that nothing of any kind or nature whatsoever that will not discharge **PRINCIPAL** shall operate as a discharge or a release of liability to **SURETY**, any law, rule or equity or usage relating to the liability of sureties to the contrary notwithstanding.

**IN TESTIMONY, WHEREOF, PRINCIPAL** has hereto set its hand and affixed its seal, and **SURETY** has caused its corporate seal to be affixed hereto, in accordance with its regulations and in the presence of its duly authorized

officers this \_\_\_ day of \_\_\_\_\_ 20 \_\_\_.

**THE COMMON SEAL of PRINCIPAL** )  
 was hereon affixed in the presence of: )

\_\_\_\_\_ )  
 (Witness) )

By \_\_\_\_\_

And \_\_\_\_\_ (Seal)  
**(PRINCIPAL)**

**THE COMMON SEAL of SURETY** )  
 was hereon affixed in the presence of: )

\_\_\_\_\_ )  
 (Witness) )

By \_\_\_\_\_

And \_\_\_\_\_ (Seal)  
**(SURETY)**

**SURETY's Address** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Appendix V: Form of Labour and Materials Bond**

\$ \_\_\_\_\_  
\_\_\_\_\_ No.

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_, hereinafter called "**PRINCIPAL**", and \_\_\_\_\_ a corporation created and existing under the laws of \_\_\_\_\_ and duly authorized to transact the business of Suretyship in \_\_\_\_\_, hereinafter called "**SURETY**", are, subject to the conditions hereinafter contained, held and firmly bound unto NEWFOUNDLAND AND LABRADOR HYDRO as **TRUSTEE**, hereinafter called "**OBLIGEE**", for the use and benefit of the Claimants, their and each of their heirs, executors, administrators, successors and assigns in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ ) lawful money of Canada for the payment of which sum well and truly to be made **PRINCIPAL** and **SURETY**, jointly and severally, bind themselves and each of them and their and each of their heirs, executors, administrators, successors and assigns firmly by these presents.

**WHEREAS PRINCIPAL** has entered into a written Contract with **OBLIGEE** dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ for which Contract (including the Drawings, Contract Documents, conditions and other documents referred to therein) is by reference made a part hereof, as fully and to the same extent as if recited in full herein and is hereinafter referred to as the Contract.

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that, if **PRINCIPAL** shall promptly make payment to all Claimants as hereinafter defined for all labour and Material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- (1) A Claimant for the purpose of this Bond is defined as one having a direct contract with **PRINCIPAL** for labour, Material, or both, used or reasonably required for use in the performance of the Contract, labour and Material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to **PRINCIPAL** to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied toward the purchase price thereof shall only be a claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract.

The prevailing industrial rental value of equipment shall be determined insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Government of Newfoundland and Labrador, Department of Transportation and Works, Highway Design Division's Form 1000 entitled "Newfoundland Equipment Rental Schedule" at the time of Tender close.

- (2) **PRINCIPAL** and **SURETY** hereby jointly and severally agree with **OBLIGEE** as **TRUSTEE** that every Claimant who has not been paid as provided for under the terms of its contract with **PRINCIPAL** before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or

labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of its said Contract with **PRINCIPAL** and have execution hereon. Provided that **OBLIGEE** is not obliged to do or take any act, action or proceeding against **SURETY** on behalf of the Claimants or any of them to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of **OBLIGEE** or by joining **OBLIGEE** as a party to such proceeding, then such act, action or proceeding shall be taken on the understanding and basis that the Claimants or any of them who take such act, action or proceeding shall indemnify and save harmless **OBLIGEE** against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to **OBLIGEE** by reason thereof. Provided further that, subject to the foregoing terms and conditions, the Claimants or any of them may use the name of **OBLIGEE** to sue on and enforce the provisions of this Bond.

- (3) No suit or action shall be commenced hereunder by any Claimant:
- (a) Unless such Claimant shall have given written notice within the time limits hereinafter set forth to each of **PRINCIPAL**, **SURETY** and **OBLIGEE**, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to **PRINCIPAL**, **SURETY** and **OBLIGEE** at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the Contract is located. Such notice shall be given,
    - (i) in respect of any claim for the amount or any portion thereof required to be held back from the Claimant by **PRINCIPAL** under either the terms of the Claimant's contract with **PRINCIPAL** or under the Mechanics' Liens Legislation applicable to the Claimant's contract with **PRINCIPAL** whichever is the greater within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with **PRINCIPAL**;
    - (ii) in respect of any claim other than for the holdback or portion thereof referred to above within one hundred and twenty (120) days after the date upon which such Claimant did or performed the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with **PRINCIPAL**;
  - (b) After the expiration of one (1) year following the date on which **PRINCIPAL** ceased work on the Contract including work performed under the guarantees provided in the Contract.
  - (c) Other than in a court of competent jurisdiction in the Province or District of Canada in which the subject matter of the Contract or any part thereof is situated and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such court.
- (4) The amount of this Bond shall be reduced by and to the extent of any payment made in good faith and in accordance with the provisions hereof, inclusive of the payment by **SURETY** of Mechanics' Liens which may be registered against the subject matter of the Contract, whether or not claim for the amount of such lien be presented under and against this Bond.
- (5) **SURETY** shall not be liable for a greater sum than the specified amount of this Bond.

5

**IN TESTIMONY, WHEREOF, PRINCIPAL** has hereto set its hand and affixed its seal, and **SURETY** has caused its corporate seal to be affixed hereto, in accordance with its regulations and in the presence of its duly

authorized officers this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

**THE COMMON SEAL of PRINCIPAL** )  
was hereon affixed in the presence of: )

By \_\_\_\_\_

\_\_\_\_\_  
(Witness)

And \_\_\_\_\_ (Seal)  
**(PRINCIPAL)**

**THE COMMON SEAL of SURETY** )  
was hereon affixed in the presence of: )

By \_\_\_\_\_

\_\_\_\_\_  
(Witness)

And \_\_\_\_\_ (Seal)  
**(SURETY)**

**SURETY's Address** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5

**Appendix VI: Tender Information**

**(A) Statement of Financial Standing**

Tenderer shall provide copy of it financial statements if requested by Owner.

Include name(s) and address(es) of Chartered Bank(s) or Financial Firm(s), or both, for reference(s).

Available upon request.

---

---

---

---

---

**(B) Insurance Summary**

Pursuant to SCHEDULE A - INSTRUCTIONS TO TENDERERS and SCHEDULE B - GENERAL CONDITIONS, and SCHEDULE C SPECIAL CONDITIONS the following is a list of insurance coverage Tenderer proposes to maintain over the life of the Contract:

Property, Inland Marine, General Liability, Automobile, Executive Risk, Excess D&O,  
Workers' Compensation, Umbrella, Professional Liability, International Liability,  
Foreign Voluntary WC, Ocean Cargo, AD&D, KR&E, Builder's Risk

---

---

5

**(C) Previous Experience**

Complete the following statement of work Tenderer has undertaken during the past five (5) years or is presently engaged in completing similar to that on which it is tendering. (Attach company brochures and other relevant material to fully illustrate the experience, ability, plant and resources to be made available for the Work):

Description of the Work	Client	Location	Completion Date	Value of Completed Work

Please see Previous Experience list in Section 4b of this tender submission.

**(D) Work in Progress**

Complete the following statement of work which Tenderer is presently engaged in completing and which is similar in character to that described in this Contract.

Description of the Work	Client	Period of Contract	Tendered Value

Please see Work in Progress list in Section 4c of this tender submission.

5

**(E) Proposed Subcontractors**

Give the names and addresses of proposed Subcontractors and the part of the Work it is proposed they shall carry out.

Names and Addresses of Subcontractors	(Is Subcontractor Registered in Newfoundland and Labrador <u>yes</u> or no)	WHSCC	Yes
		NLCSA COR	Yes
Subcontractor Name: Pennecon	Section of Work To be Subcontracted Civil / Mechanical / Electrical		
Sub Contraction Address 1309 Topsail Road P.O. Box 8274, Station. A St. John's, NL A1B 3N4			
Sub Contractor Phone Number:  709-782-3404			
Sub Contractor Primary Contact Name:  Don Noseworthy			
Subcontractor Name:  Stantec Consulting Services, Inc.	(Is Subcontractor Registered in Newfoundland and Labrador <u>yes</u> or no)	WHSCC	Yes
		NLCSA COR	Yes
Sub Contraction Address 482 Payne Road Scarborough Court Scarborough, ME 04074	Section of Work To be Subcontracted  Engineering and Design		
Sub Contractor Phone Number:  207-887-3405			
Sub Contractor Primary Contact Name:  Kenneth B. Rogers			

Please see Additional Proposed Subcontractors in Section 4d of this tender submission.

5

**(F) Proposed Accommodations**

Tenderer shall list below the Site accommodations it proposes to use during the performance of the Work.

\_\_\_\_\_

Tenderer has identified ample hotels near the proposed site.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

S

**(G) Summary of Claims**

Provide the particulars of outstanding claims against the Tenderer in respect of any tender security and performance security on other Tenderer's projects.

Enter Summary of Claims

In 2012 Beumer Corp made a demand against the bond issued on behalf of PES in  
relation to a contract for fabricated steel to be used on a new pipe conveyor system.  
Beumer asserted defects and delays in PES's scope of work. ProSteel believes  
Beumer's claims are without merit. In 2014 PES filed for arbitration against Beumer for  
nonpayment. To date the surety has declined coverage and arbitration is pending.

---

5

**Appendix VII: Construction Data**

**(A) Organization**

List hereunder the names and experience of supervisory personnel proposed for the Work under the Contract.

Name	Experience	Job/Position Title
Thomas Canon	8 yrs construction and operations	Project Manager
Dave Mott	30+ yrs construction management	Site Manager
JC Verego	20 yrs construction management	Mechanical Superintendent
Al Rivera	30+ yrs installing Siemens CTGs	CTG Technical Advisor
Steve James	20 yrs commissioning Siemens CTGs	Start-Up Manager
Alex Chacara	15 yrs HV/Electrical Design/Install	HV Specialist

**(B) Hours of Work**

Show below Tenderer's proposed working hours. If Tenderer proposes to double shift any portion of the Work, attach details.

Working Days per Week	Hours per Working Day	Hours per Week
Seven (7)	Ten (10)	Seventy (70)

Based on our conversations with local companies, and in order to achieve the required schedule, ProEnergy will utilize a rotational work force consisting of three crews staggered in such a way that the site remains adequately staffed, productive, and safe. Union laborers will work 14 days straight x 10 hours per day, then they will receive 7 days off to go home. Ex-pat management teams will be rotated on an as needed basis, while maintaining enough on site supervision to maintain productivity and safety.







5

**(E) Union Affiliations and Hiring Practice**

List below the names of Trade Unions with which Tenderer and its proposed Subcontractors have associations, agreements and affiliations. If no associations, agreements or affiliations, so state:

**1. Tenderer**

Name of Union and Nature of Agreement	Expiry Date of Agreement
No associations	

Provide details of the proposed labour hiring practice.

ProEnergy will utilize local contractors for all local laborers necessary. Our local subcontractors will utilize their union affiliations and contracts to supply these laborers. The management staff and specialized services, such as start-up & commissioning personnel, will be ex-patriot ProEnergy employees.

5

2. **Subcontractors**

Name of Union and Nature of Agreement	Expiry Date of Agreement
Operating Engineering Local 904 - Heavy Equipment	2016
Carpenters Local 579	2016
Laborers Local 1208	2016
IBEW 2330	2015

Provide details of the proposed labour hiring practice.




**(G) Construction Methodology**

Tenderer shall describe in detail hereunder (using additional sheets as necessary), its proposed construction methodology for performance of the Work tendered.

This descriptive detail shall show full consideration for the scope of Work scheduled under the Tender and, because of the sensitivity of the Schedule, place particular emphasis on proposed plans relating to:

- mobilization of labour, material and Plant;
- number of Work fronts and sequences of operations;
- intended locations for construction camps;
- provisions for Site communications;
- first-aid services.

The provision of any construction methodology by the Tenderer will not imply approval by the Owner of the means and methods to be employed by the Tenderer in completing the Work.

The method and timing of the material shipments will be dictated by the site progress in such a way to minimize the handling of the equipment and required lay down area. The crew rotation will vary through the construction schedule based on the needs at the time, however local union practices are to have laborers work 14 – 10 hour shifts in a row then travel back to their point of origin for 7 days of rest and recreation. ProEnergy has

incorporated this local practice in the schedule attached to this tender submission. Due to the site location, ProEnergy will utilize local accommodations and medical facilities during construction. Site communications will be through the use of hand held radios carried by all management staff.

## Appendix VIII: Schedule of Equipment Rental Rates

### Preamble

The terms and conditions of this Schedule shall apply only to equipment when used on Changes performed on a cost plus basis in accordance with Clause GC 12.6 of Schedule B - GENERAL CONDITIONS.

The rental rates which are entered in this Schedule shall apply to the equipment provided on the Site for the execution of the Work and shall be paid only in respect of equipment engaged on Changes and Extra Work authorized by Owner in accordance with Clause GC 12.6 of Schedule B - GENERAL CONDITIONS and this Preamble.

Unless otherwise specified, the rates in this Schedule shall include servicing, fuels, lubricants, maintenance, repairs and costs of any nature including overhead and profit, required to operate the equipment at the Site and maintain it in working order.

Rental rates for welding equipment shall include provision for all fuel, oxygen, acetylene and lubricants, but shall not cover the supply of welding electrodes.

The rental rate listed herein for each item of equipment will be paid for the number of operating hours the said item of equipment is engaged on Changes at the request of Owner whether such time is worked on day or night shift, or both.

Payment shall not be made in respect of:

- (a) time during which the equipment is being maintained, repaired or replaced;
- (b) time during which the equipment cannot be used, because of breakdown, fault of the equipment or Contractor, or because of inclement weather conditions.

The rates entered in the Schedule shall be given on an hourly, weekly, and monthly basis and shall exclude operators' wages.

5



**Appendix IX: Permission Letter – Safety Record**

To:

Workplace Health, Safety and Compensation Commission

Fax: (709) 778-1110

and to:

Occupational Health & Safety Branch of Service Newfoundland and Labrador

Fax: (709) 729-3445

Please **PROVIDE** to

Newfoundland and Labrador Hydro

Fax: (709) 737-1795

Attention: Theresa Barnes, Buyer,  
Supply Chain

Reference **CONTRACT:** 2014-57952-TB

information concerning our injury statistics and safety record, solely for their use in relation to the above-referenced tender.

Signed by

\_\_\_\_\_

**(Tenderer)**

ProEnergy Services, LLC

\_\_\_\_\_  
**(Name of TENDERER)**

2001 ProEnergy Blvd

\_\_\_\_\_  
**(Address of TENDERER)**

Sedalia, MO

POSTAL CODE: 65301

TELEPHONE: 660-829-5100

FAX: 660-827-0469

Permission letter for use of

Newfoundland and Labrador Hydro

P.O. Box 12400

Supply Chain Department

4th Level, Hydro Place

St. John's, Newfoundland and Labrador

A1B 4K7

## Appendix X: Schedule of Prices

### PREAMBLE

The lump sum prices in this Schedule of Prices shall be the full inclusive value of the Work described, including all costs and expenses which may be required in and for the construction of the Work, together with all general risks, liabilities and obligations set forth or implied in the Contract Documents on which the Tender is based.

A lump sum price shall be entered against each item in this Schedule of Prices. If no unit price is entered, then the Tender may be considered as incomplete by Owner.

The quantities stated are only estimates and the unit prices entered in this Schedule of Prices shall apply to the actual quantities required for and measured in the completed Work in accordance with the Specifications.

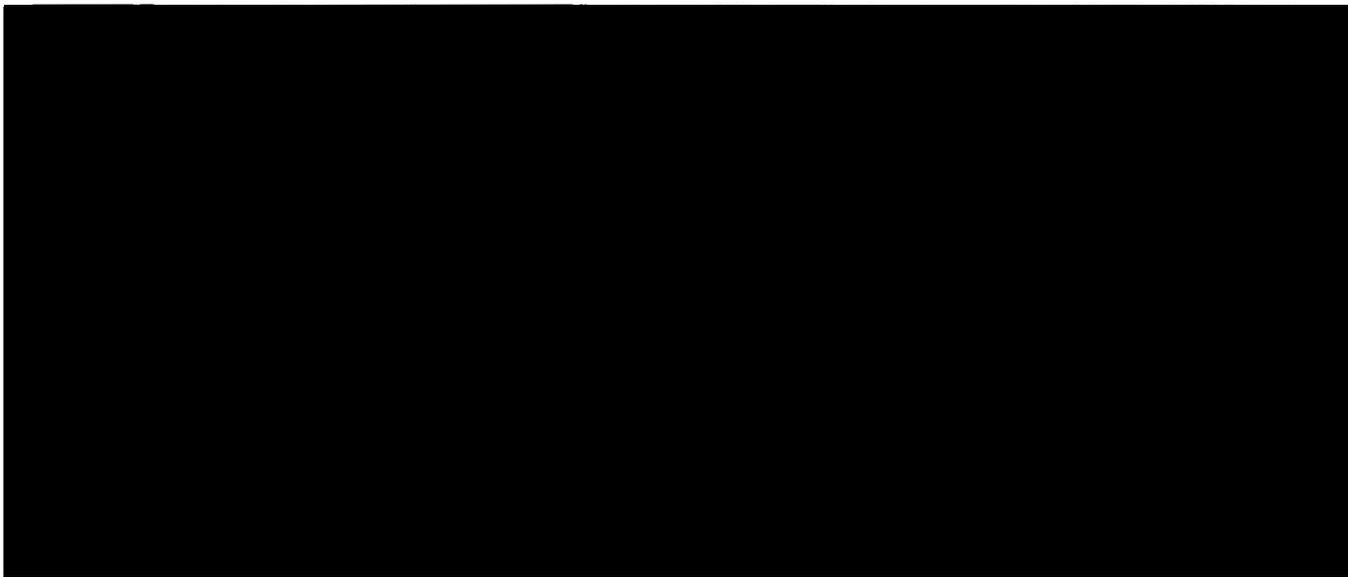
Prices shall exclude the Harmonized Sales Tax (HST), and the applicable HST will be paid as provided for in the Contract Documents.

Tenderer shall price every item provided in the Schedule of Prices, including those listed as optional items. Owner will evaluate all Tenders subject to the criteria specified in Clause IT 15 – Evaluation of Tender.

Tenderers are required to price optional items. Owner may decide not to proceed with any optional item, in which case those optional items will not be considered in the Tender evaluation.

Dependent upon internal budget restraints, after acceptance of a Tender, Owner, in its sole discretion, may elect to delete any item in the Schedule of Prices and the Contract Price shall be reduced by the amount of the price tendered for such deleted item.

5



<b>TOTAL =</b> (excluding HST) (carry over to page 2)	<u>\$99,827,669</u>
----------------------------------------------------------	---------------------

ProEnergy Services, LLC

Tenderer's Name (please print)

82916 7642

(GST/HST Registration Number)

  
Signature of Authorized Representative

\_\_\_\_\_  
Signer's Name (please print)

President & CEO  
Office Held

Dated at 9:30 am CST this 21st day of April 20 14 .

  
Witness

**APPENDIX XI: Certificate of Insurance**

DELIVER TO: NEWFOUNDLAND AND LABRADOR HYDRO  
 SUPPLY CHAIN, 500 COLUMBUS DRIVE, OR MAIL TO:  
 PO Box 12400, St. John's, NL Canada A1B 4K7, t.709.737.1400 f 709.737.1795 www.nlh.nl.ca

DESCRIPTION & LOCATION OF WORK:		
CONTRACT NO.	AWARD DATE:	VALUE (incl. OWNER-FURNISHED MATERIALS) \$
<b>INSURER</b>		
NAME:		
ADDRESS:		
<b>BROKER</b>		
NAME:		
ADDRESS:		
<b>INSURED</b>		
CONTRACTOR'S NAME:		
ADDRESS:		
<b>ADDITIONAL INSURED (Excluding Automobile Liability Policy)</b>		
NEWFOUNDLAND AND LABRADOR HYDRO		

THIS DOCUMENT CERTIFIES THAT THE FOLLOWING POLICIES OF INSURANCE AND INDICATED COVERAGES ARE AT PRESENT IN FORCE SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS AS CONTAINED THEREIN COVERING THE OPERATIONS OF THE INSURED IN CONNECTION WITH THE ABOVE NOTED CONTRACT MADE BETWEEN THE NAMED INSURED AND NEWFOUNDLAND AND LABRADOR HYDRO

POLICY TYPE	NUMBER	INCEPTION DATE	EXPIRY DATE (Y/M/D)	LIMITS OF LIABILITY
1. <input checked="" type="checkbox"/> Commercial General Liability OR ___ Wrap-up Liability  Including where indicated: ___ Blasting ___ Pile Driving or Caisson Work ___ Removal or Weakening of Support <input checked="" type="checkbox"/> Environmental Impairment <input checked="" type="checkbox"/> Forest Fire Fighting Expense (min. \$250,000) ___ Hook/Hoist/Rigging (min. \$ )				MINIMUM \$1,000,000.00
2. <input checked="" type="checkbox"/> Builders' Risk "Broad Form"      OR ___ Installation Floater "Broad Form"      OR ___ Piers, Wharves & Docks Rider				\$100% OF VALUE
3. <input checked="" type="checkbox"/> Automobile Liability Insurance				MINIMUM \$1,000,000.00
4. <input checked="" type="checkbox"/> Errors and Omissions Insurance				MINIMUM \$5,000,000.00

THE INSURER AGREES TO NOTIFY NEWFOUNDLAND AND LABRADOR HYDRO, IN WRITING, THIRTY (30) DAYS PRIOR TO CANCELLATION OR MATERIAL CHANGE OF ANY POLICY, EXCEPT IN THE EVENT OF NON-PAYMENT WHERE POLICY CONDITIONS DEALING WITH TERMINATION WILL APPLY.

NAME (print):	SIGNATURE:	DATE
INSURER'S OFFICER OR AUTHORIZED REPRESENTATIVE		TEL. NO.

ISSUANCE OF THIS CERTIFICATE SHALL NOT LIMIT OR RESTRICT THE RIGHT OF Choose LOB TO REQUEST AT ANY TIME DUPLICATE CERTIFIED COPIES OF SAID INSURANCE POLICIES UPON REQUEST.

Please see Certificate of Insurance in Section 4g of this tender submission.

5

**Appendix XII: Schedule of Payments**

Column 1 below represents Tenderer's estimated monthly value of Work to be performed over the life of the Contract (the equivalent of Tenderer's expected monthly revenue including Work performed and unbilled) and Column 2 below represents Tenderer's expected monthly cash receipts estimated over the life of the Contract.

Year	Month	Tenderer's Estimated Monthly	
		Column 1 Value of Work	Column 2 Cash Receipts
2014	April		25,645,754
2014	May		16,407,360
2014	June		292,930
2014	July		12,010,112
2014	August		16,652,534
2014	September		5,858,591
2014	October		5,274,725
2014	November		5,968,481
2014	December		11,717,182
	<b>Total</b>		99,827,669

**Note:** Actual payments to Contractor shall be made in accordance with the terms of payment as specified in Schedule D - PAYMENT.



**Worksheet C – Contractor Safety & Health Questionnaire - Standard**

Nalcor Energy and its subsidiaries (Owner) are committed to providing a safe and healthy workplace for its employees, contractor personnel, subcontractor personnel, vendors and the general public.

Safety and Health performance is a major criteria utilized in the selection of contractors performing work on behalf of Owner. Awarding of contracts will not only be on grounds of price and technical ability, but also on a contractor’s past safety and health performance and present ability to carry out work safely and without risk to health

All Tenders will be evaluated on the basis of the Tenderer’s ability to satisfy the safety standards and requirements of Owner, and any applicable law, regulation or standard. The information that has been provided in Worksheet “C” may be taken by Owner and used as data for use inside of the Contractor Safety Evaluation Tool (CSET) to give each Tender a score. The Tender must score a **70%** or higher in the CSET in order to be considered for further evaluation. A score of less then **70%** will result in the Tender being rejected. The CSET has been developed internally by the Owner and provides a quantitative approach to the evaluation of the information provided by the Tenderer in Worksheet “C”.

**1.0 CONTACTOR INFORMATION:**

<b>Company Name:</b> ProEnergy Services, LLC	<b>Company Address:</b> 2001 ProEnergy Blvd Sedalia, MO 65301	
<b>Total # of off site employees expected to work on this job:</b>	<b>Company Contact:</b>	
<b>Total # of part-time employees expected to work on this job:</b>	<b>Telephone:</b>	<b>Fax:</b>
<b>Total # of employees to be on-site for work on this job:</b>	<b>Email Address:</b>	
<b>Company's Main Activities:</b>		

**2.0 WORKERS' COMPENSATION:**

Please provide your WHSCC PRIME Incentive Experience Results for the past three (3) years.

**NOTE:** For out of Province vendors, please provide you applicable workers compensation experience rating information.

WHSCC Experience	Yr - 1	Yr - 2	Yr - 3
	2013	2012	2011
2.1 WHSCC PRIME Incentive Experience Results (i.e. Refund Applied, Refund Forfeited, or Neither)			
WHSCC PRIME Incentive Experience Percentage	0.72	0.81	0.80
<i>NOTE: You may be requested to attach copy of WHSCC Three Year Accident Summary Report (obtained from the Workplace Health Safety &amp; Compensation Commission).</i>			

**3.0 SAFETY AND HEALTH PERFORMANCE:**

Please provide your safety performance record for past three (3) years and current year to date, referencing the attached incident definitions and frequency calculations:

Safety and Health Indicators	Current YTD	Yr - 1	Yr - 2	Yr - 3
	2014	2013	2012	2011
3.1 No. Total Person hours worked	287,823	1,246,134	1,349,597	2,211,696
3.2 No. Fatalities (FAT)	0	0	0	0
3.3 No. Lost Time Injuries (LTI)*	0	2	0	2
3.4 No. Medical Aid Injuries (MA)*	0	4	4	2
3.5 No. Restricted Work Cases (RWC)*	0	2	1	1
3.6 Lost Time Injury Frequency (LTIF)	0	0.32	0	0.18
3.7 All Injury Frequency (AIF)	0	1.28	0.74	0.45
<i>* As per your applicable governing workers compensation board</i>				
<i>NOTE: All recordable incidents shall be recorded once only within the categories provided and shall be recorded as the highest category reported. For example, a Medical Aid (MA) incident, which also results in a Restricted Work Case (RWC), shall be recorded as a Medical Aid only. A MA that subsequently results in a Lost Time Injury (LTI) shall be recorded as a LTI only.</i>				
3.6 Has your company received any OHS stop-work orders, charges, convictions or fines (within the past 3 years) from Services NL, OHS Branch? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
<i>NOTE: You may be requested to attach copy of Detailed Company Report by Date for the past 3 years (obtained from Service NL, OHS Branch).</i>				

**Use the following Definitions to classify your incidents:**

**FAT – Fatality:** Any death resulting from an injury/illness regardless of time intervening between injury/illness and death will be reported but no days will be charged to the event.

**LTI – Lost Time Injury:** A work related injury for which an employee requires medical attention and is unable to return to work for his/her next scheduled shift.

**MA – Medical Aid Injuries:** A work related injury for which an employee requires medical attention; however, he/she is able to return to work for the next scheduled shift.

**RWC – Restricted Work Cases:** When an employee, due to a work-related injury/illness, is medically determined to be unable to perform one or more routine functions or unable to work the normal time period of their pre-injury/illness work day, they are working in a “restricted” capacity. Routine functions are the work activities that employee regularly performs at least once a week.

**Frequency Calculations:** The Industry Standard for injury/ illness reporting is based on 200,000 hours. This base represents the equivalent of 100 employees working 40 hours per week for 50 weeks per year.

**LTIF - Lost Time Injury Frequency:** This Frequency Rate is based on the total number of Lost-Time Injuries or Illnesses, which occurred in the calendar year.

The following formula shall be used:

$$\text{LTIF} = \frac{\text{Number of Lost-Time Injuries} \times 200,000}{\text{Total Person Hours Worked}}$$

**AIF – All Injury Frequency:** This is based on the total number of fatalities and Lost-Time injuries, plus the total number of Medical Aid Injuries which occurred in a calendar year.

The following formula shall be used:

$$\text{AIF} = \frac{(\text{No. of Fatalities} + \text{No. of Lost-Time Injuries} + \text{No. of Medical Aid Injuries}) \times 200,000}{\text{Total Person Hours Worked}}$$

**4.0 SAFETY AND HEALTH MANAGEMENT:**

Questions		Yes	No
<b>4.1</b>	<b>Leadership and Administration</b>		
4.1.1	Does your company's Safety & Health, (S&H) Program have a Policy Statement that clearly outlines the Company's commitment to safety & health stewardship?	X	
4.1.2	Are the S&H Policies posted and communicated to all employees?	X	
4.1.3	Does your company's S&H Policy outline the specific responsibilities of Management, Employees & Sub-Contractors?	X	
4.1.4	Does your Management team participate in workplace inspections and observations?	X	
4.1.5	Does your company hold a Certificate of Recognition (COR) from the NLCSA or other safety management system, which meets or exceeds COR requirements, such as OHSAS 18001 or CSA Z-1000?	X	
4.1.6	Does your company have procedures for drug and alcohol use in the workplace?	X	
<b>4.2</b>	<b>Leadership Training</b>		
4.2.1	Does your company provide S&H training to Management personnel?	X	
4.2.2	Does your company conduct safety orientation training for Supervisors and Managers?	X	
4.2.3	Are employees oriented to the company's systems and approach to the management of health, safety and environment?	X	
<b>4.3</b>	<b>Planned Inspections and Maintenance</b>		
4.3.1	Does your company's S&H program outline the requirement for Supervisors and Employees to conduct regular inspections of equipment and conditions at the worksite?	X	
4.3.2	Does your company's inspection procedure outline responsibility for conducting inspections, including the frequency of inspections, hazard ranking criteria, inspection reporting and follow up requirements for corrective actions?	X	
4.3.3	Does your company's S&H program require the prompt reporting of hazardous practices and/or conditions at the worksite?	X	
4.3.4	Does your company have a program that effectively manages preventative maintenance?	X	
4.3.5	Does your company maintain an inventory of critical parts, equipment and systems and is this inventory formally monitored through the preventative maintenance systems?	X	
4.3.6	Does your company have a program for identifying and reporting substandard safety practices?	X	
<b>4.4</b>	<b>Incident / Accident Investigations</b>		
4.4.1	Does your company have a written procedure for the reporting and investigation of accidents and near miss incidents?	X	
4.4.2	Does your company review and follow-up all incident reports?	X	
4.4.3	Are incident reports reviewed and signed by Senior Management?	X	
4.4.4	Is incident data recorded and evaluated for the identification of trends to facilitate system improvement?	X	
4.4.5	Does your company maintain historical data relating to incidents as well as regularly review and report on such data?	X	
4.4.6	Is the historical data, statistics and reports available for review?	X	

Questions		Yes	No
4.4.7	Is formal training provided to those persons responsible for conducting and completing investigation reports?	X	
<b>4.5</b>	<b>Emergency Preparedness</b>		
4.5.1	Does your company have an Emergency Response Plan related to its activities and specific locations?	X	
4.5.2	Does your company provide emergency response training to its personnel?	X	
4.5.3	Does your company conduct regular drills & exercises with its emergency response team to test & review the effectiveness of the emergency response plan?	X	
<b>4.6</b>	<b>Organizational Rules, Policies &amp; Procedures</b>		
4.6.1	Does your company have a risk assessment process to identify workplace hazards and their appropriate controls?	X	
4.6.2	Does your company have management programs for high risk work, and make reference to site-specific rules and procedures for the assessment of hazards and safe work planning prior to engaging in high risk work (e.g. fall protection, confined space, etc.)?	X	
4.6.3	Does your company make reference to following all applicable legislative requirements in the jurisdiction where work is being performed?	X	
4.6.4	Does your company have specific work procedures for each critical task or is reference made to following specific procedures where required?	X	
4.6.5	Does your company have procedures to prevent inadvertent operation of equipment, where such operation could result in personal harm (e.g. Work Permit System)?	X	
4.6.6	Does your company have an engineering/design standard that outlines the company's commitment to following applicable acts, statutes, regulations and industry standards?	X	
<b>4.7</b>	<b>Employee Knowledge &amp; Skills Training</b>		
4.7.1	Does your company have specific requirements regarding training in: WHMIS, First Aid, CPR, Transportation of Dangerous Goods (TDG)?	X	
4.7.2	Does your company undertake a Safety/Job Orientation for each newly hired or transferred Employee?	X	
4.7.3	Does your company have a system in place to identify and support new or transferred workers?	X	
4.7.4	Are training records maintained and available for review?	X	
4.7.5	Does your company have a process to ensure that only competent workers, including supervision, will be used during the operation?	X	
<b>4.8</b>	<b>Personal Protective Equipment</b>		
4.8.1	Does your company have a policy or specific rules with respect to the use of Personal Protective Equipment (PPE)?	X	
4.8.2	Does your company have a formal process addressing the selection, use, care and maintenance requirements for PPE?	X	
4.8.3	Does your company have in a formal process for determining personnel PPE requirements for its operations?	X	
4.8.4	Does your company have a Respiratory Protection Program?	X	
4.8.5	Are those persons required to use respiratory protective equipment deemed competent and properly trained to do so?	X	
4.8.6	Are employees provided instruction and training in the proper use and care of PPE?	X	

Questions		Yes	No
<b>4.9</b>	<b>Health &amp; Hygiene Control</b>		
4.9.1	Does your company have a formal program for the recognition, evaluation and control of occupational health hazards (such as: noise, lighting, radiation, chemical exposure, vibration, ergonomics)?	X	
4.9.2	Does your company provide accessible and readily available Material Safety Data Sheets at the worksite for the controlled products that are used?	X	
4.9.3	Does your company have a program to monitor the use of hazardous substance in the workplace?	X	
4.9.4	Does your company have a WHMIS Program that includes information, training, labeling and Material Safety Data Sheets?	X	
<b>4.10</b>	<b>OHS Committee / Safety Meetings</b>		
4.10.1	Does your company have an Occupational Health & Safety (OHS) Committee or Worker Safety Representative for each worksite as per OHS Regulations?	X	
4.10.2	Are your OHS Committee members or Worker Safety Representatives trained as per current WHSCC requirements?	X	
4.10.3	Does your company inform workers of their rights to know, participate and to refuse unsafe work and the process for work refusals?	X	
4.10.4	Does your company have a written standard that outlines who is responsible for conducting the meetings, scheduling of meetings, recording the minutes as well as responsibility for completion of corrective actions?	X	
4.10.5	Does your company hold scheduled safety meetings, such as: General Safety Meetings for all crew and Departmental Meetings for each department at the worksite?	X	
4.10.6	Are tailboard/toolbox safety meetings conducted?	X	
<b>4.11</b>	<b>Critical Operations &amp; Task Analysis</b>		
4.11.1	Does your company have a system for the identification of all critical tasks, operations and processes?	X	
4.11.2	Are procedures developed and periodically reviewed for all critical task, operations and/or processes?	X	
<b>4.12</b>	<b>System Review &amp; Evaluation</b>		
4.12.1	Does your company conduct periodic audits to measure the effectiveness of your S&H program?	X	
4.12.2	Are performance-tracking measures compiled monthly and evaluated on a routine basis?	X	
4.12.3	Does your company have a system to ensure that compliance to their Management Performance Standards is assessed on an annual basis?	X	
<b>4.13</b>	<b>Standards &amp; Change Management</b>		
4.13.1	Are relevant engineering, classification rules, codes, industry standards reviewed periodically?	X	
4.13.2	Does your company have a formal process to manage changes to critical tasks, operations, procedures, equipment or personnel?	X	
4.13.3	Does your company have a written statement that references S&H for purchasing material and renting equipment?	X	
4.13.4	Is a systematic process used to identify hazards and risk associated with new, or changes to existing work processes and procedures prior to the procedures being used?	X	

	Questions	Yes	No	N/A
<b>4.14</b>	<b>Personal Communications</b>			
4.14.1	Does your company have a system to ensure that appropriate communication take place during shift and rotation changes (Handovers)?	X		
4.14.2	Does your company have in place a system to ensure that line management regularly interfaces with its employees on one to one basis?	X		
<b>4.15</b>	<b>Sub-Contractor Management</b>			
4.15.1	Do you employ Sub-contractors?	X		
4.15.2	Does your company have a sub-contractor policy?	X		
4.15.3	Does your company have a formal process for the selection and management of its sub-contractors including periodic evaluation of the Sub-contractors?	X		

STANDARD SAFETY AND HEALTH QUESTIONNAIRE	
I certify that the information I have supplied on the questionnaire is complete, accurate and true.	
Print name: <i>Alfred Bartol</i>	Position: <i>VP of EHS &amp; Quality</i>
Signature: <i>Alfred Bartol</i>	Telephone Number: <i>660-596-7032</i>
	Date: <i>4-16-14</i>

All information received will be treated as strictly private and confidential. No information given will be shared with other parties or reproduced without the express permission of your company.



---

### 3. Specifications – (Schedule E to the Contract) – Tender Submission

- a) General Arrangement Drawing
- b) List of Major Components
- c) Performance Specifications
- d) CTG Starting Technology
- e) Plant Start-Up Time
- f) Project Execution Schedule
- g) Emissions and Heat Rate Guarantee
- h) Warranty Details and Terms
- i) Gas Generator and Turbine Cooling Systems
- j) Information On Air Pre-Heat Requirements
- k) Recommended Spare Parts
- l) Noise Rating for Start-Up and Operation

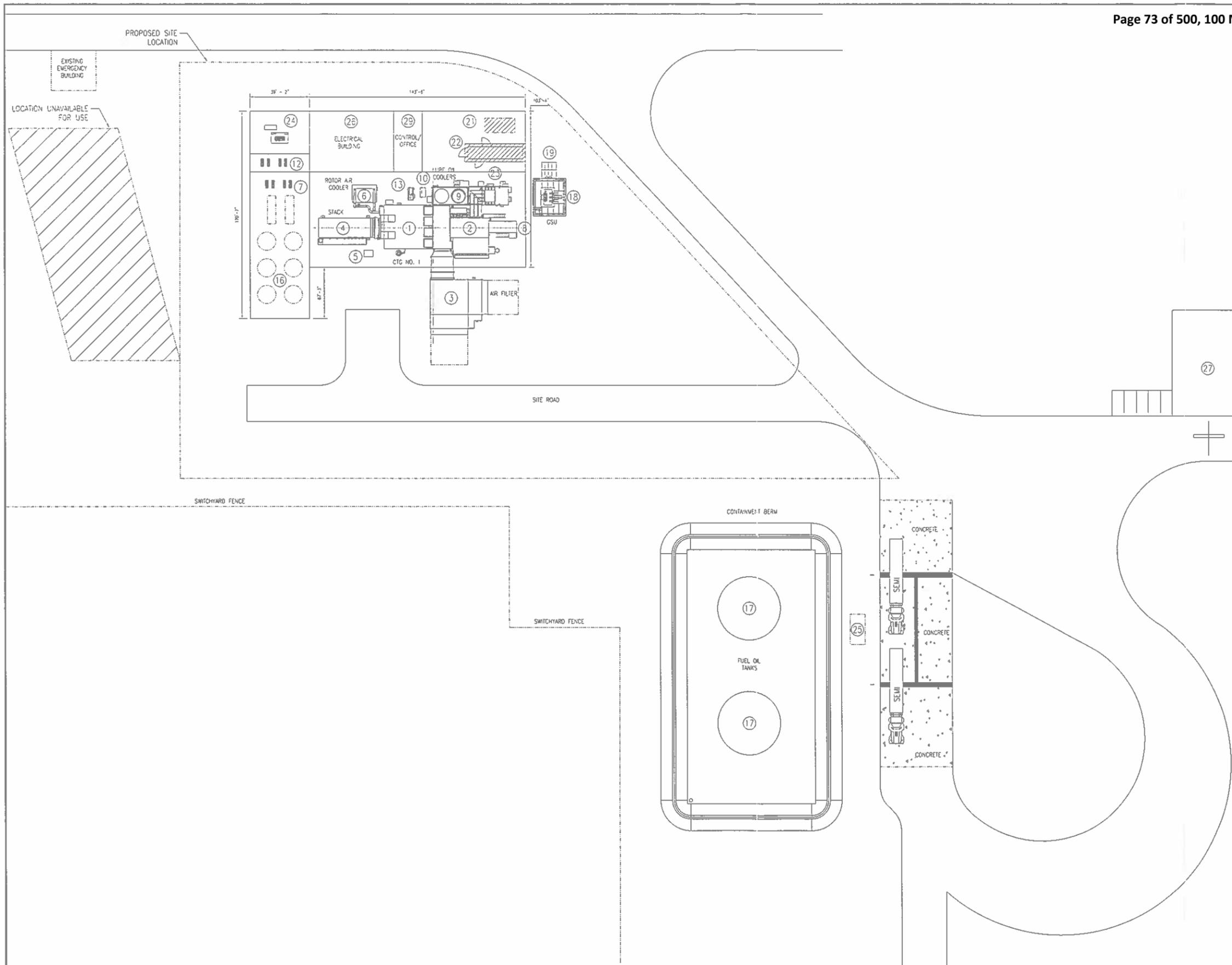


5

---

a) General Arrangement Drawing

A general arrangement of the plant to scale on the site layout drawing provided in Appendix A. Plant layout shall be limited to the indicated site boundary.



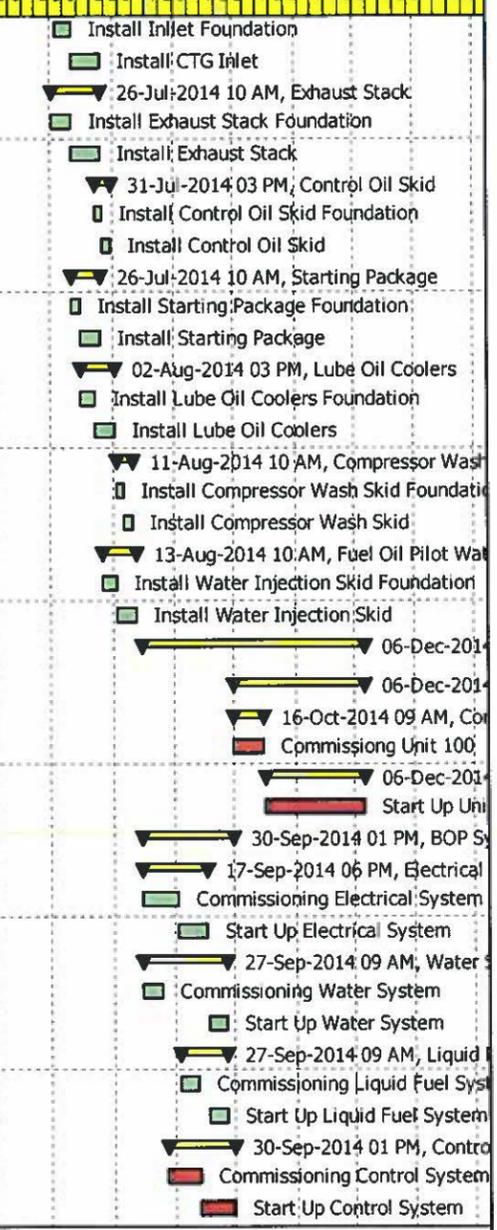
EQUIPMENT LEGEND	
PLANT EQUIPMENT	
1	COMBUSTION TURBINE
2	COMBUSTION TURBINE GENERATOR
3	CTG INLET AIR HOUSING
4	STACK
5	CONTROL OIL SKID
6	ROTOR AIR COOLER
7	WATER TREATMENT
8	STARTING PACKAGE
9	LUBE OIL COOLERS
10	COMPRESSOR WASH SKID
11	(NOT USED)
12	FUEL OIL TRANSFER PUMPS
13	FUEL OIL PILOT WATER INJECTION SKID
14	(NOT USED)
PLANT TANKS	
15	(NOT USED)
16	DEMIN WATER
17	FUEL OIL
ELECTRICAL EQUIPMENT	
18	GSU TRANSFORMER
19	UAT TRANSFORMER
20	(NOT USED)
21	EMERGENCY GENERATOR
22	BLACK START DIESEL GENERATOR
PLANT BUILDINGS	
23	CTG ELECTRICAL
24	FIRE PUMP HOUSE
25	LIQUID FUEL PUMP HOUSE
26	BOP ELECTRICAL ROOM
27	GUARD HOUSE
28	(NOT USED)
29	CONTROL ROOM

- 1.) BUILDING DIMENSIONS PRELIMINARY
- 2.) BUILDING ROOF HEIGHTS VARY

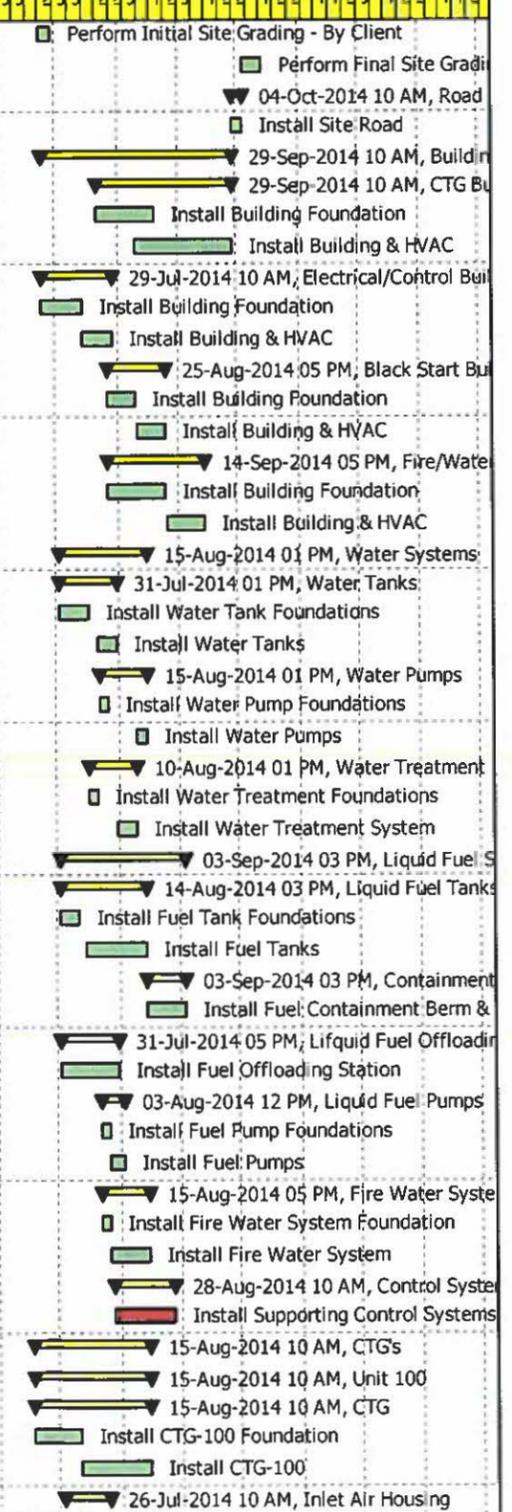
**PRELIMINARY  
NOT FOR  
CONSTRUCTION**  
4/14/2014

NALCOR	© COPYRIGHT, 2008, ProEnergy SERVICES ALL RIGHTS, RESERVED THIS DRAWING IS THE PROPRIETARY AND/OR CONFIDENTIAL PROPERTY OF ProEnergy SERVICES AND IS LOANED IN STRICT CONFIDENCE WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED NOR USED FOR ANY PURPOSE EXCEPT THAT FOR WHICH IT IS LOANED. IT SHALL BE IMMEDIATELY RETURNED ON DEMAND, AND IS SUBJECT TO ALL OTHER TERMS AND CONDITIONS OF ANY WRITTEN AGREEMENT OR PURCHASE ORDER WHICH INCORPORATES OR RELATES TO THIS DRAWING.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY	APP'D	DESCRIPTION																DRAWN CHECK DESIGN ENGINEER PROJ MGR QA MGR SCALE SIZE D		<b>ProEnergy EPC Services, LLC</b> CONCEPTUAL LAYOUT IN SIMPLE CYCLE - WESTINGHOUSE 501 D5A
NO.	DATE	BY	APP'D	DESCRIPTION																					
JOB NO. _____ DWG NO. _____ SH NO. _____ REV _____																									

NALCOR - Simple Cycle 1 x Westinghouse 501 D5A - Preliminary		ProEnergy Services				19-Apr-2014 12 PM											
Activity ID	Activity Name	Original Duration	% Complete	Start	Finish	M	A	M	J	J	A	S	O	N	D	J	
GTG100.40	Install Inlet Foundation	75h	0%	03-Jul-2014 03 PM	11-Jul-2014 10 AM												
GTG100.50	Install CTG Inlet	150h	0%	11-Jul-2014 10 AM	26-Jul-2014 10 AM												
<b>Exhaust Stack</b>		250h	0%	01-Jul-2014 10 AM	26-Jul-2014 10 AM												
GTG100.60	Install Exhaust Stack Foundation	100h	0%	01-Jul-2014 10 AM	11-Jul-2014 10 AM												
GTG100.70	Install Exhaust Stack	150h	0%	11-Jul-2014 10 AM	26-Jul-2014 10 AM												
<b>Control Oil Skid</b>		80h	0%	23-Jul-2014 03 PM	31-Jul-2014 03 PM												
GTG100.80	Install Control Oil Skid Foundation	30h	0%	23-Jul-2014 03 PM	26-Jul-2014 03 PM												
GTG100.90	Install Control Oil Skid	50h	0%	26-Jul-2014 03 PM	31-Jul-2014 03 PM												
<b>Starting Package</b>		150h	0%	11-Jul-2014 10 AM	26-Jul-2014 10 AM												
GTG100.100	Install Starting Package Foundation	50h	0%	11-Jul-2014 10 AM	16-Jul-2014 10 AM												
GTG100.110	Install Starting Package	100h	0%	16-Jul-2014 10 AM	26-Jul-2014 10 AM												
<b>Lube Oil Coolers</b>		175h	0%	16-Jul-2014 10 AM	02-Aug-2014 03 PM												
GTG100.120	Install Lube Oil Coolers Foundation	75h	0%	16-Jul-2014 10 AM	23-Jul-2014 03 PM												
GTG100.130	Install Lube Oil Coolers	100h	0%	23-Jul-2014 03 PM	02-Aug-2014 03 PM												
<b>Compressor Wash Skid</b>		80h	0%	03-Aug-2014 10 AM	11-Aug-2014 10 AM												
GTG100.140	Install Compressor Wash Skid Foundation	30h	0%	03-Aug-2014 10 AM	06-Aug-2014 10 AM												
GTG100.150	Install Compressor Wash Skid	50h	0%	06-Aug-2014 10 AM	11-Aug-2014 10 AM												
<b>Fuel Oil Pilot Water Injection Skid</b>		175h	0%	26-Jul-2014 03 PM	13-Aug-2014 10 AM												
GTG100.160	Install Water Injection Skid Foundation	75h	0%	26-Jul-2014 03 PM	03-Aug-2014 10 AM												
GTG100.170	Install Water Injection Skid	100h	0%	03-Aug-2014 10 AM	13-Aug-2014 10 AM												
<b>Commissioning and Start Up</b>		1028h	0%	15-Aug-2014 01 PM	06-Dec-2014 06 PM												
<b>CTG-100</b>		610h	0%	30-Sep-2014 01 PM	06-Dec-2014 06 PM												
<b>Commissioning Work Package</b>		150h	0%	30-Sep-2014 01 PM	16-Oct-2014 09 AM												
COM100.10	Commissioning Unit 100	150h	0%	30-Sep-2014 01 PM	16-Oct-2014 09 AM												
<b>Start Up</b>		450h	0%	17-Oct-2014 08 AM	06-Dec-2014 06 PM												
COM100.20	Start Up Unit 100	450h	0%	17-Oct-2014 08 AM	06-Dec-2014 06 PM												
<b>BOP Systems</b>		418h	0%	15-Aug-2014 01 PM	30-Sep-2014 01 PM												
<b>Electrical System</b>		300h	0%	15-Aug-2014 03 PM	17-Sep-2014 06 PM												
COM100.50	Commissioning Electrical System	150h	0%	15-Aug-2014 03 PM	02-Sep-2014 11 AM												
COM100.60	Start Up Electrical System	150h	0%	02-Sep-2014 11 AM	17-Sep-2014 06 PM												
<b>Water System</b>		392h	0%	15-Aug-2014 01 PM	27-Sep-2014 09 AM												
COM100.70	Commissioning Water System	90h	0%	15-Aug-2014 01 PM	25-Aug-2014 03 PM												
COM100.80	Start Up Water System	90h	0%	18-Sep-2014 07 AM	27-Sep-2014 09 AM												
<b>Liquid Fuel System</b>		225h	0%	03-Sep-2014 03 PM	27-Sep-2014 09 AM												
COM100.90	Commissioning Liquid Fuel System	90h	0%	03-Sep-2014 03 PM	12-Sep-2014 05 PM												
COM100.100	Start Up Liquid Fuel System	90h	0%	18-Sep-2014 07 AM	27-Sep-2014 09 AM												
<b>Control System</b>		300h	0%	28-Aug-2014 10 AM	30-Sep-2014 01 PM												
COM100.110	Commissioning Control System	150h	0%	28-Aug-2014 10 AM	13-Sep-2014 05 PM												
COM100.120	Start Up Control System	150h	0%	13-Sep-2014 05 PM	30-Sep-2014 01 PM												



NALCOR - Simple Cycle 1 x Westinghouse 501 D5A - Preliminary		ProEnergy Services				19-Apr-2014 12 PM											
Activity ID	Activity Name	Original Duration	% Complete	Start	Finish	M	A	M	J	J	A	S	O	N	D	J	
CIVIL.20	Perform Initial Site Grading - By Client	50h	0%	23-Jun-2014 03 PM	28-Jun-2014 03 PM												
CIVIL.30	Perform Final Site Grading & Site Dressout	100h	0%	04-Oct-2014 10 AM	14-Oct-2014 10 AM												
<b>Road</b>		50h	0%	29-Sep-2014 10 AM	04-Oct-2014 10 AM												
ROAD.10	Install Site Road	50h	0%	29-Sep-2014 10 AM	04-Oct-2014 10 AM												
<b>Buildings &amp; HVAC</b>		970h	0%	24-Jun-2014 10 AM	29-Sep-2014 10 AM												
<b>CTG Building</b>		700h	0%	21-Jul-2014 10 AM	29-Sep-2014 10 AM												
CTG.BLD.10	Install Building Foundation	300h	0%	21-Jul-2014 10 AM	20-Aug-2014 10 AM												
CTG.BLD.20	Install Building & HVAC	500h	0%	10-Aug-2014 10 AM	29-Sep-2014 10 AM												
<b>Electrical/Control Building</b>		350h	0%	24-Jun-2014 10 AM	29-Jul-2014 10 AM												
EC.BLD.10	Install Building Foundation	200h	0%	24-Jun-2014 10 AM	14-Jul-2014 10 AM												
EC.BLD.20	Install Building & HVAC	150h	0%	14-Jul-2014 10 AM	29-Jul-2014 10 AM												
<b>Black Start Building</b>		300h	0%	27-Jul-2014 07 AM	25-Aug-2014 05 PM												
BSE.BLD.10	Install Building Foundation	150h	0%	27-Jul-2014 07 AM	10-Aug-2014 05 PM												
BSE.BLD.20	Install Building & HVAC	150h	0%	11-Aug-2014 07 AM	25-Aug-2014 05 PM												
<b>Fire/Water/Fuel Building</b>		500h	0%	27-Jul-2014 07 AM	14-Sep-2014 05 PM												
FWF.BLD.10	Install Building Foundation	300h	0%	27-Jul-2014 07 AM	25-Aug-2014 05 PM												
FWF.BLD.20	Install Building & HVAC	200h	0%	26-Aug-2014 07 AM	14-Sep-2014 05 PM												
<b>Water Systems</b>		446h	0%	02-Jul-2014 07 AM	15-Aug-2014 01 PM												
<b>Water Tanks</b>		296h	0%	02-Jul-2014 07 AM	31-Jul-2014 01 PM												
WTR.TNK.10	Install Water Tank Foundations	150h	0%	02-Jul-2014 07 AM	16-Jul-2014 05 PM												
WTR.TNK.20	Install Water Tanks	100h	0%	21-Jul-2014 01 PM	31-Jul-2014 01 PM												
<b>Water Pumps</b>		246h	0%	22-Jul-2014 07 AM	15-Aug-2014 01 PM												
WTR.PMP.10	Install Water Pump Foundations	50h	0%	22-Jul-2014 07 AM	26-Jul-2014 05 PM												
WTR.PMP.20	Install Water Pumps	50h	0%	10-Aug-2014 01 PM	15-Aug-2014 01 PM												
<b>Water Treatment</b>		246h	0%	17-Jul-2014 07 AM	10-Aug-2014 01 PM												
WTR.TRT.10	Install Water Treatment Foundations	50h	0%	17-Jul-2014 07 AM	21-Jul-2014 05 PM												
WTR.TRT.20	Install Water Treatment System	100h	0%	31-Jul-2014 01 PM	10-Aug-2014 01 PM												
<b>Liquid Fuel System</b>		638h	0%	02-Jul-2014 07 AM	03-Sep-2014 03 PM												
<b>Liquid Fuel Tanks</b>		438h	0%	02-Jul-2014 07 AM	14-Aug-2014 03 PM												
FL.TNK.10	Install Fuel Tank Foundations	100h	0%	02-Jul-2014 07 AM	11-Jul-2014 05 PM												
FL.TNK.20	Install Fuel Tanks	300h	0%	15-Jul-2014 03 PM	14-Aug-2014 03 PM												
<b>Containment Berm</b>		200h	0%	14-Aug-2014 03 PM	03-Sep-2014 03 PM												
BRM.10	Install Fuel Containment Berm & Liner	200h	0%	14-Aug-2014 03 PM	03-Sep-2014 03 PM												
<b>Liquid Fuel Offloading</b>		300h	0%	02-Jul-2014 07 AM	31-Jul-2014 05 PM												
FOL.10	Install Fuel Offloading Station	300h	0%	02-Jul-2014 07 AM	31-Jul-2014 05 PM												
<b>Liquid Fuel Pumps</b>		125h	0%	22-Jul-2014 07 AM	03-Aug-2014 12 PM												
FL.PMP.10	Install Fuel Pump Foundations	50h	0%	22-Jul-2014 07 AM	26-Jul-2014 05 PM												
FL.PMP.20	Install Fuel Pumps	75h	0%	27-Jul-2014 07 AM	03-Aug-2014 12 PM												
<b>Fire Water System</b>		250h	0%	22-Jul-2014 07 AM	15-Aug-2014 05 PM												
FW.10	Install Fire Water System Foundation	50h	0%	22-Jul-2014 07 AM	26-Jul-2014 05 PM												
FW.20	Install Fire Water System	200h	0%	27-Jul-2014 07 AM	15-Aug-2014 05 PM												
<b>Control System</b>		311h	0%	28-Jul-2014 09 AM	28-Aug-2014 10 AM												
CNTRL.10	Install Supporting Control Systems	311h	0%	28-Jul-2014 09 AM	28-Aug-2014 10 AM												
<b>CTG's</b>		570h	0%	19-Jun-2014 10 AM	15-Aug-2014 10 AM												
<b>Unit 100</b>		570h	0%	19-Jun-2014 10 AM	15-Aug-2014 10 AM												
<b>CTG</b>		570h	0%	19-Jun-2014 10 AM	15-Aug-2014 10 AM												
GTG100.10	Install CTG-100 Foundation	220h	0%	19-Jun-2014 10 AM	11-Jul-2014 10 AM												
GTG100.30	Install CTG-100	350h	0%	11-Jul-2014 10 AM	15-Aug-2014 10 AM												
<b>Inlet Air Housing</b>		225h	0%	03-Jul-2014 03 PM	26-Jul-2014 10 AM												

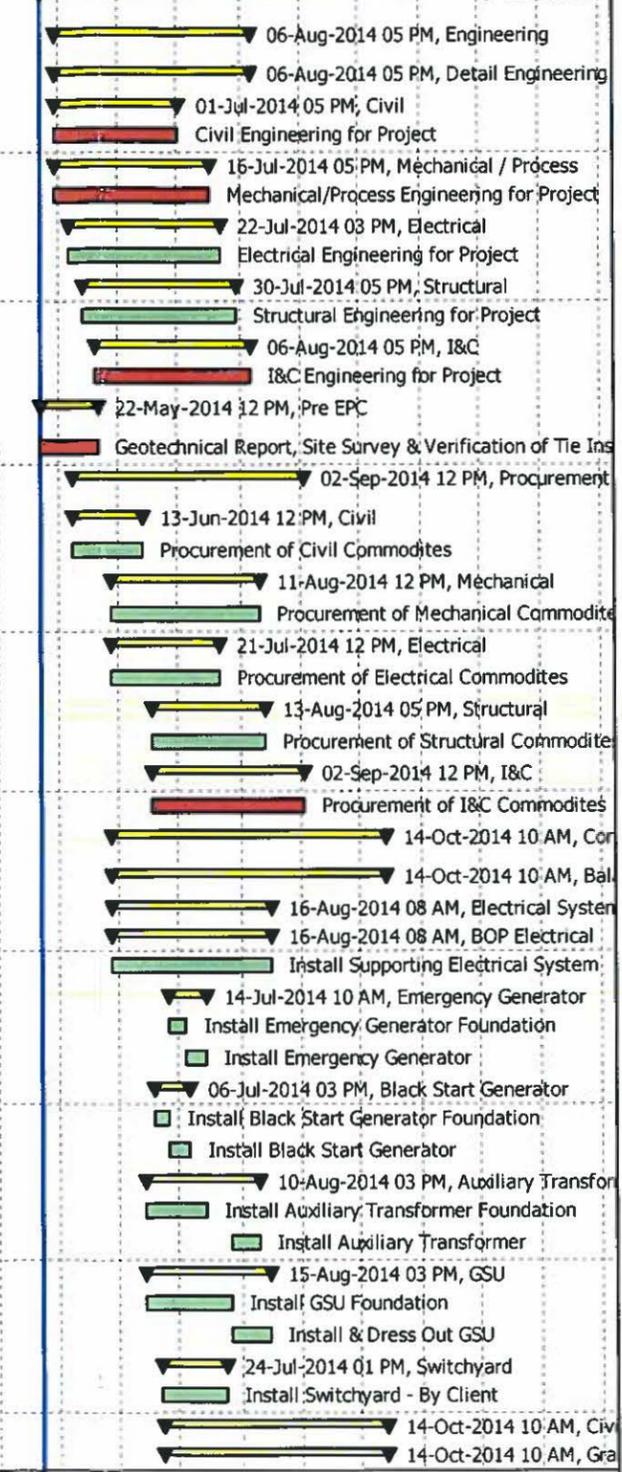


█ Actual Work   
 █ Critical Remaining Work   
 █ % Complete  
█ Remaining Work   
 ◆ Milestone   
 ▼ Summary

NALCOR Power Plant - Preliminary

TASK filter: All Activities  
 Workweek:

NALCOR - Simple Cycle 1 x Westinghouse 501 D5A - Preliminary		ProEnergy Services				19-Apr-2014 12 PM											
Activity ID	Activity Name	Original Duration	% Complete	Start	Finish	M	A	M	J	J	A	S	O	N	D	J	
<b>NALCOR - Simple Cycle 1 x Westinghouse 501 D5A - Preliminary</b>		1639h	0%	22-Apr-2014 08 AM	06-Dec-2014 06 PM												
<b>Engineering</b>		560h	0%	29-Apr-2014 08 AM	06-Aug-2014 05 PM												
<b>Detail Engineering</b>		560h	0%	29-Apr-2014 08 AM	06-Aug-2014 05 PM												
<b>Civil</b>		360h	0%	29-Apr-2014 08 AM	01-Jul-2014 05 PM												
ENG.CIVIL.10	Civil Engineering for Project	360h	0%	29-Apr-2014 08 AM	01-Jul-2014 05 PM												
<b>Mechanical / Process</b>		440h	0%	29-Apr-2014 08 AM	16-Jul-2014 05 PM												
ENG.MECH.10	Mechanical/Process Engineering for Project	440h	0%	29-Apr-2014 08 AM	16-Jul-2014 05 PM												
<b>Electrical</b>		430h	0%	06-May-2014 08 AM	22-Jul-2014 03 PM												
ENG.ELEC.10	Electrical Engineering for Project	430h	0%	06-May-2014 08 AM	22-Jul-2014 03 PM												
<b>Structural</b>		430h	0%	14-May-2014 10 AM	30-Jul-2014 05 PM												
ENG.STRCL.10	Structural Engineering for Project	430h	0%	14-May-2014 10 AM	30-Jul-2014 05 PM												
<b>I&amp;C</b>		440h	0%	20-May-2014 08 AM	06-Aug-2014 05 PM												
ENG.IC.10	I&C Engineering for Project	440h	0%	20-May-2014 08 AM	06-Aug-2014 05 PM												
<b>Pre EPC</b>		180h	0%	22-Apr-2014 08 AM	22-May-2014 12 PM												
PEPC.10	Geotechnical Report, Site Survey & Verification of Tie Ins	180h	0%	22-Apr-2014 08 AM*	22-May-2014 12 PM												
<b>Procurement</b>		640h	0%	08-May-2014 01 PM	02-Sep-2014 12 PM												
<b>Civil</b>		200h	0%	08-May-2014 01 PM	13-Jun-2014 12 PM												
PROC.CIVIL.10	Procurement of Civil Commodites	200h	0%	08-May-2014 01 PM	13-Jun-2014 12 PM												
<b>Mechanical</b>		420h	0%	28-May-2014 08 AM	11-Aug-2014 12 PM												
PROC.MECH.10	Procurement of Mechanical Commodites	420h	0%	28-May-2014 08 AM	11-Aug-2014 12 PM												
<b>Electrical</b>		300h	0%	28-May-2014 08 AM	21-Jul-2014 12 PM												
PROC.ELEC.10	Procurement of Electrical Commodites	300h	0%	28-May-2014 08 AM	21-Jul-2014 12 PM												
<b>Structural</b>		320h	0%	18-Jun-2014 08 AM	13-Aug-2014 05 PM												
PROC.STRCL.10	Procurement of Structural Commodites	320h	0%	18-Jun-2014 08 AM	13-Aug-2014 05 PM												
<b>I&amp;C</b>		420h	0%	18-Jun-2014 08 AM	02-Sep-2014 12 PM												
PROC.IC.10	Procurement of I&C Commodites	420h	0%	18-Jun-2014 08 AM	02-Sep-2014 12 PM												
<b>Construction</b>		1392h	0%	28-May-2014 08 AM	14-Oct-2014 10 AM												
<b>Balance of Plant</b>		1392h	0%	28-May-2014 08 AM	14-Oct-2014 10 AM												
<b>Electrical System</b>		800h	0%	28-May-2014 08 AM	16-Aug-2014 08 AM												
<b>BOP Electrical</b>		800h	0%	28-May-2014 08 AM	16-Aug-2014 08 AM												
BOP.ELEC.10	Install Supporting Electrical System	800h	0%	28-May-2014 08 AM	16-Aug-2014 08 AM												
<b>Emergency Generator</b>		175h	0%	26-Jun-2014 03 PM	14-Jul-2014 10 AM												
EG.ELEC.10	Install Emergency Generator Foundation	75h	0%	26-Jun-2014 03 PM	04-Jul-2014 10 AM												
EG.ELEC.20	Install Emergency Generator	100h	0%	04-Jul-2014 10 AM	14-Jul-2014 10 AM												
<b>Black Start Generator</b>		175h	0%	19-Jun-2014 10 AM	06-Jul-2014 03 PM												
BS.ELEC.10	Install Black Start Generator Foundation	75h	0%	19-Jun-2014 10 AM	26-Jun-2014 03 PM												
BS.ELEC.20	Install Black Start Generator	100h	0%	26-Jun-2014 03 PM	06-Jul-2014 03 PM												
<b>Auxiliary Transformer</b>		575h	0%	14-Jun-2014 10 AM	10-Aug-2014 03 PM												
AX.ELEC.10	Install Auxiliary Transformer Foundation	300h	0%	14-Jun-2014 10 AM	14-Jul-2014 10 AM												
AX.ELEC.20	Install Auxiliary Transformer	150h	0%	26-Jul-2014 03 PM	10-Aug-2014 03 PM												
<b>GSU</b>		625h	0%	14-Jun-2014 10 AM	15-Aug-2014 03 PM												
GSU.ELEC.10	Install GSU Foundation	425h	0%	14-Jun-2014 10 AM	26-Jul-2014 03 PM												
GSU.ELEC.20	Install & Dress Out GSU	200h	0%	26-Jul-2014 03 PM	15-Aug-2014 03 PM												
<b>Switchyard</b>		320h	0%	22-Jun-2014 01 PM	24-Jul-2014 01 PM												
SW.ELEC.10	Install Switchyard - By Client	320h	0%	22-Jun-2014 01 PM	24-Jul-2014 01 PM												
<b>Civil</b>		1125h	0%	23-Jun-2014 03 PM	14-Oct-2014 10 AM												
<b>Grading</b>		1125h	0%	23-Jun-2014 03 PM	14-Oct-2014 10 AM												



█ Actual Work   
 █ Critical Remaining Work   
 █ % Complete  
█ Remaining Work   
 ◆ Milestone   
 ▽ Summary

NALCOR Power Plant - Preliminary

TASK filter: All Activities  
Workweek: Page 1 of 3

4



---

b) List of Major Components

A manufacturer's list of the major components of equipment being provided along with specifications.



### SGT6-3000E (501D5A) Equipment List

<b>Detailed Equipment List</b>	
<b>Combustion Turbine And Misc Parts</b>	
	Combustion Turbine
	Combustion Turbine Misc Parts
<b>Combustion Turbine Generator And Misc Parts</b>	
	Combustion Turbine Generator
	Combustion Turbine Generator Misc Parts
<b>Auxiliaries</b>	
	Accumulator Charging System
	SGT-PAC Piping Touch-Up Paint
	Fire Protection System
	Gas Turbine Leveling Wedge & Clamp Assembly
	Maintenance Tool List
	Service Lifts Assembly
	Gas Turbine Enclosure
	Gas Turbine Package Platform & Stairs Assembly
	Generator Isophase Bus & Lineside Cubicle
	Starting Package Assembly
	Combustor Bypass Valve Position Transmitter Assy
	Vibration System Field Equipment
	Ignition Exciter Assembly W/Cable
	CT Overspeed Pickups
	DCS OM Equipment Delivery
	Electrical Package Assembly
	Mechanical Package Assembly
	Control Oil Skid
	Bypass Ring Accumulator
	Control Oil Start Up Unit
	Control Oil Start Up Spares
	Turbine Piping Package Assembly
	Rotor Cooling Air Cooler



Detailed Equipment List	
Rotor Cooling Air Cooler Support Structure	
Lube Oil Cooler Fin-Fan	
Inlet Duct & Silencer	
Inlet Filter	
Weather Station	
Barometric Pressure Sensor	
Exhaust Transition	
Exhaust Stack	
Cooling Air/Compressor Bleed I/C PPG Assembly	
Low Pressure Compressor Bleed Valve	
Rotor Air Cooler Interconnect Piping Assembly	
Control Oil Interconnect Tubing Assembly	
Lube Oil Interconnect Piping Assembly, Generator	
Lube Oil Interconnect Piping Assembly, Turbine	
Lube Oil Cooler Interconnect Piping Assembly	
Drain Interconnect Piping Assembly	
Instrument Interconnect Tubing Assembly	
Compressor Wash Interconnect Piping Assembly	
SGT-PAC Piping Insulation	
Inlet Guide Vane Rotary Position Transmitter Assembly	
Inlet Resistance Temperature Detectors	
Exhaust Thermocouple Rakes	
Bulk Cable Quantities	
Miscellaneous Electrical Specialties	
Gas Turbine Section Assembly Hardware	
Inlet Manifold Assembly	
Exhaust Manifold Section Assembly	
Exhaust Expansion Joint	
Coupling Cover - Gas Turbine To Generator	
Lube Oil Piping Assy - Exhaust Manifold	



c) Performance Specifications

Performance specifications of the gas turbine plant at standard ISO conditions and also at minus 10 degrees C.

Expected Performance Cases:

<b>ISO Conditions with Water Injection</b>				
<b>% Load</b>	<b>Gross Output kW</b>	<b>Net Output kW</b>	<b>Net Heat Rate BTU/kWh</b>	<b>Water/Fuel Ratio</b>
100	125,307	123,483	10,695	1.00

<b>-10 degrees C (14 F &amp; 60% Relative Humidity) Case with Water Injection - No Inlet Heating</b>				
<b>% Load</b>	<b>Gross Output kW</b>	<b>Net Output kW</b>	<b>Net Heat Rate BTU/kWh</b>	<b>Water/Fuel Ratio</b>
100	135,011	133,125	10,499	1.00



---

d) CTG Starting Technology

5

# SIEMENS

I.L. SGT6-3000E-IL035\_1105

## STARTING SYSTEM

The starting system provides a capability for remote automatic, unattended startup of the turbine.

Primary motive power for starting the turbine is provided by a 1529 kW (2050 HP) squirrel cage electric motor. Since the electric starting motor does not have the low-end torque characteristics needed to drive the turbine at starting load, a hydraulic torque converter is used to achieve required torque. The torque converter also incorporates high-speed characteristics required for turbine startup. The turning gear located between torque converter and clutch, provides breakaway torque when starting from a standstill. It will also maintain turbine and exciter generator shaft rotation at 2.5 rpm for a cooldown period after shutdown. The clutch engages and disengages the starting motor and turning gear with the turbine/generator unit shaft during turbine startup and shutdown. Cooling oil for the torque converter, clutch and starting motor is supplied by the turbine lube oil reservoir.

### OPERATION DESCRIPTION

Following a start signal, the motor quickly accelerates to 1800 rpm; energy converted through the torque converter gradually accelerates the turbine. At ignition, the turbine begins to help itself accelerate. The turbine is motor assisted, through the torque converter, to 2304 rpm where the start is deenergized and declutched. The turbine will continue acceleration to synchronous speed of 3600 rpm.

### CAUTION

**After two successive aborted start cycle attempts have been made, do not attempt another start until the cause of the malfunction has been determined and appropriate corrective action taken. Multiple aborted starts can result in equipment damage.**

A normal start cycle as defined for the starting package, consists of approximately 90 seconds of unit acceleration to ignition speed. This will vary based on ambient temperature. Conditions from the time a start is initiated, the turbine must reach a minimum of 225 rpm within 60 seconds or a trip occurs. A maximum of 120 seconds is allowed from the time the machine reaches 225 rpm until the ignition speed is achieved, or a trip ensues.

Upon reading 2304 rpm, the starting package is disengaged. The turbine then becomes self sustaining to idle speed.

Turbine speed is sensed by three "Hall Effect" speed pickups located at the starting package. The median value of these pickups is used to determine speed.



---

e) Plant Start-Up Time

The start time required for the 501D5A CTG, from zero (0) RPM to synchronization is 21 minutes.



---

f) Project Execution Schedule



g) Emissions and Heat Rate Guarantee

Fuel Type	OIL
Ambient Temperature, °F	59
Fuel Heating Value, Btu/lb LHV	18450
Relative Humidity	60
Barometric Pressure, psia	14.696
Inlet Pressure Loss, in-water	4.0
Exhaust Pressure Loss, in-water	12.0
Generator Power Factor	0.9
Injection Fluid	WATER
Injection Ratio, lb/lb	1.0

**Combustion Turbine Performance**

Load Level	Base
Net Power Output, kW	125700
Heat Rate, BTu/kWh LHV	10730
Exhaust Flow, lb/hr	3138030
Exhaust Temperature, °F	1011
Fuel Flow, lb/hr	73100
Injection Rate, lb/hr	73100
Auxiliary Load, kW	670
Heat Input, MMBtu/hr (LHV)	1349
Heat Input, MMBtu/hr (HHV)	1439

Exhaust Gas Composition (by percent volume)

Oxygen	12.64
Carbon Dioxide	4.72
Water	8.99
Nitrogen	72.73
Argon	0.91



**Emissions**

NOx, ppmvd @ 15% O <sub>2</sub> & ISO	42
NOx, lb/hr	237
CO, ppmvd	10
CO, lb/hr	29
SO <sub>2</sub> , ppmvd	12
SO <sub>2</sub> , lb/hr	75
H <sub>2</sub> SO <sub>4</sub> Mist, lb/hr	11.5
UHC, ppmvd	5
UHC, lb/hr	8
VOC, ppmvd	5
VOC, lb/hr	8
TSP And PM-10, lb/hr (Excl. H <sub>2</sub> SO <sub>4</sub> )	47.1
Opacity %	20

Notes:

- Values above are guaranteed only for Heat Rate and Emissions.
- Oil fuel composition is 86.425% C, 13.5% H<sub>2</sub>, 0.05% S, 0.015% FBN, and 0.01% Ash.
- Exhaust flow is at the exit of the exhaust stack.
- Part loads are achieved by reducing firing temperature.
- Injection rates may be adjusted during plant commissioning to meet the emissions.
- Performance is based on new and clean condition. Performance test to take place prior to accumulating 2000 Equivalent Degradation Hours (EDH) as defined in [EC-93208], otherwise degradation corrections determined by engine test or degradation curve must be applied.
- Emission guarantees apply during steady state operation and not during startup, shutdown, transient plant or fuel conditions and/or initial commissioning activities.
- Liquid fuel must comply with Siemens Power Generation Liquid Fuel Specification.



h) Warranty Details and Terms

11.1 General Warranty

Contractor represents and warrants that it is and will be at all times during the term of this Contract duly qualified and capable of performing the Work in accordance with the terms of this Contract. Contractor warrants that:

- a) the Work shall be of good quality and shall be free of defects in materials and workmanship;
- b) the Work shall be in accordance with GIP;
- c) the Work shall conform in all material respects to the Scope of Work and all applicable Laws and Governmental Authorizations in effect at Substantial Completion.

11.2 Warranty Period

The warranty set forth in Section 11.1 shall extend for a period of 24 months following Substantial Completion (the "Warranty Period") provided Contractor or one of its affiliates is the operator of the Plant during the entire Warranty Period. If Contractor or its affiliate is not the operator of the Plant during the entire 24 month Warranty Period then the Warranty Period shall be reduced to 12 months. The Warranty Period with respect to any Work that is repaired, replaced, modified or otherwise altered or corrected after Substantial Completion shall extend for the longer of 3 months from the date of completion of such repair, replacement, modification, correction or alteration or the remainder of the original Warranty Period, provided that in no event shall any Warranty Period extend beyond 27 months (or 15 months in the event the original Warranty Period is reduced to 12 months) following Substantial Completion.

11.3 Remedy

Owner promptly shall give notice to Contractor of the discovery during the Warranty Period of any defect that constitutes a breach of Contractor's warranties under Section 11.1. Contractor shall correct or replace the applicable Work at no cost to Owner except that Owner shall be responsible for any and all import and export permits, duties, licenses, customs clearance and any Governmental Authorizations or Taxes associated with Contractor performing its warranty obligations. Promptly after receipt by Contractor of such notice, Contractor and Owner shall agree upon a schedule for Contractor's performance of its warranty obligations that will allow Contractor to complete such work within a reasonable period of time without unreasonably interfering with the operation of the Facility. Owner shall provide Contractor with full and free access to the Facility to perform such warranty obligations in accordance with such schedule. The remedies of Owner under Sections 11.1 and 11.2 are the exclusive remedies of Owner arising out of the warranties set forth in this Contract and any remedies to which Owner otherwise would be entitled at law arising out of such warranties are hereby excluded. Notwithstanding another provision hereof or under applicable Law, Contractor's liability for



---

breach of warranty shall be limited to the correction or replacement of the defective portion of the Work, and Contractor shall have no other liability in connection with such breach to Owner.

#### 11.4 Third Party Warranties

Contractor agrees to assign to Owner all of its rights and interest in any warranty that may be provided by the manufacturer or supplier of any Equipment, goods, parts, or materials and further agrees to provide all reasonable assistance to Owner in administering warranty claims with respect to any of these third party manufacturers or suppliers.

#### 11.5 Warranty Exclusions

The duties, liabilities and obligations of Contractor under this Article 11 or otherwise do not extend to any repairs, adjustments, alterations, replacements or maintenance that may be required as a result of normal wear and tear in the operation of the Facility, normal degradation in the performance of Equipment, or as a result of (a) improper repair or alteration by Owner or other Persons or (b) misuse, negligence or damage by Owner or other Persons.

#### 11.6 No Implied Warranties

THE EXPRESS WARRANTIES SET FORTH IN THIS CONTRACT ARE EXCLUSIVE AND NO OTHER WARRANTIES OF ANY KIND, WHETHER STATUTORY, WRITTEN, ORAL, EXPRESS OR IMPLIED (INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY AND IMPLIED WARRANTIES OF CUSTOM OR USAGE) SHALL APPLY.



---

i) Gas Generator and Turbine Cooling Systems

Turbogenerator  
Description

**Design and Cooling System**

**1 General**

The international standard **IEC 60034** is basis for the generator design. The insulation system is designed in heat resistance class F but used in class B.

The type of construction is **IM 7215** (IEC 60034-7). Two pedestal bearings assembled to the baseframe carry the rotor, on the turbine side of the rotor is the coupling flange.

A closed cooling air circuit through the generator with cooling elements arranged beside or above the active parts is standard.

In this case the generators degree of protection provided by the enclosure is **IP 54** (IEC 60034-5).

For sliprings and brushholder-assembly in the case of static excitation the degree of protection differs from that of the main generator. It is **IP 23** because of the open ventilated cooling air circuit.

**2 Main Design Groups**

The generator consists of the following components:

- Base frame
- Stator core
- Stator winding
- Cover
- Rotor shaft
- Rotor winding
- Rotor retaining rings
- Bearings
- Field connections

The following additional auxiliaries are required for generator operation:

- Oil system
- Excitation system

**3 Cooling System**

The heat losses arising in the generator interior are dissipated through air.

Direct cooling of the rotor essentially eliminates hot spots and differential temperatures between adjacent components which could result in mechanical stresses.

Indirect air cooling is used for the stator winding.

**4 Air Cooling Circuit**  
(see also 4.1-1110)

The cooling air for the generator is drawn by axial-flow fans arranged on the rotor via lateral openings in the stator housing.

The cooling air flow is divided into three flow paths after each fan:

**Flow path 1** is directed into the rotor end winding space for cooling the rotor winding.

One part of the cooling air flows past the individual coils for cooling the rotor end windings and then leaves the end winding space via bores in the rotor teeth at the ends of the rotor body.

The other portion of the cooling air is directed from the rotor end winding space into the slot-bottom ducts where it is discharged into the air gap via a large number of radial ventilating slots in the coils and bores in the rotor wedges. Along these paths the heat of the rotor winding is directly transferred to the cooling air.

**Flow path 2** is directed over the stator end windings to cold air ducts and into the cold air compartments in the stator frame space between the generator housing and the stator core. The air then flows into the air gap through slots in the core where it absorbs the heat from the stator core and stator winding.

**Flow path 3** is directed into the air gap via the rotor retaining rings. The air then flows past the clamping fingers and via ventilating slots in the stator core into the hot air compartments in the stator frame. This flow path mainly cools the rotor retaining rings, the ends of the rotor body and the ends of the stator core.

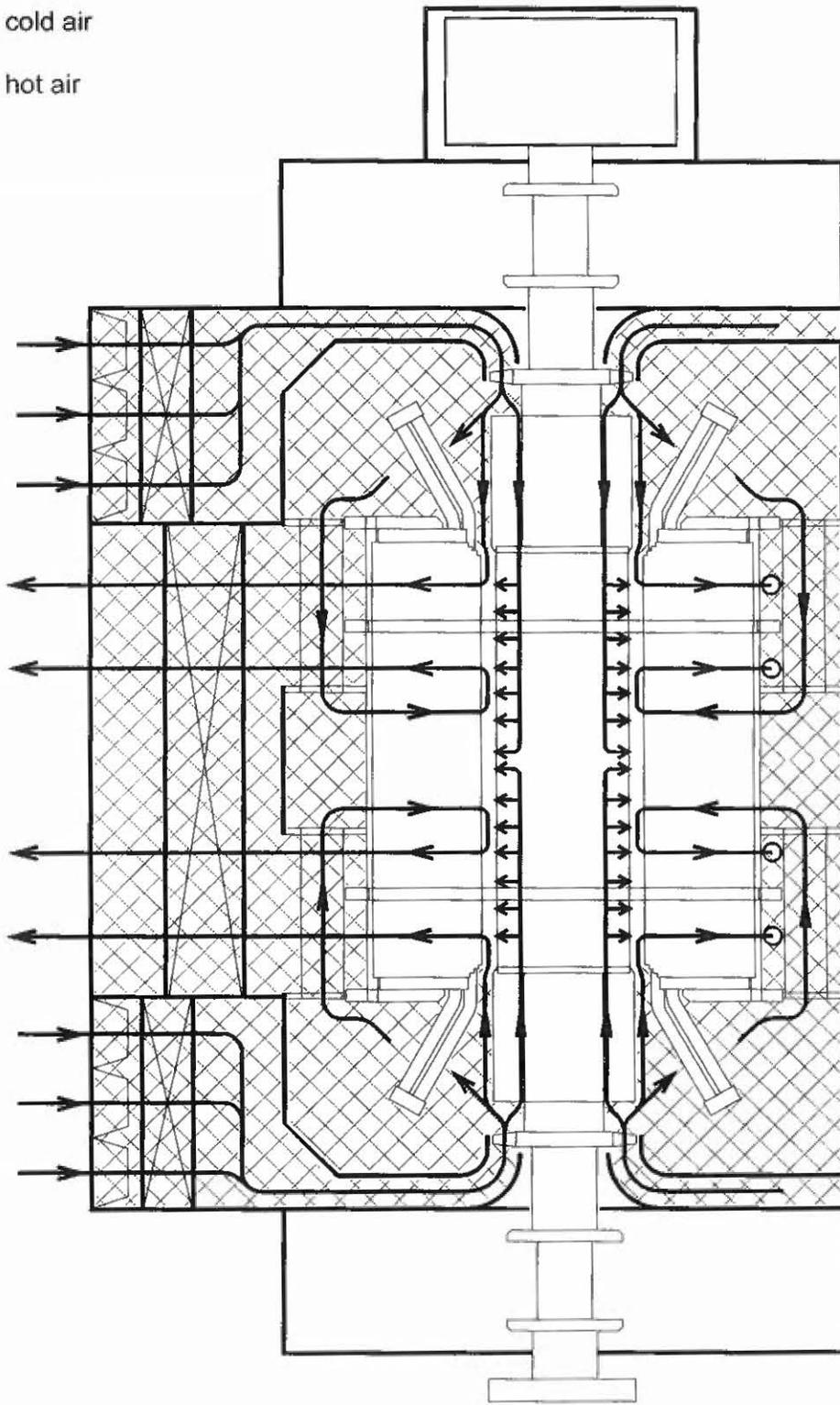
Flows 2 and 3 mix in the air gap with flow 1 leaving the rotor. The cooling air then flows radially outward through ventilating slots in the core within the range of the hot air compartments for cooling further portions of the stator core and stator winding. The hot air is discharged to the cooling elements via exhaust ducts.

Copyright © Siemens AG 2005 - All Rights Reserved

Turbogenerator  
Description

Generator Cooling Air Circuit  
Direct Air Cooling System (DAC)

— cold air  
— hot air



Copyright © Siemens AG 2001 - All Rights Reserved

**SIEMENS**

I.L. SGT6-3000E-IL080\_0509

**COOL AIR/COMPRESSOR BLEED SYSTEM****Note**

This document is intended to be used for information only and is expressly not to be used for design. The information contained herein is based upon standard, reference designs and may not reflect project specific design details. This document is applicable only to SGT6-3000E Gas Turbines.

**SYSTEM DESCRIPTION****Cooling Air**

The combustion turbine cooling air system provides direct cooling of components exposed to gas path temperatures that are higher than material temperature limits. Air is provided and distributed to vane rings 1, 2, 3, and 4. A large percentage of the cooling air is supplied to satisfy seal leakage requirements. By having a positive flow of cooling air toward the gas path, the hot gases are excluded from the shell support structure.

The turbine stationary vanes are cooled in several ways. First-stage vanes are cooled by compressor discharge air routed internally through the casing. Second-stage vanes are cooled using 14<sup>th</sup>-stage compressor bleed air that flows from a manifold to the turbine cylinder through external piping. The air passes from the outer shroud, through the vanes, and through the inner shroud while some air also exits through passages leading to the trailing edge of the vane. Similarly, 3<sup>rd</sup>-stage vanes are cooled using 11<sup>th</sup>-stage compressor bleed air piped externally to the turbine housing, and 4<sup>th</sup>-stage vanes are cooled using 6<sup>th</sup>-stage compressor bleed air piped externally. The air cools the vanes and vane segments and also provides positive flow across ring segments and inter-stage seals. Orifices in the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> stage cooling air

lines limit flow. Valves in the 2<sup>nd</sup> and 3<sup>rd</sup> stage cooling air lines modulate air flow to maintain disc cavity temperatures.

**Compressor Bleed**

High Pressure (HP) and Low Pressure (LP) Compressor Bleed valves work in conjunction with the guide vanes, to provide improved acceleration and compressor surge margin, or stall, during start-up and shutdown. The two systems function together to limit the airflow and control pressures in the compressor during start-up and shutdown.

**SYSTEM INTERFACES**

The Cooling Air System is connected with the instrument air system, electrical system, and the control system for power and control purposes.

**SYSTEM FUNCTION****Operation**Cooling Air

At Start-up, the Disc Cavity Temperature Control Valves will be in the fully closed position. Air flows through the bypass lines where flow is limited by orifice plates. As load increases, the valves are modulated.

During steady state operation, the amount of cooling air flow for disc cavity 2 and 3 temperature control is regulated by means of valves connected in parallel with fixed orifices. By monitoring the actual disc cavity temperatures, each valve is modulated to control the amount of cooling air flow.

For each disc cavity, the higher of two thermocouple readings is utilized for control purposes. If the disc cavity 2 temperature reaches a set value, an alarm is issued, and the engine is auto-unloaded in 10%

Siemens Confidential

## COOL AIR/COMPRESSOR BLEED SYSTEM

increments, holding for 10 minutes at each level until the alarm clears.

### Compressor Bleed

Both HP and LP bleed valves must be fully open to obtain a turbine start permissive. When the operating speed reaches  $3356 \pm 20$  rpm, the HP bleed valve will be commanded to the fully closed position. Similarly, when the operating speed reaches  $3525 \pm 25$  rpm, the LP bleed valve will be commanded to the fully closed position. If the HP or LP bleed valve's stroke time exceeds the allotted time in the Controls Settings Specification, an alarm will be sounded. If either of the valves does not fully close within the time defined by the Controls Settings Specification, the engine will trip.

During a normal or emergency shutdown sequence, the bleed valves open and the guide vanes close simultaneously with the fuel-off signal.

### DESCRIPTION OF COMPONENTS

#### Disc Cavity Thermocouples

Thermocouples are installed to enable an operator to determine temperature conditions within the turbine section. The following thermocouples transmit a signal for indication as a reference.

MBA10CT121A,B MBA10CT122A,B	Upstream of Row 2 Turbine Disc
MBA10CT123A,B MBA10CT124A,B	Upstream of Row 3 Turbine Disc
MBA10CT125A,B MBA10CT126A,B	Upstream of Row 4 Turbine Disc

If **MBA10CT121** or **MBA10CT122** temperature exceeds a reference setting, an alarm will occur.

### Cooling Air Orifices

Orifices are located in the external cooling air piping for the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> stage turbine vanes to limit the cooling flow.

MBH40BP003 MBH10BP005	Stage 4 Cooling Orifice
MBH20BP003	Stage 3 Bypass Orifice
MBH20BP005	Stage 3 Cooling Orifice
MBH30BP003	Stage 2 Bypass Orifice
MBH30BP005	Stage 2 Cooling Orifice

### Flow Modulation Valves

#### Turbine Stage 2 and 3 Temperature Control Valves

Stage 2 temperature control valve and Stage 3 temperature control valve are pneumatically actuated, fail open, butterfly valves, located in stages 2 and 3 of the cooling air piping circuit. Air to the Stage 2 temperature control valve actuator is controlled by pressure regulator **MBX75AA103** and I/P Transducer **MBX75AA185**. Air to the Stage 3 temperature control valve actuator is controlled by pressure regulator **MBX75AA105** and I/P Transducer **MBX75AA182**.

MBH30AA103	Stage 2 Temperature Control Valve
MBH20AA103	Stage 3 Temperature Control Valve
MBX75AA103	Stage 2 actuator pressure regulator
MBX75AA185	Stage 2 I/P Transducer
MBX75AA105	Stage 3 actuator pressure regulator
MBX75AA182	Stage 3 I/P Transducer

## COOL AIR/COMPRESSOR BLEED SYSTEM

Siemens Confidential

### LP Bleed Valve

The low-pressure bleed valve is a pneumatically actuated, fail closed, butterfly valve. Air to the valve actuator is controlled by a three-way solenoid valve, **MBX72AA083**. A needle valve between the solenoid valve and actuator allows adjustment of the valve closing time by adjusting the restriction to supply instrument air.

Limit switches are mounted on the LP bleed valve shaft for determining the valve position. **MBH11CG083** indicates the fully open position, while **MBH11CG085**, **MBH11CG087**, and **MBH11CG089** indicate the fully closed position.

MBH11AA003	LP Bleed Valve
MBX72AA083	LP actuator three-way solenoid valve
MBH11CG083	Open limit switch
MBH11CG085	Close limit switch
MBH11CG087	Close limit switch
MBH11CG089	Close limit switch

### HP Bleed Valve

The high-pressure bleed valve is a pneumatically actuated, fail closed, butterfly valve. Air to the valve actuator is controlled by a 3-way solenoid valve, **MBX72AA085**. A needle valve between the solenoid valve and actuator allows adjustment of the valve closing time by adjusting the restriction to supply instrument air.

Limit switches are mounted on the HP bleed valve shaft for determining the valve position. **MBH21CG083** indicates the fully open position, while **MBH21CG085**, **MBH21CG087**, and **MBH21CG089** indicate the fully closed position.

MBH21AA003	HP Bleed Valve
MBX72AA085	HP actuator three-way solenoid valve
MBH21CG083	Open limit switch
MBH21CG085	Close limit switch
MBH21CG087	Close limit switch
MBH21CG089	Close limit switch

©2009 Siemens Energy, Inc.

I.L. SGT6-3000E-IL080\_0509

3

k) Recommended Spare Parts**501D5A Capital Spares List**

Item	Description	Qty	Market Price	Repair / Replace (FFS)	Repair / Replace (FFH)
14pcs/Set	Fuel Nozzle Asms	1 Set	560,000.00	800/2400	32,000/64,000
14pcs/Set	Combustor Baskets	1 Set	364,000.00	400/1600	16,000/32,000
14pcs/Set	Transitions	1 Set	560,000.00	400/1600	16,000/32,000
14pcs/Set	Clamshells	1 Set	140,000.00	400/3200	16,000/32,000
81pcs/Set	Row 1 Turbine Blades	1 Set	427,000.00	800/1600	32,000/64,000
73pcs/Set	Row 2 Turbine Blades	1 Set	399,000.00	800/1600	32,000/96,000
55pcs/Set	Row 3 Turbine Blades	1 Set	574,000.00	1600/3200	64,000/128,000
51pcs/Set	Row 4 Turbine Blades	1 Set	546,000.00	1600/3200	64,000/128,000
48pcs/Asm	Row 1 Vane Segments	1 ASM	890,000.00	800/1600	32,000/64,000
16pcs/Asm	Row 2 Vane Segments	1 ASM	780,000.00	800/1600	32,000/64,000
14pcs/Asm	Row 3 Vane Segments	1 ASM	785,000.00	800/1600	32,000/64,000
14pcs/Asm	Row 4 Vane Segments	1 ASM	898,000.00	800/3200	32,000/96,000
48pcs/Set	Row 1 Ring Segments	1 Set	168,000.00	NA/800	NA/32,000
48pcs/Set	Row 2 Ring Segments	1 Set	175,000.00	NA/1600	NA/64,000
28pcs/Set	Row 3 Ring Segments	1 Set	112,000.00	NA/2400	NA/96,000
28pcs/Set	Row 4 Ring Segments	1 Set	126,000.00	NA/23200	NA/96,000

Recommended BOP spares will be determined based on final plant design.

# Turbogenerator Operating and Maintenance Manual

---

## Spare Parts

Copyright © Siemens AG 2009 - All Rights Reserved

Turbogenerator

Recommended Spare Parts

Parts identification number	Designation	Installed quantity	Recommended quantity for 2 years	Unit
<b>Generator Bearings</b>				
116385	E-ZYB 35-335 bearing shell w. hydrostatic ø 335 x 300 Profil. 2.215/1.32% RENK Therm V89	1	1	pcs.
116386	E-ZYQ 35-335 bearing shell w. hydrostatic ø 335 x 254 Profil. 2.215/1.32% RENK Therm V89	1	1	pcs.
116383	Chamber seal type 20 35-425 ø 425, IP 44,	3	3	pcs.
116384	Chamber seal type 22 35-425 ø 425, IP 55, 90 mm	1	1	pcs.
107903	Jointing compound Curil T	1	1	pcs.
<b>Shaft bushings</b>				
274382	Labyrinth ring	1	1	kg
<b>Rotor grounding system</b>				
105014	Double brush holder CDHm1KLA820 G-CuZn33Pb	2	2	pcs.
105011	Two-layer contact brush EMT 513-005, 20 x 8 x 32 EG5U / AG20	4	40	pcs.
<b>Monitoring generator</b>				
119889	Resistance thermometer WQ 0233 2xPT100, Install. length 250 mm, HAN 8D	6	2	pcs.
120043	Shell thermocouple MQ 0206-PVDFö 3xTC(K), Install. length 375 mm, HAN 8D	2	1	pcs.
<b>Anticondensation heating</b>				
116421	CSN Threaded heating body ERCH III/38, 1,6 kW, 3 x 480V, G2", M20	2	1	pcs.

Copyright © Siemens AG 2009 - All Rights Reserved

Turbogenerator

Recommended Spare Parts

Parts identification number	Designation	Installed quantity	Recommended quantity for 2 years	Unit
<b>Cooler (DAC Unit)</b>				
	Compact Filter, G4/F7 592 x 292 x 300	2	64	pcs.
	Compact Filter, G4/F7 287 x 292 x 300	2	16	pcs.
	Flap Actuator Motor JCI M9132-GGA-1	1	1	pcs.
	Temperature Sensor JCI, TS-9103-8324	1	1	pcs.
	Differential Pressure Switch JCI P 233 A-10-AAC	1	1	pcs.
	Differential Pressure Switch JCI P 233 B-AAC	1	1	pcs.
	Controler JCI FX07	1	1	pcs.
<b>Brushless exciter</b>				
116785	Fuse 840C208F01	6	2	pcs.
116766	F-Diode 840C411F03	6	12	pcs.
121767	R-Diode 840C411F04	6	12	pcs.
116768	Ground Fault Transmitter 153C691G02	1	1	pcs.
116769	RC-Capacitor Assembly 153C684	1	1	pcs.

**Note:** For the use of spare parts not bought at Siemens PG there is no guarantee for damages or defects resulting from this.

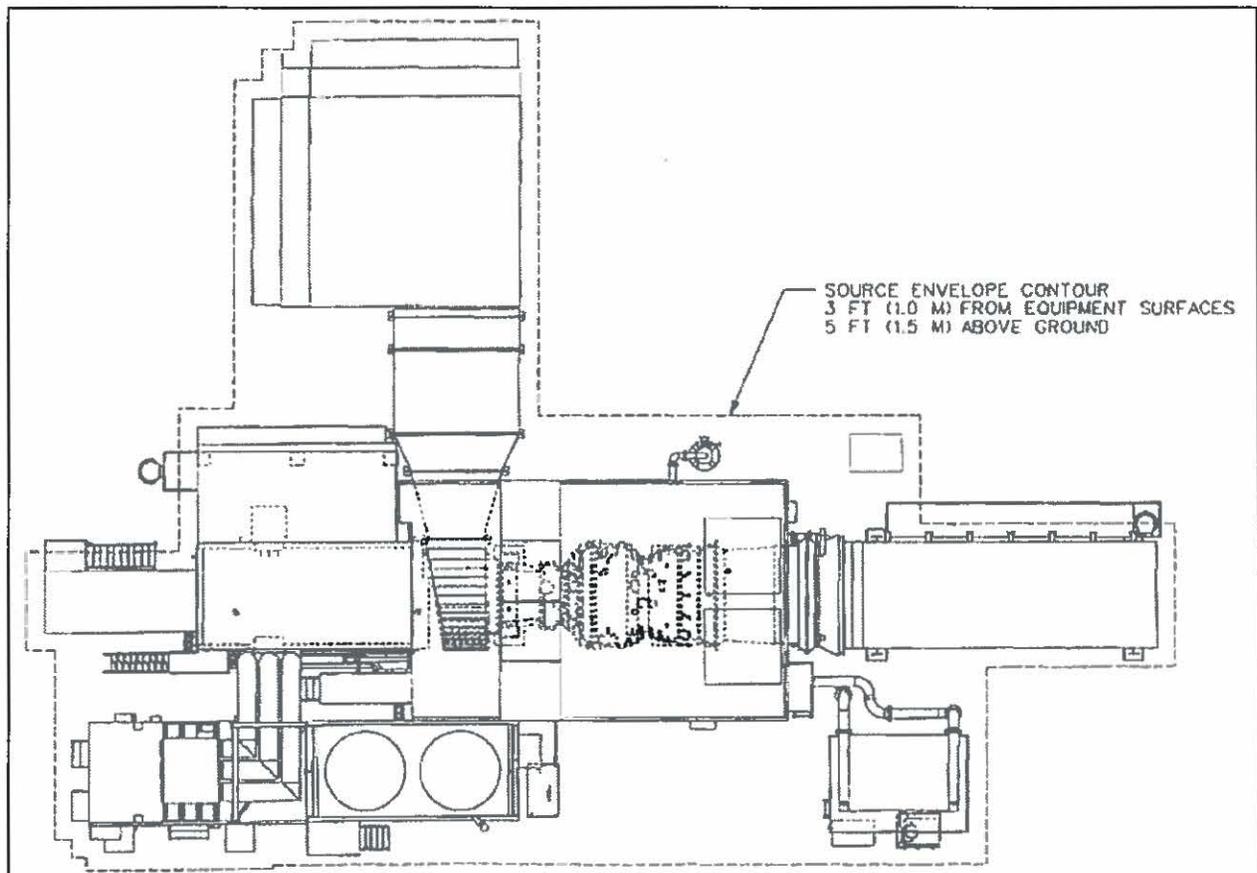


### 1) Noise Rating for Start-Up and Operation

The spatially averaged near field A-weighted sound level emissions from the equipment for one (1) CTG and associated auxiliaries are typically 90 dB or less, in a free field environment, when measured on the near field source envelope contour, with all equipment operating at steady state base load conditions, exclusive of transients, startup and shutdown and any other off normal and/or emergency conditions, using standard acoustical test procedure and measurement methods.

Appropriate corrections, in accordance with OEM documentation and recognized industry standards, shall be made to the near field sound level measurements. This acoustical estimate applies strictly to the CTG package and is exclusive of BOP equipment or structures that may be located in the vicinity of the near field Source Envelope Contour, indicated below.

#### **Near Field Source Envelope Contour**





---

#### 4. Additional Tender Submission Documentation

- a) Tender Security
- b) Previous Experience List
- c) Work in Progress List
- d) Additional Proposed Subcontractors
- e) Monthly Man Power by Trade
- f) Example Equipment Rate Schedule
- g) Certificate of Insurance
- h) Certificate of Recognition (COR) from Newfoundland and Labrador Construction Safety Association or Owner Approved Equivalent.
- i) Third Party Safety Program Certifications
- j) Clearance Letter from the Workplace, Health, Safety and Compensation Commission indicating the contractor is in good standing
- k) Browz ID number
- l) Clarifications and Exceptions to to Contract 2014-57952-TB

PURPOSE/REMITTER: PROENERGY SERVICES INTERNATIONAL LLC Page 101 of 500, 100 MW Combustion Turbine Generation - Holyrood



CASHIER'S CHECK

No. 8723505733

93-38  
929

DATE: APRIL 18, 2014

PAY SIX MILLION FOUR HUNDRED THOUSAND DOLLARS AND 00 CENTS

CUSTOMER COPY \$ 6,400,000.00

TO THE ORDER OF: NEWFOUNDLAND AND LABRADOR HYDRO

Location: 8723 Sedalia Main

U.S. Bank National Association  
Minneapolis, MN 55480

NON NEGOTIABLE

AUTHORIZED SIGNATURE

HARLAND CLARKE 20745 (03-10) 11386701

THIS DOCUMENT CONTAINS A TRUE WATERMARK - HOLD TO LIGHT TO VIEW



CASHIER'S CHECK

No. 8723505733

93-38  
929

DATE: APRIL 18, 2014

PAY SIX MILLION FOUR HUNDRED THOUSAND DOLLARS AND 00 CENTS

\$ 6,400,000.00

TO THE ORDER OF: NEWFOUNDLAND AND LABRADOR HYDRO

PURPOSE/REMITTER: PROENERGY SERVICES INTERNATIONAL LLC

Location: 8723 Sedalia Main

U.S. Bank National Association  
Minneapolis, MN 55480



*James A. Taylor*  
AUTHORIZED SIGNATURE

Details on Back. Security Features Included.

⑈8723505733⑈ ⑆092900383⑆ ⑆50080235248⑈



Travelers Canada  
Suite 300, P.O. Box 6  
20 Queen Street West  
Toronto, Ontario M5H 3R3  
www.travelerscanada.ca

**SURETY'S LETTER OF QUALIFICATION**

**TO:** ProEnergy Services  
**FROM:** Travelers Insurance Company of Canada  
**DATE:** April 22, 2014  
**CONTRACTOR:** Pennecon Limited  
**PROJECT:** 2014-57952-TB: Engineering Procurement & Construction  
Turnkey Turbine Generator Holyrood Generating Station  
Civil, Electrical, Mechanical Works

---

We are the Surety for Pennecon Limited, (and its subsidiary and related/affiliated companies), who has a current bonding facility in place. Pennecon Limited has demonstrated to us in the past an ability to complete their projects in accordance with the conditions of their contracts and we have no hesitation in recommending their services to you.

Pennecon Limited has in place an aggregate bond facility of approximately \$200,000,000, which is not fully utilized at the present time.

Our client has provided a budget to ProEnergy Services in relation to the Project. Based on the limited information available at this time and subject to our assessment of the project, contract terms, and our client's work program at the time of tender, we believe we can support the captioned project and supply the requisite bonds if asked to do so.

Our decision to extend the required suretyship will be based on our underwriting of the contractor and project documents at the time of formal tenders.

Travelers Insurance Company of Canada

A handwritten signature in blue ink, appearing to read "O Eggert".

---

Oliver Eggert  
416.488.2522



---

a) Tender Security



---

b) Previous Experience List



## Previous Experience Summary

Description of the Work	Client	Location	Completion Date	Value of Completed Work (USD)
Turnkey EPC; Refurbishment and Fuel Conversion of 1 x MS7001EA; 2 x LM6000	CVG	Puerto Ordaz, Venezuela	October 2011	125,915,000
Engineering; Procurement of Parts; Construction; Startup and Commissioning of 3 x FT8-3	CORPOELEC	Charallave, Venezuela	July 2011	61,787,000
Engineering; Procurement of Parts; Construction; Startup and Commissioning of 2 x LM6000PC/PD	CORPOELEC	Charallave, Venezuela	November 2012	93,133,000
Turnkey EPC; Refurbishment and Fuel Conversion of 2 x LM2500, 2 x LM6000PC/PD	CORPOELEC	La Guaira, Venezuela	December 2010	91,857,000
Turnkey EPC; Refurbishment and Fuel Conversion of 2 x MS7001EA	CORPOELEC	Maracaibo, Venezuela	May 2009	127,300,000
Turnkey EPC; Refurbishment and Fuel Conversion of 2 x LM2500+; 1 x LM6000 PC	CORPOELEC	Guarenas, Venezuela	November 2011	78,979,000
Turnkey EPC; Refurbishment and Fuel Conversion of 1 x LM6000 PC	CORPOELEC	Guarenas, Venezuela	August 2012	60,500,000
Turnkey EPC of 3 x TM2500, 1 x LM6000PD, 1 x TM2500	Dowans Holdings	Dar es Salaam, Tanzania	September 2008	102,000,000
Turnkey EPC; Refurbishment and Conversion of 2 x RB211	Pakistan Power Resources	Pakistan	August 2009	53,559,000
Turnkey EPC; Refurbishment and Fuel Conversion of 1 x LM2500 PE	PDVSA	Tamare, Venezuela	June 2010	23,510,000



---

c) Work in Progress List



Work in Progress

Description of the Work	Client	Period of Contract	Tendered Value
Turnkey EPC; Refurbishment and Fuel Conversion of 2 x TwinPac FT-4	PDVSA	April 2014	62,653,000
Turnkey EPC of 4 x Trent60	PDVSA	May 2014	169,705,000
Engineering; Procurement of Parts; Construction; Startup and Commissioning of 2 x LM6000 PC	PDVSA	April 2014	36,647,000



## d) Additional Proposed Subcontractors

Subcontractor	Registered in NL	WHSCC	Yes
	Yes	NLCSA COR	Yes
Dexter Construction Company Limited Part of The Municipal Group of Companies			
Address: 927 Rocky Lake Dr PO Box 48100 Bedford, NS B4A 322	Scope: Foundations, Excavation, Backfill, Gravel, Asphalt		
Phone: (902) 835-3381			
Contact: Brian Reimer, P.Eng			



---

e) Monthly Man Power by Trade

## Monthly Man Power by Trade

Monthly Man Power	April	May	June	July	August	September	October	November	December
Civil Site Work	0	12	23	57	25	5	5	0	0
Civil Excavation and Backfill	0	8	37	33	8	2	6	0	0
Civil Concrete	0	0	324	436	86	0	0	0	0
Civil Roads	0	0	0	0	0	5	4	0	0
Piping	0	0	2	152	103	2	0	0	0
Structural	0	0	0	2	28	4	0	0	0
Mechanical Millwright	0	0	2	169	221	75	0	0	0
Boiler Maker	0	0	0	105	54	0	0	0	0
Electrical	0	11	33	46	55	39	0	0	0
Controls	0	0	0	11	51	0	0	0	0
<b>Total Man Power</b>	<b>0</b>	<b>31</b>	<b>421</b>	<b>1012</b>	<b>631</b>	<b>132</b>	<b>15</b>	<b>0</b>	<b>0</b>



---

f) Example Equipment Rate Schedule

**Example Equipment Rate Schedule**

Equipment	Manufacturer & Model Number	Size	Hourly Usage Rate	Daily Usage Rate	Weekly Usage Rate	Daily Standby Rate
185 CFM Compressor	TBD	185CFM	\$20.00	\$200.00	\$1,000.00	\$120.00
Articulated Truck	Cat 740	40T	\$215.00	\$2,150.00	\$10,750.00	\$1,290.00
Boom Truck	International	30 Ton	\$140.00	\$1,400.00	\$7,000.00	\$840.00
Crane	Grove	50T	\$120.00	\$1,200.00	\$6,000.00	\$720.00
Crane	Grove	80T	\$155.00	\$1,550.00	\$7,750.00	\$930.00
Diesel Welding Machine	TBD	TBD	\$20.00	\$200.00	\$1,000.00	\$120.00
Dozer	Cat D6	20T	\$120.00	\$1,200.00	\$6,000.00	\$720.00
Dozer	Cat D8/Kom 155	40T	\$220.00	\$2,200.00	\$11,000.00	\$1,320.00
Excavator	Takeuchi	3T	\$65.00	\$650.00	\$3,250.00	\$390.00
Excavator	Cat 308	8T	\$90.00	\$900.00	\$4,500.00	\$540.00
Excavator	Cat 320	20T	\$140.00	\$1,400.00	\$7,000.00	\$840.00
Excavator	John Deere	30T	\$150.00	\$1,500.00	\$7,500.00	\$900.00
Excavator	Cat 345	45T	\$205.00	\$2,050.00	\$10,250.00	\$1,230.00
Excavator	Komatsu PC600	65T	\$265.00	\$2,650.00	\$13,250.00	\$1,590.00
Forklift Variable Reach	CAT	10,000 lb	\$110.00	\$1,100.00	\$5,500.00	\$660.00
Front End Loader 216Hp	Cat 950	2.68	\$120.00	\$1,200.00	\$6,000.00	\$720.00
Front End Loader 283Hp	Cat 966	3.6	\$165.00	\$1,650.00	\$8,250.00	\$990.00
Front End Loader 392Hp	Cat 980	4.2	\$190.00	\$1,900.00	\$9,500.00	\$1,140.00
Front End Loader 555Hp	Cat 988	6	\$240.00	\$2,400.00	\$12,000.00	\$1,440.00
Generator	TBD	10 KW	N/A	\$180.00	\$900.00	\$108.00
Generator	TBD	15 KW	N/A	\$260.00	\$1,300.00	\$156.00
Generator	TBD	25 KW	N/A	\$300.00	\$1,500.00	\$180.00
Hydraulic Breaker for 330 Exc.	Cat	H-140	\$138.00	\$1,380.00	\$6,900.00	\$828.00
Light Towers	TBD	4 KW	N/A	\$300.00	\$1,500.00	\$180.00
Motor Grader	Cat 12M (AWD)	12M	\$125.00	\$1,250.00	\$6,250.00	\$750.00
Pickup	Ford F-150	1/2 T	\$22.00	\$220.00	\$1,100.00	\$132.00
Skid Steer Loader	Cat	279	\$40.00	\$400.00	\$2,000.00	\$240.00
Tractor/Trailer	TBD	TBD	\$110.00	\$1,100.00	\$5,500.00	\$660.00
Vibratory Roller	Cat CS56	12T	\$83.00	\$830.00	\$4,150.00	\$498.00
Water Truck	International	TBD	\$43.00	\$430.00	\$2,150.00	\$258.00



---

g) Certificate of Insurance





- 
- h) Certificate of Recognition (COR) from Newfoundland and Labrador Construction Safety Association or Owner Approved Equivalent.

[Print Unofficial Transcript\\*](#)

[Change PIN](#)

[Sign Out](#)



**Individual Quickcheck**

\*To obtain your Official NCCER Training Transcript, contact your instructor, or you can purchase an official NCCER Credentials Packet by filling out a [Credential Request Form](#).

**Training**

**Skill Assessments**

**PVs**

Alfred Bartol

Card Number: 8329029

**Crafts Completed**

*(None)*

**Levels Completed**

*(None)*

**Modules Completed**

*(None)*

**NCCER Certifications**

<b>Expires</b>	<b>Certification</b>	<b>Date Certified</b>
1/31/2015	Administrator	2/25/2011
2/13/2015	Craft Instructor	8/31/2011
	<b>*Craft Certifications</b>	
	Construction Site Safety Master	8/31/2011
	Core Curricula	2/25/2011
8/31/2014	Master Trainer	2/24/2011

[Sign Out](#)

# National Center for Construction Education and Research

This is to certify that

*Alfred Bartol*

*Master Trainer*

has successfully completed all requirements and  
will be entered into the National Registry on  
this Twenty-fourth day of February, 2011



*Donald E. Whyte*

Donald E. Whyte

President



---

i) Third Party Safety Program Certifications

[Home](#)
[Training](#)
[Contractor Management](#)
[Contractor Benefits](#)
[Workforce Development](#)
[SEMS](#)
[About](#)
[News](#)

# PROFESSIONAL SAFETY NETWORK

PEC Safety has a network of over 1000 professional trainers/consultants that can assist our customers' contractor workforce with training and consulting needs.

## PEC SAFETY FEATURED IN THE HOUSTON CHRONICLE

PEC Safety was recently featured in the Houston Chronicle on the importance of safety and the jobs created by safety in the Oil & Gas Industry. To view the article in the Houston Chronicle, please click [here](#).

[Read More](#)

## RECOMMENDED COMPANIES

PEC is proud of the products and services we are able to offer our contractors and instructors nationwide. We know that there is more to your business than what we currently provide; for this reason we offer to you the below recommended companies. These companies have been carefully selected, knowing they offer products or services of the highest quality relating to our industry. Please [click here](#) to view the list of recommended companies.

[Read More](#)

## CONTRACTOR SERVICES

Document Uploads & Training Tracker Bundle with Insurance Verification This annual subscription can help your company as well as your customers' requirements. Included within this bundle is PEC's Advanced Training Tracker system as well as the ability to Upload and Archive safety documents in both the SSQ and Training Tracker. By recording, tracking, and maintaining your company's training documents, you can ensure that all your training is up to date and easily accessible.

[Read More](#)

[Open Links](#) 



233 General Patton Ave, Mandeville, LA | 1.800.892.8179  
© 2012 PEC. All rights reserved



ALFRED BARTOL  
[PROENERGY SERVICES HOME](#)  
[LOG OUT & CLOSE](#)

Selected Company

PROENERGY SERVICES

**PROENERGY SERVICES**

2001 ProEnergy Blvd.  
Sedalia, MO 65301

Primary Contact: Alfred Bartol  
Phone: 660-287-7207  
Email: [abartol@proenergyservices.com](mailto:abartol@proenergyservices.com)

Questionnaire is Complete SSQ was last completed on 4/11/2014 by: Alfred Bartol.

SSQ ID: 25999 Date: 4/11/2014 - 3:53 PM Central Time

[Edit Questionnaire](#)

[Print Questionnaire](#)

[Hagemeyer Discount Page](#)

**Help**

[Marathon Approved Subcontractor List](#)

[Edit User Profile or Change Password](#)

[Report Card](#)

[Industry Comparison Report: TRIR](#)



[Transfer to Training Tracker](#)

**Verificatio**



For Clients (for-clients/benefits/) For Contractors (for-contractors/benefits/) Services (services/overview/) MENU/REGISTER/ LOGIN

Resources (resources/testimonials/ancon-marine/) Company (company/about-us/) Contact (contact/get-in-touch/)



These global leaders use PICS every day.

<b>Prequalify</b>	<b>Centralize</b>	<h3>In the News</h3> <p><b>The Most Dangerous Job in America: Tower Climbing</b> (<a href="http://www.picsauditing.com/blog/2014/04/dangerous-job-america-tower-climbing/">http://www.picsauditing.com/blog/2014/04/dangerous-job-america-tower-climbing/</a>)</p> <p><b>ERRG Selects PICS' Contractor Prequalification Platform</b> (<a href="http://www.picsauditing.com/blog/2014/02/errg-selects-pics-contractor-prequalification-platform/">http://www.picsauditing.com/blog/2014/02/errg-selects-pics-contractor-prequalification-platform/</a>)</p> <p><b>DTE Energy Selects PICS for Contractor Management</b> (<a href="http://www.picsauditing.com/blog/2014/02/dte-energy-selects-pics-contractor-management/">http://www.picsauditing.com/blog/2014/02/dte-energy-selects-pics-contractor-management/</a>)</p> <p><b>Access Midstream Selects PICS' Contractor Safety Management Program</b> (<a href="http://www.picsauditing.com/blog/2014/02/access-midstream-selects-pics-contractor-safety-management-program/">http://www.picsauditing.com/blog/2014/02/access-midstream-selects-pics-contractor-safety-management-program/</a>)</p> <p style="text-align: right;"><b>See More</b> (<a href="http://www.picsauditing.com/blog/category/news/">http://www.picsauditing.com/blog/category/news/</a>)</p>
<b>Audit</b>	<b>Manage</b>	

Privacy Policy (footer-menu/privacy-policy/) Cookie Policy (footer-menu/cookie-policy/) Contact PICS (contact/get-in-touch/) WebEx Login (footer-menu/webex-login/) Register (footer-menu/register/) Login (footer-menu/login/) +1-949-936-4500

Global Headquarters  
California, USA  
17701 Cowan, #140  
Irvine, CA 92614 USA

**REQUEST DEMO** (request-demo/) **CONTACT** (contact/get-in-touch/)

DocuGUARD, InsureGUARD, AuditGUARD, EmployeeGUARD and PICS are trademarks of PICS.



April 11, 2014

# ProEnergy Services LLC

Became a Member of the PICS Consortium on:  
2/15/13

This document certifies that the company above is a Member of the PICS Consortium. This company will be an authorized user of the PICS database, as long as a full PICS membership is maintained.

  
John Moreland, President



  
Jesse Cota, V.P. Operations



Fred Bartol ProEnergy Services LLC (400-153748)  
 | Meetings | Webcasts | My Profile | Company Admin | Log Out



Home | My To-Do List | My Clients | Messages | Favorites | Hide

Company | Employees | Training Manager

YOU ARE HERE: Home » Access Audits » Company Notifications » ISNworld Sticker Request » Company Profile



- 1. Company Information
  - Audit/Review Report
  - Company Profile
  - Company Security Settings
  - Details
  - Company Notifications
  - Login Statistics Report
  - Permission Report
  - Security Roles
  - Sticker Request
  - User Login Access
  - Employees
  - Evaluation Report
  - Graphs
  - Job Bid
  - Operator Qualifications (OQ)
  - Promote My Company
  - SmartLog
  - Site Tracker
  - Training Manager
  - Training Qualifications (TQ)
  - Third Party Company Data
  - Work Types
- 2. Document Center
- 3. Questionnaire
- 4. Review & Verification (RAVS)

Details | Company Contacts | Primary Location

Details

**Company ID Number:** 400-153748  
**Web Address:** www.proenergyservices.com  
**Phone Number:** 6605967032  
**Fax Number:** 6608270469

Subscription Type	Start Date	End Date
Contractor Subscription	04/24/2009	04/24/2015

About Your Company

**Company Description:** ProEnergy Services is an integrated service company with broad domestic and international experience. PES is a cost-effective, safe, reliable service group with high quality standards, and provides a broad spectrum of services to the global energy industry.

**Company Logo:**



**Company Picture:**



+ Save

Contact Us  

Become a Member

Remember Me  
Login Help

Username:

Password:



Collect. Verify. Connect.

WHAT WE DO

BENEFITS

EVENTS

RESOURCES

ABOUT US

Careers

Company

Customers

Data Providers

Contact Us

# Company

Company History

Management Team

## ISN Through the Years

Established in 2001, ISN® is a global leader in contractor and supplier management. We support more than 350 Hiring Clients in capital-intensive and public sector industries to help manage more than 52,000 contractors and suppliers with operations in over 75 countries. We are headquartered in Dallas, Texas, with additional offices in Calgary, Sydney, London, Los Angeles and New York. ISN takes pride in leading efforts to improve the efficiency and effectiveness of contractor management systems and in serving as a forum for sharing industry best practices among our members.

2002

1<sup>ST</sup>

Pipeline Hiring Client

2003

1,000

Contractors

2003

ISN Expands Services with MSQ

2004

1<sup>ST</sup>

Offshore Hiring Client

2004

1<sup>ST</sup>

Onshore Hiring Client

2005

20

Employees

2005

RAVS Begins

2005

100

Hiring Clients



Fred Bartol ProEnergy Services LLC (400-153748)  
 | Meetings | Webcasts | My Profile | Company Admin | Log Out



Home My To-Do List My Clients Messages Favorites More...

YOU ARE HERE: Home » Grade Details



Clients Grade Requirements

Cleco Corporation

Cleco Corporation

You are connected to 13 Clients

**A**

Grade Since 09/20/2013

Grade Component	Status	Points	Edit
<a href="#">Current Year EMR</a>	Rate is 0.72	10 / 10	
<a href="#">Insurance</a>	Insurance Documents are Accepted	30 / 30	
<a href="#">Louisiana Contractor License</a>	Louisiana Contractor License Grade Accepted	0 / 0	
<a href="#">RAVS Safety Program</a>	RAVS score is 100	25 / 25	
<a href="#">Safety Questionnaire</a>	Exceptional	5 / 5	
<a href="#">Safety Statistics</a>	Satisfactory	20 / 30	
Total		90 / 100	



- 
- j) Clearance Letter from the Workplace, Health, Safety and Compensation Commission indicating the contractor is in good standing

Upon notice of award, ProEnergy will provide a WHSCC clearance letter.



---

k) Browz ID number

ProEnergy Services, LLC - Browz ID number: **42C64665**



---

l) Clarifications and Exceptions to Contract 2014-57952-TB

Clarification to IT 18 – 1: If ProEnergy is the successful bidder, it agrees to promptly negotiate in good faith the terms of the EPC contract between the parties which shall be based on the form of contract included in the RFQ and as further modified or supplemented to reflect the terms set forth in PES's bid and as otherwise mutually agreed to by the parties as part of the contract negotiations.

5

# TENDER SUBMISSION

Presented To:

**Nalcor Energy**

for

**100 MW Simple Cycle EPC:  
Contract: 2014-57952-TB**

Prepared By



## Binder 2

April 21, 2014

This document is privileged and contains confidential information intended for use only by Nalcor Energy.



---

**5. Equipment Proposal**

# PROPOSAL

Presented To:

**Nalcor Energy**

for

One (1) Siemens SGT6-3000E  
(501D5A) Combustion Turbine  
Generator

*Prepared By*



Proposal No. 714-8844R1

April 21, 2014

**This document is privileged and contains confidential information intended for use only by  
Nalcor Energy.**

---



---

## Table of Contents

<b>1.0</b>	<b><i>Introduction</i></b> .....	<b>3</b>
<b>2.0</b>	<b><i>Scope of Supply</i></b> .....	<b>3</b>
<b>2.1</b>	<b>Combustion Turbine Generator</b> _____	<b>3</b>
<b>2.2</b>	<b>Generator Step-Up Transformers (GSU)</b> _____	<b>3</b>
<b>2.3</b>	<b>Limit of Scope</b> _____	<b>4</b>
<b>3.0</b>	<b><i>Expected Equipment Performance</i></b> ..... <i>Error! Bookmark not defined.</i>	
<b>3.1</b>	<b>Design Criteria</b> _____ <i>Error! Bookmark not defined.</i>	
<b>3.2</b>	<b>Expected Performance</b> _____ <i>Error! Bookmark not defined.</i>	
<b>4.0</b>	<b><i>Commercial Terms</i></b> .....	<b>5</b>
<b>4.1</b>	<b>Delivery</b> _____	<b>5</b>
<b>4.2</b>	<b>Validity</b> _____	<b>5</b>
<b>4.3</b>	<b>Taxes</b> _____	<b>5</b>
<b>4.4</b>	<b>Price</b> _____ <i>Error! Bookmark not defined.</i>	
<b>4.5</b>	<b>Payment Schedule</b> _____	<b>5</b>
<b>5.0</b>	<b><i>Warranty</i></b> .....	<b>5</b>
<b>6.0</b>	<b><i>Terms &amp; Conditions</i></b> .....	<b>6</b>
<b>7.0</b>	<b><i>Follow Up</i></b> .....	<b>6</b>

**1.0 Introduction**

ProEnergy Services (“ProEnergy”) is pleased to provide this proposal to Nalcor Energy (“Nalcor” or “Customer”) for one (1) unused Siemens SGT6-3000E (501D5A) Combustion Turbine Generator (CTG) as described in this proposal.

ProEnergy is an integrated service company with broad international experience. Established by a dedicated group of seasoned energy professionals, ProEnergy provides a broad spectrum of services to the global energy industry in response to a growing need for a cost-effective, safe, reliable service.

**2.0 Scope of Supply**

**2.1 Combustion Turbine Generator**

Turbine Model	SGT6-3000E (501D5A)
Year	2008
Serial Number	37A7750
Fuel	No 2 Distillate Oil
Generator Model	SGEN6-100A-2P
Year	2009
Serial Number	12009742
Generator Rating	120 MVA, .90 pf (at 40°C)
Voltage	13.8 kV

The CTG is a package commonly known as Siemens “SGT6-3000E PAC”. This package of equipment consists of the combustion turbine, generator and auxiliary equipment as detailed in the Supplemental Information attachments.

The equipment has been in storage since approximately October 2009. Storage and preservation activities have been provided in accordance with the manufacturer’s guidelines.

The SGT6-3000E provides reliable, economical generation for the range of peaking duty, intermediate operation or continuous service. The SGT6-3000E class has a cumulative reliability of over 99%. This figure has been attained by a fleet of around 145 machines which have attained over 6,300,000 cumulative operating hours.

**2.2 Generator Step-Up Transformer (GSU)**

Transformer 1	Combustion Turbine Generator
Rating	90/120/150 MVA

Low Side Voltage	13.8 kV Delta
High Side Voltage	230 kV Wye
Impedance	9% @ 90 MVA

Additional information on this transformer can be found in the Supplemental Information attachments.

2.3 Limit of Scope

Listed below are the limits to the ProEnergy standard Scope of Supply. All piping, wiring, cables, ducts, etc. connecting to these points is furnished by Customer unless modified by specification agreement.

<b>Equipment System</b>	<b>Limits of Seller Scope</b>
All piping, including Liquid Fuel, Cooling Water, Heating Water, Demineralized Water, Lube Oil, Compressed Air, Instrument Air, Hydraulic Start Oil	Flanged or threaded connection on Seller baseplate.
Inlet Air-to-Filter	Atmosphere (non-standard duct by others)
Turbine Package Ventilation/Cooling Air	Atmosphere (non-standard duct by others)
Turbine Exhaust	Atmosphere
Instruments on Seller's Baseplate	Terminal box on baseplate
Instrument wiring in Turbine Control Panel	Wiring Terminal block in Turbine Control Panel
Generator Ground Connections	Seller Neutral cubicle
Electric Motors	Terminal box on individual motor
Ladders and Platforms for Air Filter	Ladders and Platforms for Inlet Air Filter maintenance only
24 V DC Batteries and Chargers for Control System and Fire and Gas Systems	Battery terminals to baseplate (if supplied loose)

### 3.0 Commercial Terms

#### 3.1 Delivery

The CTG is ready for immediate sale and conversion to liquid fuel, and is offered as it sits in Memphis, TN. Transportation to the project site is not included in this proposal. This scope is part of the EPC proposal for this equipment.

The GSU Transformer is ready for immediate shipment and will arrive at the job site in accordance with the construction schedule. Pricing for the GSU includes delivery of the unit FOB port of Houston, Texas, USA.

#### 3.2 Validity

All equipment offered is subject to prior sale.

#### 3.3 Taxes

No sales or use taxes, including VAT, have been included in this quotation. These prices quoted exclude any federal, state or local taxes or fees which may be associated with the export, import or purchase of equipment and/or services.

#### 3.4 Payment Schedule

The payment schedule for the equipment purchase will be as follows:

<b>Milestone</b>	<b>Payment (% of Contract Price)</b>
Customer's indication in writing of the intent to proceed	50%
After Customer inspection of the equipment (must occur within seven (7) days of intent to proceed	50%

### 4.0 Terms & Conditions

This proposal shall be valid for thirty (30) days; provided, however, the obligation to treat this proposal as confidential, and that it cannot be shared with any third party without the prior written consent of ProEnergy shall survive.

ProEnergy and Customer will negotiate in good faith to establish general terms and conditions that are usual and customary of the sale of this equipment.



---

**5.0 Follow Up**

Please contact the following person(s) at ProEnergy for information regarding this proposal:

Bill Mars, EPS President

[bmars@proenergyservices.com](mailto:bmars@proenergyservices.com)

Office: 660.829.5100

Cell: 660.287.5327

Fax: 713.413.3600



---

**6. EPC Proposal**

# PROPOSAL

Presented To:

**Nalcor Energy**

for

**Simple Cycle EPC:**

**1 x Siemens SGT6-3000E Power Plant**

Prepared By



Proposal No. 1014-8866R1

April 21, 2014

This document is privileged and contains confidential information intended for use only by  
Nalcor Energy.



---

## Table of Contents

<b>1.0</b>	<b>Introduction.....</b>	<b>3</b>
<b>2.0</b>	<b>Project Execution Philosophy.....</b>	<b>3</b>
<b>3.0</b>	<b>Scope of Work and Equipment.....</b>	<b>4</b>
<b>4.0</b>	<b>Project Division of Responsibility.....</b>	<b>12</b>
<b>5.0</b>	<b>Design Basis.....</b>	<b>14</b>
<b>6.0</b>	<b>Project Execution Planning.....</b>	<b>16</b>
<b>7.0</b>	<b>Startup and Commissioning.....</b>	<b>20</b>
<b>8.0</b>	<b>Payment.....</b>	<b>25</b>
<b>9.0</b>	<b>Delivery Schedule.....</b>	<b>26</b>
<b>10.0</b>	<b>Clarifications.....</b>	<b>26</b>
<b>10.1</b>	<b>Duties &amp; Taxes.....</b>	<b>26</b>
<b>10.2</b>	<b>Clarifications.....</b>	<b>26</b>
<b>11.0</b>	<b>Terms &amp; Conditions.....</b>	<b>27</b>
<b>12.0</b>	<b>Follow Up.....</b>	<b>27</b>



## **1.0 Introduction**

ProEnergy Services, LLC ("ProEnergy" or "Contractor") is pleased to provide this proposal to Nalcor Energy ("Nalcor" or "Owner") for the Engineering, Procurement, and Construction (EPC) of a simple cycle power plant to be located near the city of St. John's, Newfoundland and Labrador, Canada.

ProEnergy is committed to quality and customer service, and consequently recognizes the importance and magnitude of this project. We are ready and committed to make available all of our combined resources, expertise, and experience to ensure that the engineering, procurement and construction of this project are successfully completed. To that end, we have developed this proposal to address the challenges and issues of the project. We wish to highlight the following key elements of our philosophical approach:

- Assigning a highly experienced team of professionals with experience in optimizing, engineering, designing, procuring materials and equipment, constructing, and commissioning power plants.
- Formal and systematic development of scope, schedule, responsibility, quality and cost on a task-by-task basis to allocate responsibility and ensure the focus of all parties is on meeting or exceeding established project goals.
- Developing a Project Quality Plan to address the quality related goals.
- Implementing proven Project Management approaches to effect proactive control of scope, quality, cost, and schedule; report on progress; identify deviations; forecast trends; take corrective actions when necessary; promote communications; and coordinate the activities of all participants on the project.
- Providing a continuous involvement of the key management personnel to provide the oversight, commitment, experience and attention required to ensure successful project completion.
- Use of local subcontractors as integral team members in support of the project. Our relationship with these organizations will take advantage of opportunities to benefit from local practices, infrastructure and experience with past projects in that region.

## **2.0 Project Execution Philosophy**

ProEnergy will execute this project based on industry standards, and our standard processes developed and tested through our experience in performing this type of work. Project management support will be provided from ProEnergy's headquarters in addition to an assigned Construction Manager at the project site.

The Management team at ProEnergy's home office will provide the project support functions required to assist the construction team. The support functions provided by the home office team include coordination and logistics, procurement and purchasing, documentation and procedure development, engineering and technical expertise, environmental health and safety, and quality control. The Project Manager will ensure that the construction team is receiving optimal support from these functions to maximize the effectiveness of the Construction Team. For a more detailed synopsis of the ProEnergy Project Management Methodology, please refer to Section 7 of this proposal.



The Construction Management Team at the site will:

- Manage, oversee, and direct the construction of the plant
- Provide direct management of manpower, material control, documentation control, planning, scheduling, and technical direction
- Provide direct feedback to the subcontractors selected for manpower planning, equipment & tool requirements, and consumables
- Collect the necessary data to proper documentation.

### 3.0 Scope of Work and Equipment

The plant will utilize one (1) unused SGT6-3000E CTG operating in simple cycle mode to produce approximately 123 MW of power at ISO conditions.

The Contractor will design, supply and install the Balance of Plant (BOP) systems to support the reliable operation of the primary mover. This proposal provides for the turnkey supply of all engineering, construction, construction tools, equipment rental, project management, commissioning, start-up, and performance testing as described throughout. Any modifications to the major equipment associated with this proposal could have consequential impact on the overall design and construction of the project.

#### **Assumptions**

The following assumptions have been made in the development of this proposal:

- Owner to provide access roads to the site suitable for transporting the major equipment.
- Owner to provide all local permits required to build the power plant and associated pipeline connections.
- Owner to provide an adequate supply of liquid fuel to the site boundary in accordance with OEM specifications.
- Owner to provide an adequate supply of raw water to the associated equipment flanged connection.
- Owner to provide a site that is clean, flat, and level, requiring minimal cut and fill to prepare for construction and with a soil bearing capacity of at least 3,000 psf.
- The scope of work in this proposal does not include pilings, piers, engineered soil, removal of rock, or subterranean obstacles whatsoever.
- The Owner will be responsible for payment of all taxes, duties, and fees associated with the project.
- The Contractor assumes no liability for the condition of any equipment not continuously controlled and maintained by the Contractor during the duration of the project. If, during the time of the project, the Contractor discovers defects of the Owner-supplied equipment, Contractor will notify Owner immediately.



The proposed scope of work and supply is comprised of the following outlined items:

### 3.1 Major Generation Equipment

This scope of work will include the complete installation of the following equipment:

- One (1) Contractor supplied unused SGT6-3000E CTG, identified separately in proposal 714-8844R1.
- One (1) Contractor supplied unused 90/120/150 MVA 230 kV GSU Transformer, identified separately in proposal 714-8844R1.

### 3.2 Balance of Plant (BOP)

The contractor will design and install a dedicated BOP system to support the primary generation equipment as described in the following sections of this document. The design will include the necessary structural, mechanical, electrical, instrumentation, and control systems to support the major equipment.

The Balance of Plant scope of supply will include the following:

- Complete design of the facility including civil, structural, mechanical, electrical, instrumentation and controls.
- Concrete foundations and plant gravel as necessary within the site.
- Installation of the complete power plant with the associated interconnections as necessary, which may include:
  - Electrical installation of the plant limited to the high voltage terminals of the GSU, BOP equipment, grounding, lightning protection, and cathodic protection.
  - Installation of Instrumentation and combustion turbine generator Control System .

### 3.3 BOP Major Mechanical Systems

#### 3.3.1 Plant Liquid Fuel System

The Contractor will design and install the plant liquid fuel system as described below:

- Supply and install a liquid fuel handling system to manage the liquid fuel from truck offloading to delivery to the flanged connection on the CTG.
- Fuel truck offloading system
- Liquid fuel storage capacity of approximately 2.5 million liters.
- Supply and install Duplex liquid fuel filters
- Supply and install 2 x 100% distillate forwarding pumps
- Provide and install all plant liquid fuel carbon steel piping, valves and fittings from the plant liquid fuel pipeline to the CTG.

#### 3.3.2 Demineralized Water Treatment System

The Contractor will supply and install a demineralized water treatment system to allow for water injection into the CTG for NO<sub>x</sub> abatement while operating on liquid fuel and for compressor water wash.



The water treatment system and associated storage tank(s) will be designed and optimized for two (2) four (4) hour runs of the plant per day.

Demineralized water for the plant will meet the specifications outlined in the following table.

Parameters	Limit	Test Method
Total Matter, PPM, Max	5	ASTM D1888
Dissolved Matter, PPM, Max	3	ASTM D1888
PH*	6.0-8.0	ASTM D1293
Conductivity*, Micromhos/CM 25°C, Max	0.5-1.0	ASTM D1125
Sodium + Potassium	0.1	ASTM D1428
Silicon Dioxide, PPM, Max	0.1	ASTM D859
Chlorides, PPM, Max	0.5	ASTM D512
Sulfates, PPM, Max	0.5	ASTM D516

\*Measured when water is free of carbon dioxide

### 3.3.3 Lube Oil Heat Exchanger and Cooling Water System

The Contractor will supply and install the following:

- A lube oil heat exchanger for the CTG and generator on a separate skid.
- The generator air gap control volume will be cooled by four separate heat exchangers provided by the generator OEM.

### 3.3.4 Oily Water Drain System

The Contractor will supply and install the oily water drain system as follows:

- Supply and install an Oily Water Separator System sized for this application
- Supply and install PVC or HDPE below ground piping and fittings from concrete oil containment units located at all transformers and CTG auxiliary skids

Piping will be routed to the oily water separator and then to the waste oil storage tank. The oily water separator effluent will be pumped out to the Owner's waste oil system.

### 3.3.5 Fire Detection & Protection

Fire protection for the CTG unit is included with the CTG package. The Contractor will interconnect with the existing Owner's fire protection loop.

### 3.3.6 Instrument and Service Air Systems

The instrument and service air systems will be as follows:



- Supply and install two (2) sets of two (2) x 100% instrument and service air screw compressors with associated dryer and air storage tanks
- Supply and install stainless steel tubing, valves, fittings and instruments for instrument and service air systems from the air compressors to various required areas throughout plant.

### 3.3.7 Exhaust Stack

The Contractor will install the Exhaust Stack provided with the CTG. This includes but is not limited to:

- Inlet Expansion Joint
- Inlet Transition Ducts

Typical design characteristics of the Exhaust Stack to be provided are as follows:

Approximate Stack Height	50 feet
Silencer	85 dB(A) Sound Pressure @ 1 m
Exterior Casing Material	ASTM A36 carbon steel
Interior Liner Material	409 stainless steel
Insulation Material	High temperature ceramic fiber

### 3.3.8 Inlet Air Heating System

The Contractor will design, supply, and install an inlet air heating system to allow for operation of the CTGs in icing conditions.

## 3.4 BOP Electrical Systems

### 3.4.1 230 kV System

The Contractor will install one (1) new 13.8 kV delta / 230 kV wye 90/120/150 MVA GSU with new transformer oil, suitable to Canadian standards.

### 3.4.2 13.8 kV System

The Contractor will:

- Supply and install one (1) Generator Circuit Breaker.
- Supply and install 13.8 kV interconnections from the generator terminals to the GSU.
- Supply and install 13.8 kV interconnections from the generator breaker to the Contractor supplied Auxiliary Transformer.
- Supply and install cable from connections on the Aux Transformers to the 4160 V and 480 V distribution systems.

### 3.4.3 4160 V System

A 4160 V system will be installed to support the CTG Motor Starter and fuel injection pump.



The Contractor will install the 4160 V system as follows:

- Supply and install 4160 V CTG MCC
- Supply and install 4160 V BOP Distribution Panel as required
- Supply and install 4160 V BOP MCC as required
- Supply and install cable tray / conduit with cabling from transformers to MCCs and from MCCs to plant 4160 V equipment and motors
- Supply and install conduit, duct banks, or cable trays mounted on utility racks

#### 3.4.4 480 V System

The Contractor will install the 480 V system as follows:

- Supply and install 480 V CTG MCC
- Supply and install 480 V BOP Distribution Panel as required
- Supply and install 480 V BOP MCC as required
- Supply and install feeder breakers to the 120/208 V system as required
- Supply and install cable tray / conduit with cabling from transformers to MCCs and from MCCs to plant 480 V equipment and motors
- Supply and install conduit, duct banks, or cable trays mounted on utility racks

#### 3.4.5 120/208 V System

Contractor will supply and install transformers and distribution panels as required with associated conduits, fittings and wire.

#### 3.4.6 Plant Area Lighting

The Owner will be responsible for plant area lighting.

#### 3.4.7 Ground Grid

The Contractor will provide the ground grid for the plant as follows:

- Supply and install plant ground grid with associated ground rods and connections to plant equipment, buildings and fence in accordance with applicable codes.

#### 3.4.8 Plant Electrical Cable Tray

The Contractor will provide the plant electrical cable tray work as follows:

- Supply and install cable tray throughout plant. Cable tray will be mounted on utility racks, cable trenches or within buildings for routing plant cabling. A separate cable tray will be installed for each of the medium voltage, low voltage, and instrumentation systems.



### 3.4.9 Conduit and Cable Systems

The Contractor will provide the plant conduit and cable system as follows:

- Supply and install rigid galvanized conduit or PVC (encased in concrete if required) for all underground power, control and instrumentation systems.

### 3.4.10 Lightning Protection

The Contractor will provide lightning protection as follows:

- Supply and install lightning protection on the CTG exhaust stack

### 3.4.11 Batteries / Chargers / UPS Systems

The Contractor will provide and install CTG battery charging system and associated components.

## 3.5 BOP Control System

The Contractor will supply and install a BOP control system that interfaces with the CTG control system.

### 3.5.1 Electronic Wiring and Pneumatic Piping

Contractor will supply and install necessary instrument wiring and pneumatic piping with associated Swagelok fittings, etc.

### 3.5.2 Remote Operating Capability

Contractor will supply and install the hardware and software required to allow remote operations diagnostics both at the plant and an off-site location. Features of this equipment include, but are not limited to, the following:

- Remote plant operations (e.g., start/stop)
- Diagnostics
  - Identification/assistance in all fault identification and diagnosis
  - ISO corrected performance degradation indication
  - Improvement in CTG availability and reliability
  - Twenty-four hour continuous CTG monitoring
  - Compressor wash cycle indication
  - Combustion and Hot Gas Path planned maintenance indication
  - Unit history
  - Remote support available
  - Assistance with commissioning

## 3.6 Cathodic Protection

Contractor will provide Cathodic Protection for all steel underground piping as necessary.



### 3.7 Plant Communication System

The Contractor will supply and install the following:

- Owner will supply Contractor with temporary telephone and internet capability for construction communication purposes.
- Permanent telephone lines for operation of the plant will be the responsibility of the Owner.

### 3.8 Plant Equipment Installation and Erection

The Contractor will:

- Unload all plant equipment delivered to site.
- Provide all support equipment and manpower as required to install all of the major equipment.
- Provide for erection of the BOP equipment associated with this proposal.

### 3.9 Site Work

Owner shall provide level site free and clear of above and below ground obstructions. Existing soil is assumed to be adequate for design and construction with minimum 3000 psf bearing capacity.

Contractor will prepare the site with minimal work for the construction of the project.

### 3.10 Plant Civil and Structural

Contractor will supply and install the following:

- All plant reinforced concrete foundations.
- Plant gravel as required.
- Structural steel utility racks to support overhead piping and cable trays or bus.
- Finished grading.

### 3.11 Plant Buildings

Contractor has included a building allowance per the Tender specifications in this proposal. The requirements will be finalized in discussions with the Owner.

### 3.12 Cranes, Equipment and Tools

Contractor to supply all plant construction required cranes, forklifts, back-hoes, hydraulic lifts, welding machines, air compressors, generators, temporary lights, trucks, pick-ups, etc.

### 3.13 Lubricants and Chemicals

Contractor will supply and install all lubricants, lube oils and chemicals for supplied equipment.



### 3.14 Black Start Capability

The Contractor will supply and install Black Start capability for the plant.

### 3.15 Spares

The Contractor will:

- Supply, receive and store all commissioning spare parts associated with the Contractor's scope of supply.
- Provide Owner with recommended list of spare parts for the BOP equipment supplied by Contractor.

### 3.16 Construction Offices and Storage Facilities

- Contractor to provide construction offices for Contractor.
- Owner is providing the site with sufficient square footage to provide a lay-down area along with construction offices, and construction utilities (electrical and water)
- Contractor to provide sanitation facilities for Contractor personnel during construction.

### 3.17 Engineering and Project Management

- Contractor will provide detailed engineering and specifications for all disciplines involved for the power plant including civil and concrete foundations.
- Contractor will provide project management complete with construction management, quality control / quality assurance, scheduling, administration, warehousing, and expediting including regular monthly reporting of all disciplines.
- Contractor will arrange for and provide fully qualified technical representatives during erection, testing, start-up and commissioning of the CTG.
- Contractor will provide start-up and commissioning and testing of BOP associated systems.
- Contractor will provide operator and maintenance training for the CTG and BOP.
- Contractor will provide one (1) hard copy in English of the O&M manuals, training manuals, engineering calculations, commissioning and start-up manuals, test manuals, as-built drawings, design specifications and warranty manuals for plant equipment.



**4.0 Project Division of Responsibility**

Description	Qty	Responsibility		
		Engineer / Design	Procure / Supply	Construct / Install
<b>General</b>				
Site with survey and soil study	1		Owner	
Liquid fuel	1 lot		Owner	
Raw Water	1 lot		Owner	
Site permitting as required (Environmental, etc.)	1 lot		Owner	
Construction permitting as required	1		Owner	
<b>Mechanical</b>				
Siemens SGT6-3000E CTG Package (Proposal 714-8844R1)	1	PES	PES	PES
Exhaust Stack (Proposal 714-8844R1)	1	PES	PES	PES
Liquid fuel system	1 lot	PES	PES	PES
Water piping within site boundary	1 lot	PES	PES	PES
Deminerlized Water Treatment System	1	PES	PES	PES
Deminerlized Water Storage Tank(s)	1 lot	PES	PES	PES
2 x 100% Compressed Air/Instrument Air (500 CFM each)	1	PES	PES	PES
Oily Water Separator & pumps	1 lot	PES	PES	PES
CTG Fire Protection and Extinguishing System	1	PES	PES	PES
Diesel Generator Set - Emergency Station Power	1	PES	PES	PES
Black Start Capability	1 lot	PES	PES	PES
Inlet Air Heating System	1	PES	PES	PES
<b>Electrical</b>				
13.8 kV/230 kV 90/120/150 MVA GSU (Proposal 714-8844R1)	1	PES	Owner	PES
New Transformer Oil for GSU	1 lot	PES	PES	PES
13.8 kV Generator Circuit Breaker	1	PES	PES	PES
Aux feeder breakers	1 lot	PES	PES	PES
Unit Auxiliary Transformer (13.8 kV / 4160 V)	1 lot	PES	PES	PES
4160 V MCC	1 lot	PES	PES	PES
4160 V Switchboard	1 lot	PES	PES	PES
Unit Auxiliary Transformer (4160 V / 480 V)	1 lot	PES	PES	PES
New Transformer Oil for Aux Transformers	1 lot	PES	PES	PES
480 V MCC	1 lot	PES	PES	PES
480 V Switchboard	1 lot	PES	PES	PES



Description	Qty	Responsibility		
		Engineer / Design	Procure / Supply	Construct / Install
Balance of plant (BOP) 480 V / 120 / 208 V Transformer, Distribution Panels, Lighting Panels	1 lot	PES	PES	PES
Isophase Bus from CTG to Generator Breaker	1 lot	PES	PES	PES
15 kV Cabling from Generator Breaker to GSU	1 lot	PES	PES	PES
Cabling within site boundary	1 lot	PES	PES	PES
Plant Ground Grid	1	PES	PES	PES
Plant Instrumentation	1 lot	PES	PES	PES
BOP Control System	1	PES	PES	PES
BOP Batteries and Chargers	1 lot	PES	PES	PES
Remote Operations Capability	1 lot	PES	PES	PES
<b>Civil / Structural</b>				
Leveled Site	1 lot		Owner	
Grading	1 lot	PES	PES	PES
Concrete Foundations	1 lot	PES	PES	PES
Site Gravel	1 lot	PES	PES	PES
<b>Buildings</b>				
Owner to define requirements	1 lot	PES	PES	PES
<b>Engineering / PM</b>				
Engineering and Project Management, Safety, QA/QC, subcontracting for civil, mechanical, electrical, instrumentation & plant control system			PES	
Construction Power (480 V)	1 lot	Owner	Owner	Owner
Temporary Power Distribution	1 lot	PES	PES	PES
Fencing and gates	1 lot	Owner	Owner	Owner
Plant security during construction	1 lot		Owner	
Start up and commissioning spare parts	1 lot		PES	
Recommended BOP spare parts list	1 lot		PES	
Cathodic Protection of Buried Piping	1 lot		PES	
Transportation of all Contractor Furnished Equipment (including equipment identified in Proposal 714-8844R1)	1 lot		PES	
Lubricants and Chemicals for CTG	1 lot		PES	
Lubricants and Chemicals for BOP	1 lot		PES	
Construction Offices, Storage, Temporary Facilities and Utilities	1 lot		PES	
Construction Tools and Equipment	1 lot		PES	



Description	Qty	Responsibility		
		Engineer / Design	Procure / Supply	Construct / Install
Operator and Maintenance Training (4 weeks)	1 lot		PES	

## 5.0 Design Basis

### 5.1 Design Conditions

Site Elevation	4.5 m ASL
Design Air Temperature	-25 to 35 C
Maximum Wind Velocity	TBD
Relative Humidity	60 %
Seismic Zone	TBD

### 5.2 Interconnect Points

Electrical	High voltage terminals on the GSU (substation can be quoted separately)
Plant Waste Water	At waste water tank pump to Owner's effluent system
Plant Waste Oil	At waste oil tank pump to Owner's effluent system
Raw Water	At site boundary

### 5.3 Project Design Codes and Standards

The following organization's standards and codes are applicable to design and construction practices for the project. Required Canadian standards can be discussed and priced prior to contract signing.

ACI	American Concrete Institute – Various Sections
CRSI	Concrete Reinforcing Steel Institute – Various Sections
AISC	American Institute of Steel Construction – Various sections
ASCE	American Society of Civil Engineers – Various Sections
AISI	American Iron and Steel Institute – Various Sections
IBC	International Building Code – Various Sections
SSPC	Steel Structures Painting Council – Various Sections
ASME	American Society for Mechanical Engineers – Various Sections
ASME B31.1	Code for Power Piping
ASME Section IX	Boiler and Pressure Vessel Code – Welding and Brazing Qualifications
ASME Section VIII Div I	Boiler and Pressure Vessel Code – Unfired Pressure Vessels
ANSI	American National Standards Institute – Various Sections
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning – Various Sections
TEMA	Tubular Exchanger Manufacturers Association for Shell and Tube Heat Exchangers – Various Sections



ASTM	American Society for Testing Materials – Various Sections
MSS	Manufactures Standardization Society Standard Practices – Various Sections
AWWA	American Water Works Association – Various Sections
AGA	American Gas Association – Various Sections
API	American Petroleum Institute – Various Sections
AWS	American Welding Society – Various Sections
AWS A3/0	Definitions of Welding Terminology
AWS B2.1-84	Standard for Welding Procedure and Performance Qualification
AWS D1.1	Code for Structural Welding
IEEE	Institute of Electronic and Electrical Engineers – Various Sections
NEC	National Electrical Code – Various Sections
NESC	National Electrical Safety Code – Various Sections
IES	Illuminating Engineering Society
NEMA	National Electrical Manufactures Association – Various Sections
NEMA AB1	Molded Case Circuit Breakers
NEMA ICS1	General Standards for Industrial Control and Systems
NEMA ICS2	Industrial Control Devices, Control and Systems
NEMA ICS4	Terminal Blocks for Industrial Use
NEMA ICS6	Enclosures for Industrial Controls and Systems
NEMA MG1	Motors and Generators
NEMA PE5	Constant-Potential-Type Electric Utility (Semi-Conductor Static Converter) Battery Chargers
NEMA SG2	High Voltage Fuses
NEMA WC2	Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
ICEA	Insulated Cable Engineering Association – Various Sections
ISA	The Instrumentation, Systems, and Automation Society – Various Sections
ISA S5.1	Instrumentation Symbols and Identification
NACE	The National Association of Corrosion Engineers – Various Sections
NACE RP018890	Standard Recommended Practice: Discontinuity (Holiday) Testing of Protective Coatings
NFPA	National Fire Protection Association – Various Sections
NFPA70	National Electric Code
NFPA No. 1	Carbon Dioxide Extinguishing Systems
NFPA No. 37	Stationary Combustion Engines and Gas Turbines
OSHA	Occupational Safety and Health Administration – Various Sections
OSHA CFR Title 29	Occupational Safety and Health Administration



## 6.0 Project Execution Planning

### 6.1 Project Management Team

ProEnergy Services will provide a Project Management team at its headquarters to support the on-site Construction Team with the following functions:

- Overall Project Management
- Procurement and purchasing services
- Quality Control / Quality Assurance
- Environmental Health and Safety
- Project Scheduling
- Engineering and technical support
- Coordination and logistics
- Human Resources
- Payroll and finance

The Project Management team will be managed and coordinated by the Project Manager. The Project Manager will have overall responsibility to ensure that the Construction Team is meeting the project goals by coordinating and managing the resources for the project.

### 6.2 Project Manager

The Project Manager's primary function is to ensure the project goals are being met. The Project Manager will monitor progress of the project and will ensure the project support functions are providing the necessary functions required by the Construction Team throughout the various stages of implementation from design through to completion. The Project Manager has complete responsibility for the EPC portion of the project's execution, from contract signing to final acceptance of the EPC scope of work, and will ensure the appropriate company resources are applied to the project to meet the goals set forth.

The Site Construction Manager will report directly to the Project Manager and will communicate any issues, support needs, technical concerns, project status, and man power needs on a daily basis.

### 6.3 Procurement

ProEnergy is responsible for procurement and purchasing services associated with the retrofit scope of work.

Records and reports will be maintained and communicated to inform all participants of the status of fabrication and delivery dates. Any potential deviation from the plan will be flagged as soon as it is identified so that appropriate corrective actions can be discussed and initiated before it can impact the overall schedule.

### 6.4 Quality Control

ProEnergy is committed to accomplishing the construction, commissioning, and start-up of this project within schedule at budgeted cost with high quality and reliability in full compliance with industry codes,



engineering standards, and Customer requirements.

The ProEnergy corporate Quality Program will be utilized including our standard procedures and instructions adapted specifically for this project. These procedures have been developed and enhanced through use on past and present successful projects.

This Quality Program provides effective integration, planning, monitoring, and control of the activities performed in all facets of the project. It will provide the framework for effective communication and coordination of the interfaces between the Project Team, Project Suppliers, and the Customer.

#### 6.5 Project Scheduling

The overall project schedule will be developed and submitted to Owner for comments. The schedule will be adjusted and resubmitted as the final schedule that the project will be constructed from. ProEnergy will update the schedule on a weekly basis and provide details of any deviations of the original schedule in weekly reports to the Owner. The Project Schedule will be updated by a ProEnergy scheduler.

#### 6.6 Construction Management

ProEnergy will provide Construction Management Services to retrofit the facility and perform the start-up and commissioning of the modified plant. The Construction Management team will consist of project management engineering support, technical specialists, quality control, and supervision to perform the work. Documentation and material control will be the responsibility of ProEnergy.

The site staff will be composed of the key personnel defined below, adjusted to the specific needs of the project as it progresses.

The Site Construction Manager is assigned to the site for construction, startup, and commissioning phases of the project. His responsibilities include coordinating with the various team members on all aspects of the project effecting construction and startup. The Site Construction Manager's responsibility will also include forming a close working relationship with the Customer and any subcontractors selected to perform the work.

The Site Construction Manager is supported by a staff of individuals experienced in the mechanical/piping, electrical, and instrument and controls disciplines as needed. These individuals will provide rapid resolution of any questions, concerns, or problems that may arise during the project to ensure quality and adherence to schedule. Additionally, individuals experienced in QA/QC, Safety, and supervision of labor will complete the Construction Team to provide the required expertise in those areas.

The Site Construction Manager is responsible for the conduct of all construction related activities for the duration of the Project. The Project Manager is directly responsible for project work performance and accomplishment of the construction schedule and goals. Planning and scheduling of site work is vital to the success of any project. The Site Construction Manager forecasts labor manpower requirements, allocates manpower, equipment, and material, and administers the overall construction activities. For this task, he is supported by an experienced staff comprised of the following members.



The Project Engineer is responsible for the engineering and design interfaces. The Project Engineer is also responsible for providing field engineering support to the construction supervisors and Site Construction Manager.

The Quality Assurance/Quality Control (QA/QC) Manager is responsible for the Field Quality Assurance and Quality Control Program. All manuals and procedures for the Program are produced under his direction. He is also responsible for the direction and supervision of the Quality Control and Testing Program. The Quality Assurance/Quality Control Manager will be supported by the ProEnergy QA/QC Group.

The QA/QC Manager will ensure that all ProEnergy and Subcontractor personnel support and comply with the site safety and environmental requirements.

The Project Manager / Scheduler are responsible for the development of the project schedule and weekly updates. The Project Schedule will include all aspects of the project including design, procurement, construction, and commissioning of the retrofit of the plant. The Project Manager / Scheduler will update the schedule on a weekly basis and provide any deviations to the Construction and Project Manager.

A key element of an effective management program is the communication between all levels of the team. During the retrofit phase of the Project, communication is accomplished through regularly scheduled meetings. The agenda for these meetings typically include the following:

- Progress reports from those responsible for the various work tasks.
- Information concerning material deliveries for planning work.
- Information concerning quality issues and work plans.
- Information concerning design issues requiring resolution.
- Discussions and presentation of plans for the upcoming period.
- Development of action items and assignment of responsibility for resolution.
- Discussion of any special site activities such as heavy lifts, etc.
- Later in the project, startup and commissioning plans will be presented at these meetings.

At the conclusion of the meeting, minutes of the meeting are developed and distributed to all project participants. Attachments such as schedules, cost evaluations, and other documentation will be distributed as appropriate.

The Project Manager will be responsible for the day-to-day management of the project team and ensuring that the contract is fulfilled within the completion dates and to the satisfaction of the Customer. Additional personnel assigned to the project as well as subcontractors will report through these individuals to the Project Manager as shown on the personnel list below.

The ProEnergy Site Construction Manager will be the primary point of contact on the project. The core management team will set out all procedures and controls required for coordinating and routing documentation, design and engineering information, technical interfaces and correspondence as required ensuring the following:

- Planning and scheduling all project activities.
- Coordination of project activities.



- 
- Coordination of project interfaces.
  - Monitoring and reporting all project activities.
  - Producing progress reports and schedules.
  - Providing site Management and Coordination.
  - Providing contract management.

Key ProEnergy Personnel include the following:

- CEO (based in Sedalia, MO)
- Vice President of Engineering (based in Sedalia, MO)
- Project Manager (Sedalia, MO and on site as needed)
- Construction Manager (based on site)
- Finance Manager (based in Sedalia, MO)
- Project Engineering (based in Sedalia, MO)
- Scheduler (based in Sedalia, MO)
- QA/QC Manager (on site)
- Logistics Manager (based in Sedalia, MO)
- Electrical Superintendent (on site as applicable)
- Mechanical Superintendent (on site as applicable)
- Piping/BOP Superintendent (on site as applicable)
- Controls Superintendent (on site as applicable)



## 7.0 Startup and Commissioning

This section describes ProEnergy's methodologies and approach to providing Start-Up and Commissioning Services.

### 7.1 Phase I – Develop Commissioning Procedures and Documentation

This phase represents the start of ProEnergy's activities on the project. After receiving notice to proceed, ProEnergy's first action will be to request project reference material to support execution of Phase I activities. Because this is an integrated project, the majority of the needed information will already be on hand. Requested project reference material will typically include:

- Equipment Lists
- Instrumentation Lists
- Piping and Instrumentation Diagrams (P&IDs)
- Electrical One-Line/Elementary Diagrams
- System/Control Design Descriptions
- Project Schedule
- Control Logic Diagrams
- Project Schedule
- Vendor Manuals

After receiving sufficient reference material to start work, ProEnergy's Manager of Start-Up Services will identify internal resources necessary to complete Phase I activities. The assembled ProEnergy team (Phase I) will then perform the tasks specified below. Please note that specified tasks may be performed in parallel, as best meets the needs of the project.

#### 7.1.1 Develop Commissioning Plan

ProEnergy will develop a Commissioning Plan for Start-Up and commissioning of the project. This important document will provide administrative and management guidelines for moving the project from construction, through commissioning and Start-Up, into commercial operation. Commissioning Plan content will include (but not be limited to) the following:

- Introduction
- Purpose
- Scope of Commissioning Manual/Plan
- Jobsite Organization and Responsibilities
- Commissioning Activities
- Guidelines for Controlling Cost and Schedule
- Periodic Meeting Requirements
- Periodic Reporting Requirements

#### Guidelines for Problem Resolution

After development, the Commissioning Plan will be submitted to the Owner for review and comment.



After inclusion/resolution of Owner comments (if any), the Commissioning Plan will be issued and used by all project personnel associated with the Start-Up and commissioning effort. Periodic updates to the Commissioning Plan will be made as required.

#### 7.1.2 Review Project Safety Plan

ProEnergy will review the project Safety Plan to determine its adequacy for use by the Start-Up team and to verify the project has established safety policies. Specific focus will be placed on ensuring the Safety Plan contains sufficient detail and direction with regard to:

- Equipment Isolation
- Lock-out/Tag-out
- Electrical Safety
- Confined Space Entry
- Hazardous Materials
- Spills
- Fire Prevention
- Emergency Response

After reviewing the Safety Plan, ProEnergy will provide any associated comments and/or recommendations to the Owner for its review, evaluation, and possible implementation.

#### 7.1.3 Review and Compile Project Technical Data

ProEnergy will review the project reference material previously requested from the Owner. After review, reference material will be organized and catalogued to create a Technical Library for use during Start-Up. Updates to project reference material must be distributed to ProEnergy, as such updates are issued, to ensure the Technical Library is up to date and to avoid risks and delays arising from incomplete, inaccurate, or obsolete information. The Technical Library, with included updates, will be shipped to the work site at the time of Start-Up Manager mobilization.

#### 7.1.4 Develop System Start-Up Boundaries

ProEnergy will assess and/or develop system boundaries to establish a logical approach to commissioning and start-up. The purpose of this task is to identify boundary and/or termination points for performance of system flushing, cleaning, operating tests, continuity tests, and system by system commissioning/start-up. Establishment of these boundaries also allows the Owner to focus completion efforts on the required system within these clear and concise boundaries.

After system start-up boundaries are established, corresponding marked-up drawings and boundary descriptions will be utilized as the basis of the individual Turnover Packages. Two sets of the drawings will be developed, one will be maintained by ProEnergy's Manager of Start-Up Services for record purposes and backup, the second will be forwarded to Site with the Start-Up Manager and utilized in the Turnover Packages and Start-Up Schedule development.

#### 7.1.5 Develop/Review Start-Up and Commissioning Schedule



ProEnergy will develop a detailed start-up and commissioning schedule for the project. The schedule will be based on system start-up boundaries previously identified, and any milestone dates provided by the Owner. The schedule will be developed in Primavera computer software to allow subsequent inclusion in the overall project or construction schedule, and to allow future updates as required. After development, the start-up and commissioning schedule will be delivered to the Owner electronically, in soft-copy form (computer software file).

#### 7.1.6 Develop Component Test Standards

ProEnergy will develop test standards for new mechanical, electrical, and I&C system components installed at the Project. Format and content of the component test standards will be consistent with established ProEnergy corporate standards. After development, the “Master” set of component test standards (with index) will be maintained by ProEnergy’s Manager of Start-Up Services for subsequent handover to the Start-Up Manager. A complete set of test standards associated with the new retrofit equipment will be included in the Commissioning Plan Manual which will be delivered to the Owner in hard-copy form.

#### 7.1.7 Develop System Commissioning Procedures

ProEnergy will develop commissioning procedures for each plant system as needed based on the retrofit scope of work, based on the start-up boundaries previously identified. Each procedure will contain safety information, step-by-step checklists, and procedural text. The format of each procedure will be consistent with established ProEnergy corporate standards.

A complete set of Commissioning Procedures will be included in the Commissioning Plan Manual which will be delivered to the Owner in hard-copy form.

#### 7.1.8 Develop System Turnover Packages

ProEnergy will develop turnover packages for each plant system affected by the retrofit. Format and content of each turnover package will be consistent with established ProEnergy corporate standards. After initial development, each turnover package will contain forms for recording system parameters during testing, commissioning, and starting up the associated system. The package will utilize the previously developed system boundaries as the basis of equipment associated with each system. As the plant moves through the start-up and commissioning process, forms included in each turnover package will be filled in with system data. After all start-up and commissioning activities are completed as dictated by the retrofit, the turnover packages will be finalized and delivered to the Owner.

After development, the “Master” set of turnover packages developed will be transmitted to (client) by ProEnergy’s Manager of Start-Up Services, for subsequent implementation at the work site.

#### 7.1.9 Perform Operability/Commissioning Review

As a final task for Phase I, ProEnergy will perform an Operability/Commissioning Review to determine:

- Potential safety issues based on adjusted plant design.
- System maintainability based on adjusted plant design.
- Ease of project/system/component start-up and commissioning.



- System boundary isolations.
- Operability of plant systems and controls.

Results of the Operability/Commissioning Review will be forwarded to the Owner.

## 7.2 Phase II – Assemble and Mobilize the Site Team

This phase represents the start of site mobilization for the ProEnergy start-up and commissioning team. The following tasks will be completed during this phase.

### 7.2.1 Select ProEnergy Start-Up Manager

ProEnergy's Manager of Start-Up Services will select the Start-Up Manager for the project. The Start-Up Manager's resume will be submitted to the Owner for review and comment.

### 7.2.2 Finalize Mobilization Schedule for the ProEnergy Site Team

After reviewing all Phase I documentation and evaluating the construction schedule (planned and actual), ProEnergy's Manager of Start-Up Services will review the proposed site mobilization schedule for members of the ProEnergy start-up/commissioning team. After internal review, the final mobilization schedule will be submitted to the Owner for review and comment.

### 7.2.3 Select ProEnergy Site Team Members

Supported by ProEnergy corporate staff, the Manager of Start-Up Services will identify and select ProEnergy personnel to serve on the start-up/commissioning team. Persons filling "Lead" positions will be selected first. After selection, resumes of ProEnergy team members will be forwarded to the Owner.

### 7.2.4 Identify Tools and Test Equipment

After reviewing Phase I documentation (including reference material), the ProEnergy Start-Up Manager will identify tools and test equipment necessary to support start-up and commissioning. This list of tools and test equipment will be made available to the Owner prior to site mobilization.

### 7.2.5 Calibrate Test Equipment

Any test equipment provided by ProEnergy will be calibrated before first use.

### 7.2.6 Mobilize ProEnergy Team to Site

After completion of the above tasks, ProEnergy will begin mobilization of its start-up team to site, in accordance with the mobilization schedule previously developed. ProEnergy will make the necessary travel arrangements.

## 7.3 Phase III – Commission and Start-Up the Plant

Major tasks to be completed in this phase include:



### 7.3.1 Develop Punch-List Structure and Priorities

The ProEnergy Start-Up Manager will develop a priority scheme for punch-listing plant systems and associated equipment affected by the retrofit. Established priorities will be used to indicate the impact of discrepancies and/or deficiencies associated with construction or operation of each system.

### 7.3.2 Walk Down and Punch-List Plant Systems

When a system is said to be mechanically and electrically complete by the construction organization, the assigned ProEnergy Start-Up Engineer will perform a walk down to verify the system is ready for the start of commissioning. Observed construction deficiencies will be documented and prioritized on punch-lists. Any high priority punch-list items which would prevent the start of commissioning will be communicated to the construction organization for resolution. If/when there are no such items remaining, the system will be accepted by the start-up team for the start of commissioning.

### 7.3.3 Commission and Start-Up Plant Systems and Equipment

For each system, the assigned ProEnergy Start-Up Engineer will commission the associated pieces of equipment, working in coordination with vendor representatives, the construction organization, and plant operations personnel. The Start-Up Engineer will then start-up the system, coordinating activities with the construction organization and/or plant operations personnel as required.

### 7.3.4 Support Plant Testing and Initial Operation

After commissioning and start-up of all plant systems have been completed, the start-up team will work with designated operations personnel to perform integrated start-up of the plant. During this time frame, ProEnergy team members will be available to advise plant operations personnel on proper sequence and methods of unit operations, including start-up, normal operation, and shutdown. ProEnergy team members will also participate in responding to abnormal operating conditions (alarms, trips, etc.) and will assist in troubleshooting operational problems.

The ProEnergy start-up team will continue to support integrated plant operation throughout performance and/or reliability tests to achieve commercial operation.

### 7.3.5 Resolve Punch-List Items

For each plant system, the assigned ProEnergy Start-Up Engineer will work with the construction organization and plant operations personnel to complete/resolve any remaining punch-list items within the start-up team's scope of responsibility.

### 7.3.6 Finalize Start-Up Documentation

The ProEnergy Start-Up team will finalize all start-up documentation not previously delivered to the Owner. Such documentation is expected to include as-built drawings and control logic red-lines due to the retrofit. The ProEnergy Start-Up team will demobilize from the plant site after this task has been completed.



## 8.0 Payment

### 8.1 Payment Schedule

Milestone Payment Description	Percentage of Contract
Down Payment (Non-Refundable)	20.00%
Milestone 1 - Engineering Deliverables	
Initial IFC Rev 0 Drawings - Major Foundations	0.50%
Initial IFC Rev 0 Drawings - Electrical One Lines	0.50%
Initial IFC Rev 0 Drawings - P&IDs	0.50%
Initial IFC Rev 0 Drawings - Engineering List (Equipment, Instrumentation, etc)	0.50%
Initial IFC Rev 0 Drawings - Controls	0.50%
Milestone 2 – Civil Work - Foundations Poured for Major Equipment	
CTG	10.00%
GSU	2.50%
Milestone 3 – Major Equipment Rough Set on Foundation	
CTG	10.00%
GSU	2.50%
Milestone 4 – Assembly of Major Equipment	
CTG	10.00%
GSU	2.50%
Milestone 5 – Mechanical Completion	
CTG	10.00%
GSU	2.50%
Milestone 6 – Commissioning & Testing Complete	
CTG First Fire	10.00%
Performance Test	8.00%
Complete Documentation Turnover	2.00%
<b>Total</b>	<b>100.00%</b>



## 8.2 Commercial Letter of Credit

All payments shall be effected through an irrevocable and confirmed commercial letter of credit (LOC), opened in favor of Contractor, in a form that is acceptable to Contractor and confirmed by a leading US bank. All costs associated with opening, advising, confirming and facilitating payment through the LOC shall be to the account of the Owner.

The Down Payment of the contract price shall be drawn via the LOC upon Owner's indication in writing of the intent to proceed. This Down Payment is not refundable if the order is cancelled after Contractor receives the intent to proceed.

The Owner shall open the LOC upon entering into the Contract and shall ensure that Contractor is in receipt of an acceptable commercial letter of credit no later than ten (10) days after the date of entering into the Contract as first mentioned above. The LOC shall facilitate payment of the Cancellation Fee to Contractor should the Contract be cancelled by Owner. Owner shall promptly arrange for an extension to the Letter of Credit in the event of a delay.

## 9.0 Delivery Schedule

ProEnergy has estimated a Commercial Operations Date (COD) of December 6, 2014, based on rapid award and funding of the project.

## 10.0 Clarifications

### 10.1 Duties & Taxes

Taxes on all equipment are not included in this proposal.

### 10.2 Clarifications

- During the start-up and commissioning phase, the Contractor will verify that the Contractor supplied equipment is operating according to design specifications.
- At the Owner's expense, the Contractor can provide optional simple cycle testing, which may include heat rate, output, emissions, and reliability. This testing will confirm the base operating condition of the equipment.
- The design criteria (e.g., Temperature, Relative Humidity, Elevation, Soil Conditions, etc.) included with this proposal associated with quantities and capacities may vary as the site conditions are confirmed and the detailed design is finalized. Once the site conditions are confirmed by the Owner, the project performance (Heat Rate and Net Output) may be more accurately calculated.
- Any Owner supplied equipment will be deemed to be functioning as designed and will be installed as-is.
- In order for the Contractor to meet the Delivery Schedule in Section 10, the Owner must meet the following requirements:
  - Cash flow (payments must be made within 5 days of the invoiced milestone)
  - Owner's engineer (Owner will provide a two (2) day turnaround on the review and approval of the Rev. 0, Issued For Construction, Key Engineering Drawings). Key Drawings are the



---

Process Flow Diagrams, General Arrangements, Electrical One Line Diagrams, and Control Architecture Drawings).

### **11.0 Terms & Conditions**

This proposal shall be valid for thirty (30) days. However, the obligation to treat this proposal as confidential and that it cannot be shared with any third party without the prior written consent of ProEnergy shall survive.

This proposal, and any resulting contract or agreement, shall be subject to the terms and conditions to be mutually negotiated.

### **12.0 Follow Up**

Please contact the following person at ProEnergy for information regarding this proposal:

Bill Mars, EPS President

[bmars@proenergyservices.com](mailto:bmars@proenergyservices.com)

Office: 660.829.5100

Cell: 660.287.5327



---

## 7. Supplemental Information

- a) Siemens SGT6-3000E (501D5A) CTG Drawings
- b) Pictures of the SGT6-3000E Equipment
- c) CTG Maintenance Records
- d) GSU Transformer Information
- e) ProEnergy Services Capabilities



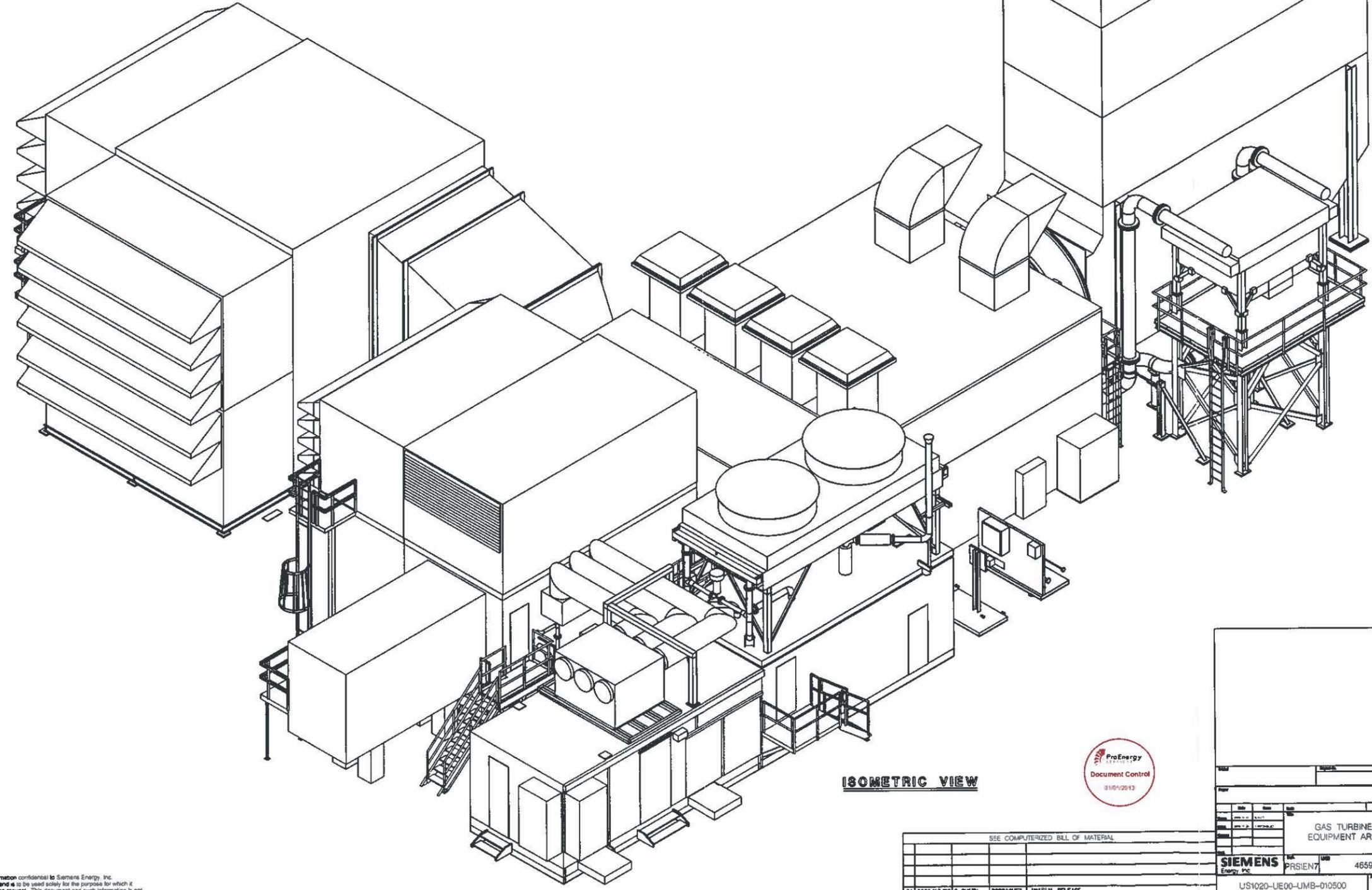
---

a) Siemens SGT6-3000E (501D5A) CTG Drawings



**NOTES**

- 1. NORTH ARROW SHOWN ON THIS DRAWING REPRESENTS EQUIPMENT NORTH AND IS IRRESPECTIVE OF PLANT NORTH. ORIGIN OF COORDINATE SYSTEM IS LOCATED AT THE INTERSECTION OF THE COMPRESSOR SUPPORT CENTERLINE AND THE TURBINE SHAFT CENTERLINE AT GRADE LEVEL, 8'-11" BELOW THE TURBINE SHAFT CENTERLINE.
- 2. THE PURPOSE OF SHEETS 5 AND 6 IS TO PROVIDE GENERAL GUIDELINES CONCERNING HAZARDOUS AREA CLASSIFICATION. IT IS THE RESPONSIBILITY OF THE ARCHITECT/ENGINEER TO DERIVE SPECIFIC DIMENSIONS FROM THE VENDOR SUBMITTED EQUIPMENT DRAWINGS. SPECIFIC INFORMATION DERIVED FROM VENDOR EQUIPMENT DRAWINGS MUST BE USED TO VERIFY EQUIPMENT COMPLIANCE WITH HAZARDOUS AREA REQUIREMENTS.
- 3. EACH BOUNDARY EXTENDS 15 FEET IN ALL DIRECTIONS FROM EACH PIECE OF EQUIPMENT. WHERE NO PHYSICAL BOUNDARY EXISTS, USE ELEVATION OF TURBINE ENCLOSURE AS MEAN HEIGHT TO JUSTIFY PROTECTED BOUNDARY.
- 4. DIMENSIONS FOR THIS EQUIPMENT ARE SUBJECT TO CHANGE PENDING RECEIPT OF FINAL SUPPLIER DRAWINGS.



**ISOMETRIC VIEW**



SEE COMPUTERIZED BILL OF MATERIAL

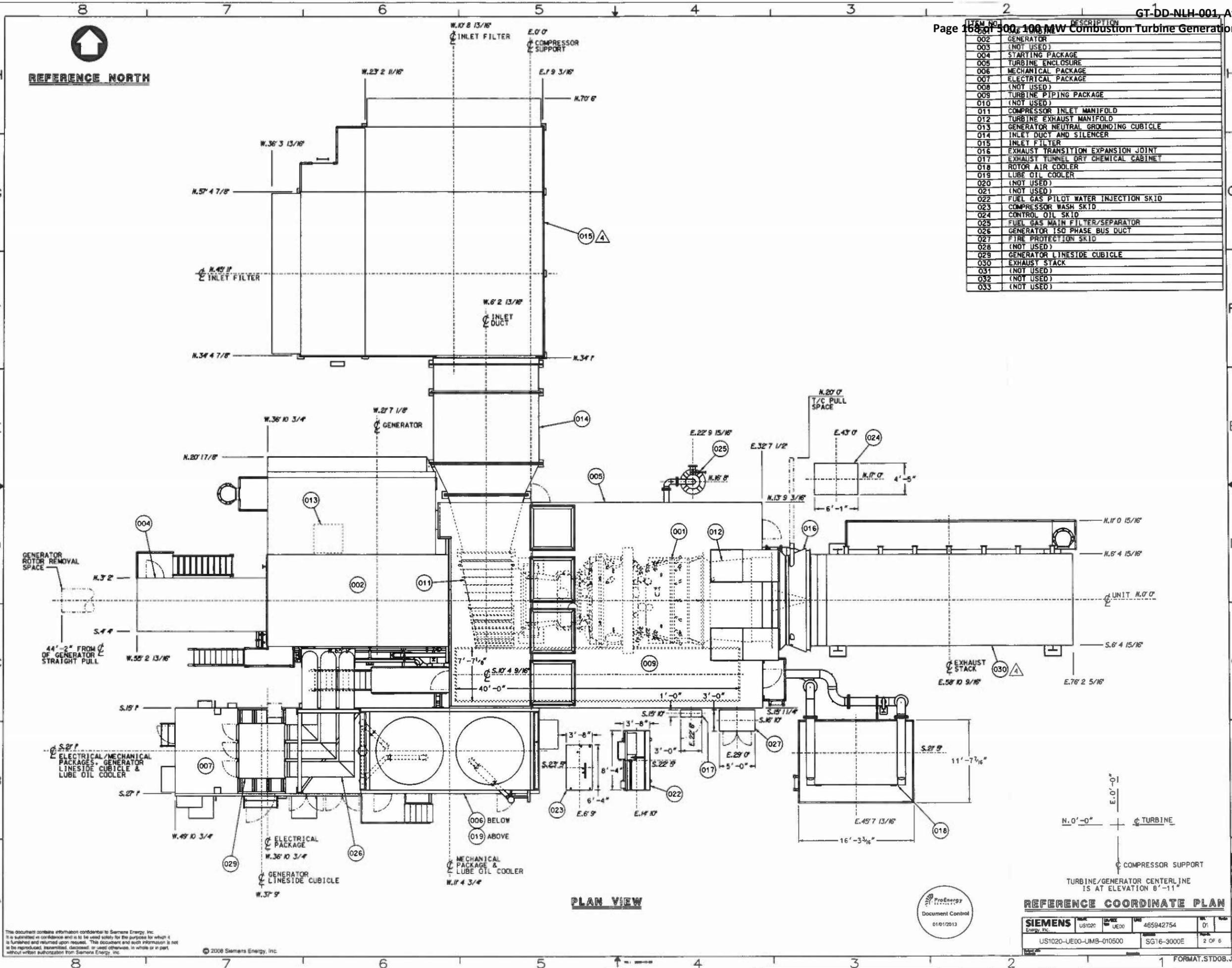
01	2008/10/22	S. SMITH	RODRIGUEZ	INITIAL RELEASE
----	------------	----------	-----------	-----------------

GAS TURBINE PACKAGE EQUIPMENT ARRANGEMENT		01	1 of 6
SIEMENS Energy Inc.	PROSIENT	465942754	SGT6-3000E
US1020-UE00-LMB-010500			

This document contains information confidential to Siemens Energy, Inc. It is submitted in confidence and is to be used solely for the purposes for which it is furnished and returned upon request. This document and such information is not to be reproduced, transmitted, disclosed, or used otherwise, in whole or in part, without written authorization from Siemens Energy, Inc.



ITEM NO.	DESCRIPTION
002	GENERATOR
003	(NOT USED)
004	STARTING PACKAGE
005	TURBINE ENCLOSURE
006	MECHANICAL PACKAGE
007	ELECTRICAL PACKAGE
008	(NOT USED)
009	TURBINE PIPING PACKAGE
010	(NOT USED)
011	COMPRESSOR INLET MANIFOLD
012	TURBINE EXHAUST MANIFOLD
013	GENERATOR NEUTRAL GROUNDING CUBICLE
014	INLET DUCT AND SILENCER
015	INLET FILTER
016	EXHAUST TRANSITION EXPANSION JOINT
017	EXHAUST TUNNEL DRY CHEMICAL CABINET
018	ROTOR AIR COOLER
019	LUBE OIL COOLER
020	(NOT USED)
021	(NOT USED)
022	FUEL GAS PILOT WATER INJECTION SKID
023	COMPRESSOR WASH SKID
024	CONTROL OIL SKID
025	FUEL GAS MAIN FILTER/SEPARATOR
026	GENERATOR ISO PHASE BUS DUCT
027	FIRE PROTECTION SKID
028	(NOT USED)
029	GENERATOR LINESIDE CUBICLE
030	EXHAUST STACK
031	(NOT USED)
032	(NOT USED)
033	(NOT USED)



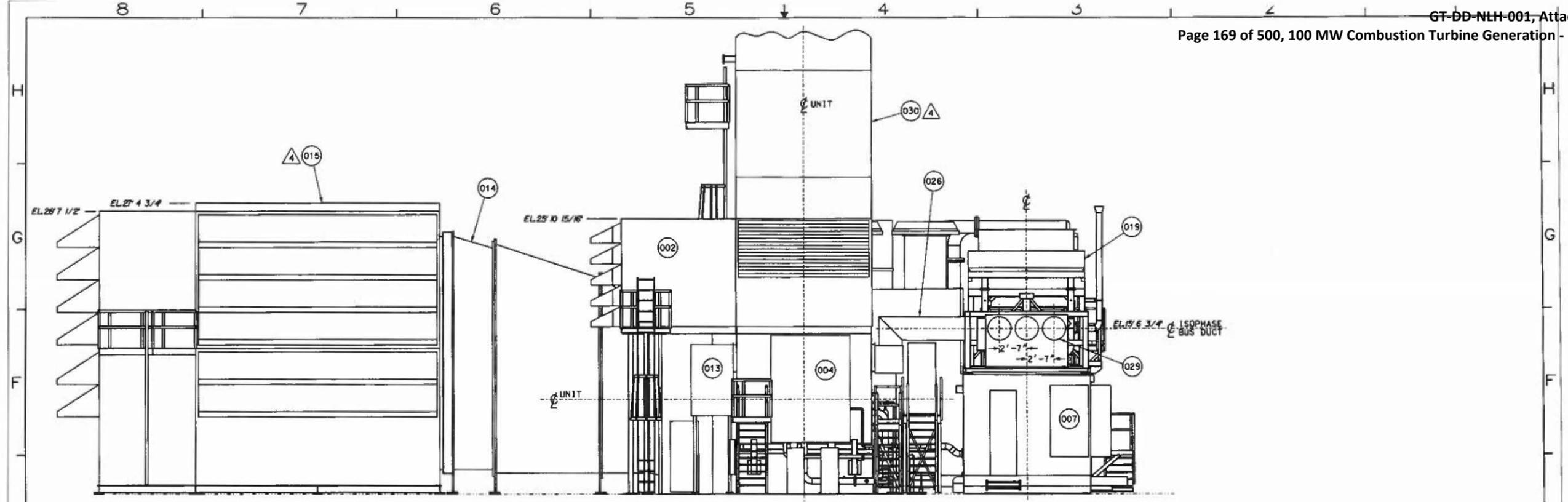
PLAN VIEW

REFERENCE COORDINATE PLAN

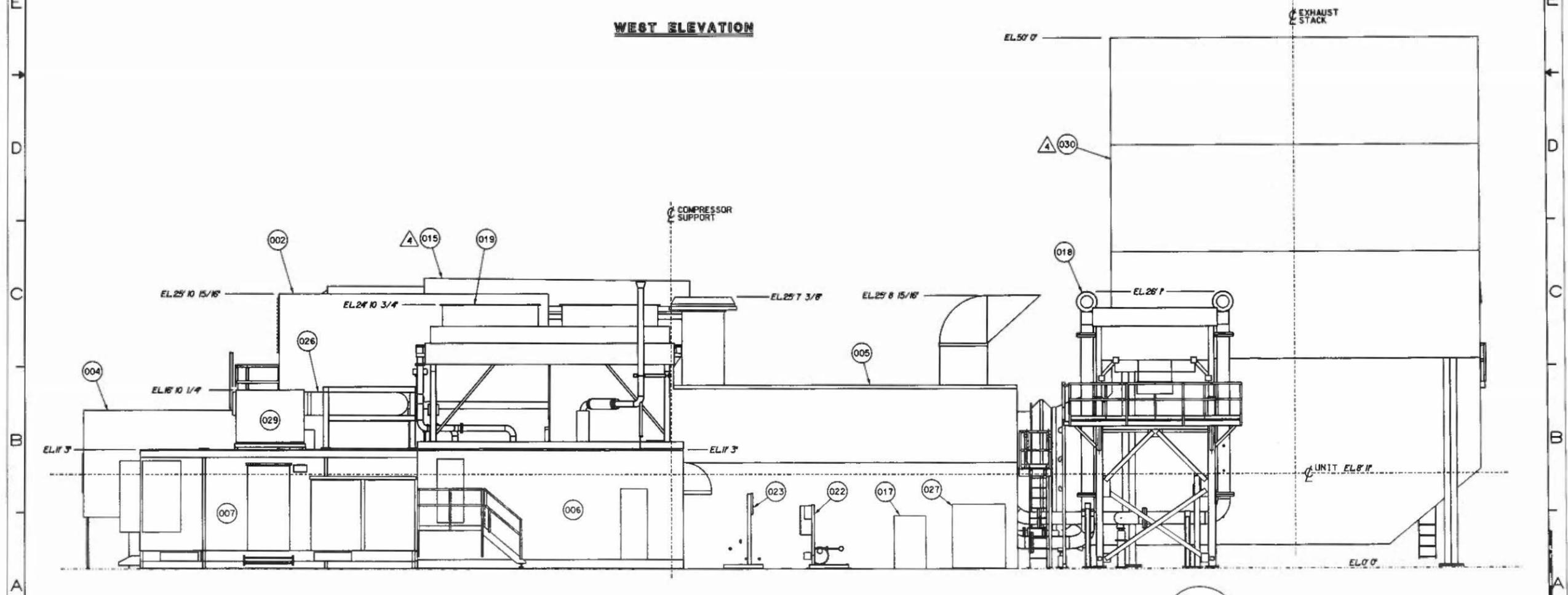
This document contains information confidential to Siemens Energy, Inc. It is submitted in confidence and is to be used solely for the purpose for which it is furnished and returned upon request. This document and such information is not to be reproduced, transmitted, disclosed, or used otherwise, in whole or in part, without written authorization from Siemens Energy, Inc.



<b>SIEMENS</b>	US1020	UJMB	465942754	01
US1020-UJMB-010500	SG16-3000E	2 OF 6		



**WEST ELEVATION**



**SOUTH ELEVATION**

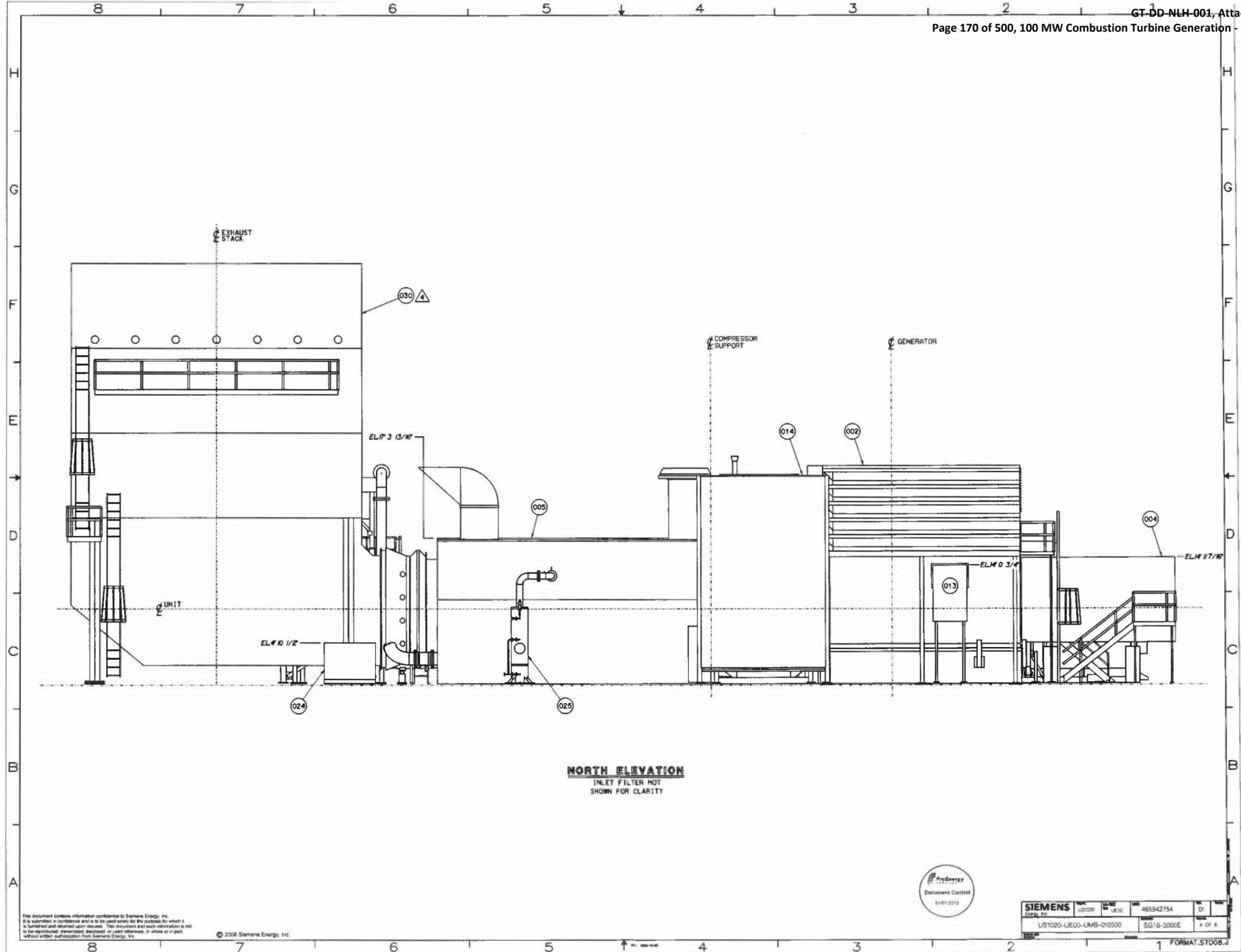
The document contains information confidential to Siemens Energy, Inc. It is submitted in confidence and is to be used solely for the purpose for which it is furnished and returned upon request. The document and such information is not to be reproduced, transmitted, disclosed or used otherwise, in whole or in part, without written authorization from Siemens Energy, Inc.

© 2008 Siemens Energy, Inc.



<b>SIEMENS</b>	US1020	UE00	465942754	D1
US1020-UE00-UMB-010500	SG16-3000E	3 OF 6		

FORMAT.STD08.J



**NORTH ELEVATION**  
 INLET FILTER NOT  
 SHOWN FOR CLARITY

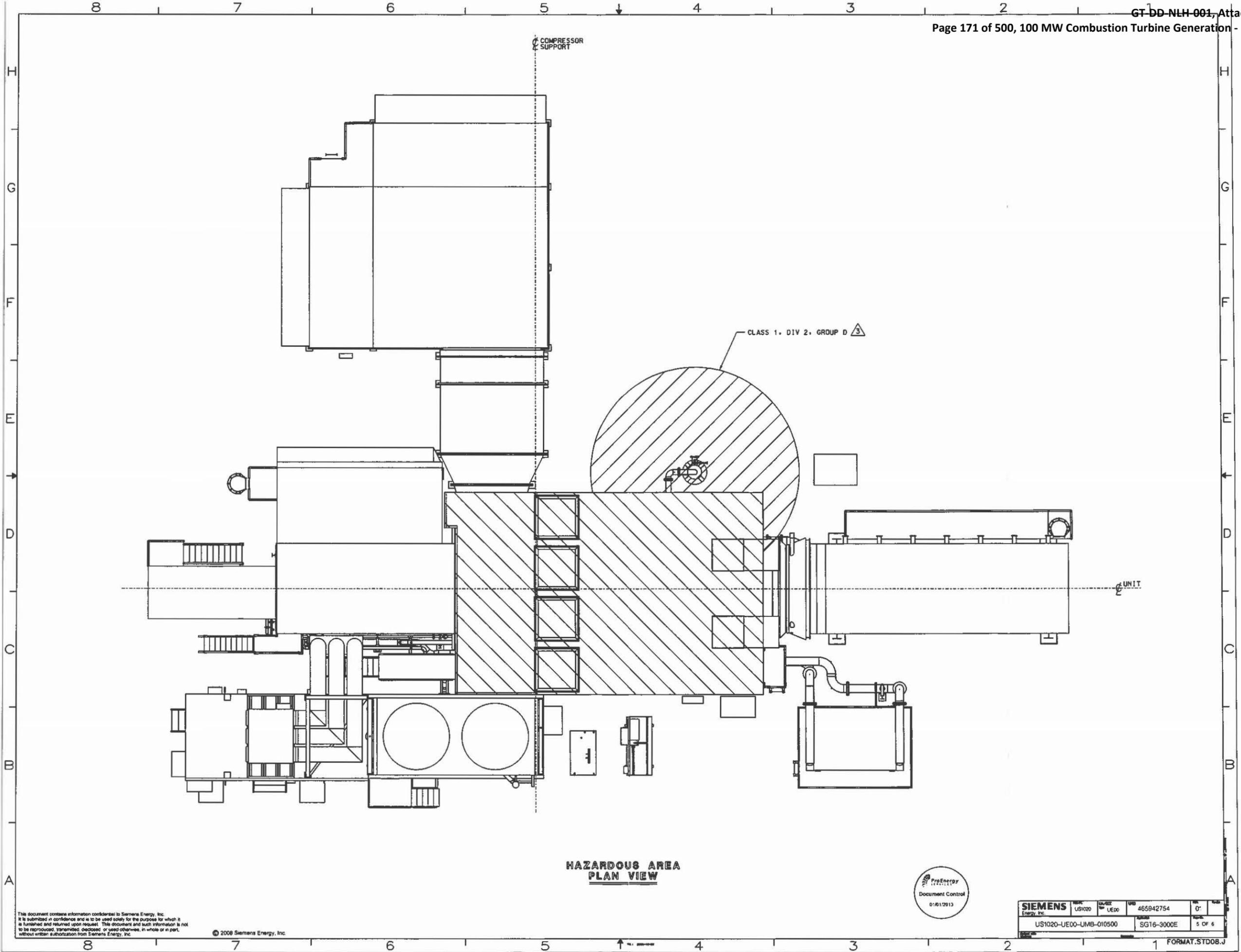


This document contains information confidential to Siemens Energy, Inc. It is submitted in confidence and is to be used solely for the purpose for which it is furnished and returned upon request. This document and such information is not to be reproduced, transmitted, disclosed or used otherwise, in whole or in part, without written authorization from Siemens Energy, Inc.

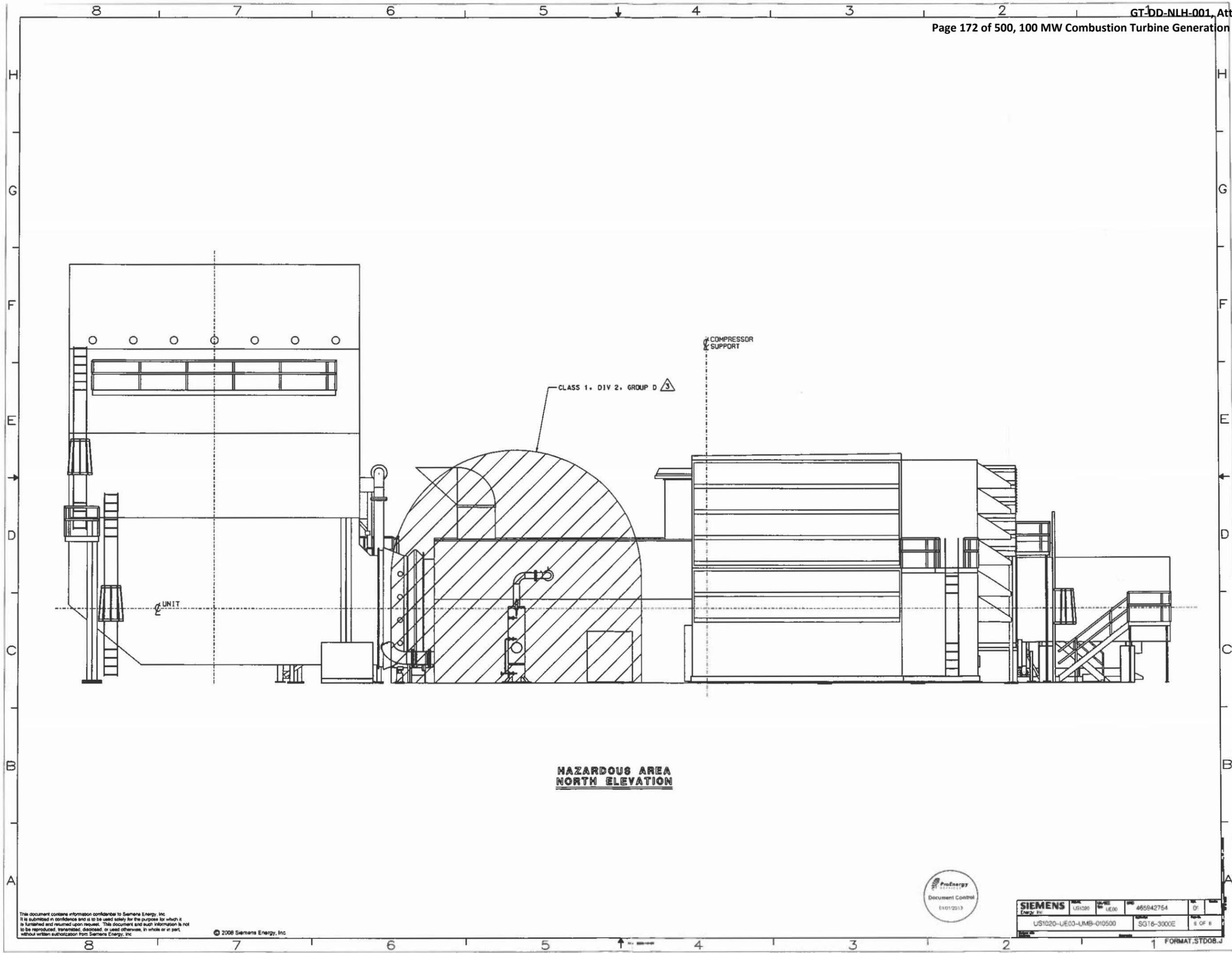
© 2008 Siemens Energy, Inc.

<b>SIEMENS</b> Energy, Inc.	PROJECT US1020	DATE 01/05/10	JOB 485942754	BY Dr
US1020-UE00-UMB-010500		SG 16-3000E		4 OF 8

FORMAT:ST008.J



This document contains information confidential to Siemens Energy, Inc. It is submitted in confidence and is to be used solely for the purpose for which it is furnished and returned upon request. This document and such information is not to be reproduced, transmitted, disclosed, or used otherwise, in whole or in part, without written authorization from Siemens Energy, Inc.



**HAZARDOUS AREA  
NORTH ELEVATION**

This document contains information confidential to Siemens Energy, Inc. It is submitted in confidence and is to be used solely for the purpose for which it is furnished and returned upon request. This document and such information is not to be reproduced, transmitted, disclosed, or used otherwise, in whole or in part, without written authorization from Siemens Energy, Inc.

© 2008 Siemens Energy, Inc.



<b>SIEMENS</b> Energy, Inc.	US1020	UE00	465842754	01
US1020-UE00-UMB-010500	SG18-3000E	8 OF 8		

1 FORMAT.STD08.J



---

b) Pictures of the SGT6-3000E Equipment













---

c) CTG Maintenance Records

**Walk Down Inspection  
AECI - ESSEX II**

Do a visual inspection of the Following Items. Look for signs of RUST. If rust is evident, coat with Metal Protective. (Dow Corning)

Seq#	Pk #	Location		ITEM	Feb '11	May '11	Aug '11	Nov '11	Feb '12
22100	1	972A/11c	Inside	Maintenance Tools	bm	bm	bm	bm	bm
22200	1	972A/10c	Inside	Service Lifts Assembly	bm	bm	bm	bm	bm
22200	2	900	Outside	Service Lifts Assembly	bm	bm	bm	bm	bm
22200	3	900	Outside	Service Lifts Assembly	bm	bm	bm	bm	bm

Write in details and take pictures of any actions needed or concerns. Be sure to date findings.  
A separate report will be done on all findings in addition to this summary.

**Comments and Concerns:**

---



---



---



---



---



---



---



---

**Walk Down Inspection  
 AECI - ESSEX II**

Do a visual inspection of the Following Items. Look for signs of RUST. If rust is evident, coat with Metal Protective. (Dow Corning)

Seq#	Pk #	Location		ITEM	May '12	Aug '12	Nov '12	Feb '13	May '13
22100	1	972A/11c	Inside	Maintenance Tools	bm	bm	bm	bm	bm
22200	1	972A/10c	Inside	Service Lifts Assembly	bm	bm	bm	bm	bm
22200	2	900	Outside	Service Lifts Assembly	bm	bm	bm	bm	bm
22200	3	900	Outside	Service Lifts Assembly	bm	bm	bm	bm	bm

Write in details and take pictures of any actions needed or concerns. Be sure to date findings.  
 A separate report will be done on all findings in addition to this summary.

**Comments and Concerns:**

---



---



---



---



---



---



---



---

**Walk Down Inspection  
AECI – ESSEX II**

Do a visual inspection of the Following Items. Look for signs of RUST. If rust is evident, coat with Metal Protective. (Dow Corning)

Seq#	Pk #	Location		ITEM	June 13	July 13	Aug 13	Sept 13	Oct 13	Nov 13	Dec 13
22100	1	972A/11c	Inside	Maintenance Tools	bm	bm	bm	bm	bm		
22200	1	972A/10c	Inside	Service Lifts Assembly	bm	bm	bm	bm	bm		
22200	2	900	Outside	Service Lifts Assembly	bm	bm	bm	bm	bm		
22200	3	900	Outside	Service Lifts Assembly	bm	bm	bm	bm	bm		

Write in details and take pictures of any actions needed or concerns. Be sure to date findings. A separate report will be done on all findings in addition to this summary.

**Comments and Concerns:**

---



---



---



---



---



---



---



---

**Seq # 50000 Scheduled Maintenance and Inspections**

Pack # 50000 - 01	November 2009				February 2010				May 2010				August 2010				November 2010			
	Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate	
<b>Motor</b>																				
Oil Mist Eliminate # 1		JS	JS		NA	JS	JS		NA	JS	JS		NA	JS	JS		NA	JS	JS	
Oil Mist Eliminate # 2		JS	JS		NA	JS	JS		NA	JS	JS		NA	JS	JS		NA	JS	JS	
Emergency DC LO Pump		JS	JS		NA	JS	JS		NA	JS	JS		NA	JS	JS		NA	JS	JS	
AC Lube Oil Pump # 1		JS	JS		NA	NA	NA		NA	↓	↓		NA	↓	↓		NA	↓	↓	
AC Lube Oil Pump # 2		JS	JS		NA	NA	NA		NA	↓	↓		NA	↓	↓		NA	↓	↓	
<b>Gauges</b>																				
LO Oil Supply Temp	52 Deg.				62°				90°				86°				62°			
LO Oil Reservoir Temp	58 Deg.				58°				92°				90°				59°			
Reservoir Vacuum	-5psi				5PSI				5PSI				5PSI				5PSI			
Air Moisture Ind.	Blue / Dry				Blue-dry				Blue-dry				WET				WET			
<b>Air Compressor</b>																				
Start Air Compressor run for 30 minutes Sec.	11/24/09				2-26-10				5-25-10				8/31/10				11/16/10			
Temp Inside Package	65°				62°				72°				89°				59°			
Date of inspection	11/25/09				2-26-10				5-25-10				8-31-10				11/16/10			



**Seq # 50000 Scheduled Maintenance and Inspections**

Pack # 50000 - 01	April 2012				July 2012				October 2012				January 2013				April 2013			
Motor	Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate		Megger	Rust insp. On shaft	Rotate	
Oil Mist Eliminate # 1	gm	gm	gm		gm	gm	gm		gm	gm	gm		gm	gm	gm		gm	gm	gm	
Oil Mist Eliminate # 2	gm	gm	gm		gm	gm	gm		gm	gm	gm		gm	gm	gm		gm	gm	gm	
Emergency DC LO Pump	gm	gm			gm	gm			gm	gm			gm	gm			gm	gm		
AC Lube Oil Pump # 1	gm	gm			gm	gm			gm	gm			gm	gm			gm	gm		
AC Lube Oil Pump # 2	gm	gm			gm	gm			gm	gm			gm	gm			gm	gm		
<b>Gauges</b>																				
LO Oil Supply Temp	77°				86°				75°				66°				78°			
LO Oil Reservoir Temp	76°				86°				70°				54°				76			
Reservoir Vacuum	2.5				2.5				2.0				2.5				2.5			
Air Moisture Ind.	Blue / Dry				wet				wet				wet				wet			
<b>Air Compressor</b>																				
Start Air Compressor run for 5 minutes	gm				gm				gm				gm				gm			
Temp Inside Package	73°				84°				71°				58°				74°			











AECI - Essex II Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
2-1-13	55°	33%	TG	
2-8-13	64°	54%	TG	
2-11-13	64°	50%	TG	
2-18-13	56°	48%	TG	
2-26-13	62°	52%	TG	
3-6-13	56°	34%	TG	
3-12-13	58°	44%	TG	
3-18-13	68°	54%	TG	
3-26-13	55°	36%	TG	
4-1-13	64°	59%	TG	
4-11-13	69°	63%	TG	
4-16-13	80°	74%	TG	
4-25-13	70°	59%	TG	
4-30-13	72°	55%	TG	
5-6-13	69°	67%	TG	
5-15-13	75°	49%	TG	
5-21-13	75°	73%	TG	
5-27-13	31°	56%	TG	
6-8-13	61°	60%	KM	
6-11-13	83°	63%	DC	
6-17-13	85°	65%	TG	
6-24-13	83°	64%	TG	
7-1-13	74°	66%	TG	
7-9-13	90°	62%	DC	
7-16-13	88°	63%	DC	
7-24-13	82°	75%	KM	

AECI - Essex II Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
7-10-12	85°	69%	J.S.	RAIN
7-17-12	92°	64%	J.S.	
7-25-12	92°	59%	J.S.	
8-2-12	84°	64%	bm	
8-8-12	98°	44%	J.S.	
8-16-12	95°	51%	J.S.	
8-22-12	79°	47%	J.S.	
8-30-12	85°	63%	J.S.	
9-6-12	85°	64%	J.S.	
9-12-12	79°	57%	J.S.	
9-20-12	88°	56%	bm	
9-25-12	85°	56%	bm	
10-4-12	81°	54%	bm	
10-8-12	71°	43%	bm	
10-11-12	68°	44%	J.S.	
10-17-12	72°	56%	J.S.	
10-24-12	75°	60%	J.S.	
11-3-12	70°	45%	TG	
12-8-12	68°	70%	J.S.	RAIN
12-11-12	63°	48%	TG	
12-19-12	68°	54%	TG	
12-27-12	60°	49%	TG	
1-2-13	58°	46%	TG	
1-14-13	55°	53%	TG	
1-16-13	54°	51%	TG	
1-25-13	60°	38%	TG	

AECI - Essex II Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
1-11-12	61°	63%	Jim S.	RAIN
1-19-12	62°	37%	J.S.	-
1-24-12	68°	40%	J.S.	
1-31-12	66°	54%	Jm	
2-8-12	62°	46%	J.S.	
2-14-12	61°	46%	J.S.	
2-20-12	65°	36	Jm	
2-27-12	75°	34%	J.S.	
3-8-12	70°	69%	J.S.	RAIN
3-13-12	75°	73%	J.S.	
3-22-12	78°	61%	J.S.	
3-29-12	74°	53%	Jm	
4-1-12	76°	60%	J.S.	
4-12-12	69°	27%	J.S.	COOL
4-17-12	70°	55%	J.S.	
4-27-12	75°	60%	J.S.	
5-1-12	87°	54%	Jm	
5-9-12	74°	58%	J.S.	-
5-16-12	78°	56%	J.S.	
5-22-12	82°	43%	J.S.	
5-29-12	97°	42%	J.S.	
6-6-12	83°	48%	D.C	
6-12-12	80°	77%	D.C	
6-18-12	94°	46%	DC	
6-27-12	85°	34%	J.S.	
7-3-12	90°	49%	J.S.	

AECI - Essex II Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
7-7-11	83°	71%	J.S.	
7-13-11	88°	60%	J.S.	
7-19-11	84°	63%	J.S.	
7-25-11	85°	64%	Gm	
8-1-11	99°	51%	J.S.	
8-8-11	84°	52%	Gm	
8-18-11	80°	72%	J.S.	RAIN
8-22-11	87°	68%	Gm	
8-31-11	90°	42%	Gm	
9-7-11	80°	45%	Gm	
9-13-11	81°	43%	Gm	
9-19-11	80°	49%	Gm	
9-29-11	75°	60%	Gm	
10-4-11	73°	44%	J.S.	
10-14-11	70°	53%	J.S.	
10-19-11	60°	52%	J.S.	HEAT ON
10-26-11	73°	58%	J.S.	
11-2-11	87°	38%	J.S.	
11-8-11	74°	65%	J.S.	
11-16-11	67°	63%	J.S.	
11-22-11	70°	79%	J.S.	
11-29-11	56°	54%	J.S.	TURN UP HEAT
12-6-11	56°	57%	J.S.	
12-21-11	63°	61%	D.C.	
12-29-11	66°	47%	J.S.	
1-4-12	64°	40%	J.S.	

AECI - Essex II Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
12-29-10	69°	32%	J.S.	
1-4-11	69°	24%	J.S.	
1-10-11	67°	24%	J.S.	
1-17-11	70°	41%	J.S.	
1-24-11	69°	37%	J.S.	
2-1-11	72°	55%	J.S.	RAIN
2-7-11	68°	30%	J.S.	SNOW
2-14-11	72°	33%	J.S.	
2-23-11	70°	28%	J.S.	RAIN
2-28-11	77°	65%	J.S.	RAIN
3-7-11	65°	59%	Gm	
3-14-11	65°	67%	J.S.	RAIN
3-23-11	73°	66%	Gm	
3-29-11	66°	56%	Gm	
4-7-11	68°	55%	J.S.	
4-14-11	80°	37%	J.S.	
4-22-11	79°	70%	J.S.	
4-27-11	68°	76%	J.S.	RAIN
5-3-11	67°	56%	Gm	
5-11-11	86°	59%	Gm	
5-17-11	66°	53%	J.S.	
5-24-11	76°	82%	J.S.	
5-30-11	89°	51%	J.S.	
6-6-11	86°	54%	J.S.	
6-16-11	80°	56%	J.S.	
6-22-11	75°	80%	J.S.	
6-29-11	82°	61%	Gm	

AECI - Essex II. Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
7-3-10	83°	61%	J.S.	WARM
7-9-10	93°	55%	J.S.	-
7-14-10	96°	61%	lom	
7-21-10	88°	67%	J.S.	
7-28-10	80°	64%	lom	
8/4/10	88°	65%	J.S.	WARM
8/11/10	98°	57%	JIM S.	
8/18/10	82°	73%	JIM S.	
8/26/10	88°	42%	JIM S.	
8/31/10	88°	51%	JIM S.	
9/10/10	79°	51%	JIM S.	
9/17/10	94°	44%	JIM S.	HOT
9-24-10	91°	40%	J.S.	
9-30-10	86°	38%	JIM S.	
10-5-10	71°	34%	J.S.	
10-13-10	84°	45%	lom	
10-20-10	87°	32%	lom	
10-27-10	69°	77%	JIM S.	WET AT BOTTOM OF DOOR
11-4-10	66°	45%	lom	
11-8-10	72	36%	lom	
11-15-10	63°	53%	J.S.	
11-22-10	70°	76%	J.S.	
11-29-10	60°	53%	lom	
12-6-10	48°	41%	J.S.	
12-13-10	46°	32%	J.S.	TURNED UP WR-90 TEMPERATURE CONTROL
12-20-10	68°	24%	J.S.	WARM

AECI - Essex II Weekly Temp and Humidity Check

Sequence # 50000: Mechanical Package

Date	Temp	Humidity	Checked by	Comments
11-20-09	62	50	Harris	
12-19-09	46	61%	km	
12-23-09	53	75%	J.S.	
12-28-09	48	36%	J.S.	
1-4-10	45	31%	J.S.	
1-11-10	51	33%	J.S.	
1-18-10	59	56%	J.S.	
1-28-10	58	46%	J.S.	
2-4-10	54	58%	J.S.	
2-8-10	51	52%	J.S.	
2-16-10	49	38%	J.S.	
2-23-10	55	47%	km	
3-5-10	60	50%	J.S.	
3-12-10	61	62%	J.S.	
3-23-10	62	63%	km	
3-29-10	69	46%	J.S.	
4-7-10	73	52%	km	
4-13-10	85	33%	km	
4-20-10	65	47%	km	
4-27-10	64	52%	km	
5-5-10	82	59%	Harris	
5-12-10	85	63%	Harris	
5-21-10	88	56%	km	
5-28-10	90	54%	km	
5-31-10	80	70%	J.S.	

**Motor Meggering - Seq. # 50000**  
**Meggering must be done every three months**

Date: 1-26-11 Temp.: 68° Humidity: 38%

Test done by: Dwight Cooper Voltage Used: 500V

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	122.3	362.4	612	5.00	
Oil Mist Eliminate # 2	72.7	188.7	252.3	3.47	
Emergency DC Lo Pump	48.4	107.8	147.2	3.04	
AC Lube Oil Pump # 1	103.2	242.2	368.3	3.57	
AC Lube Oil Pump # 2	253.2	387.1	531	2.10	
Air Compressor Motor	N/A				

Date: 4-28-11 Humidity: 41% Temperature: 70°

Test done by: George MacLin Signature: George MacLin

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	1538	1817	2018	1.31	
Oil Mist Eliminate # 2	34.21	78.7	99.1	2.90	
Emergency DC Lo Pump	24.84	53.9	69.0	2.78	
AC Lube Oil Pump # 1	49.6	88.4	133.7	2.69	
AC Lube Oil Pump # 2	31.84	129.7	188.2	5.91	
Air Compressor Motor	N/A				

**Motor Meggering - Seq. # 50000**  
**Meggering must be done every three months**

Date: 7-23-11 Temp.: 82° Humidity: 73%

Test done by: George MacLin Voltage Used: 500

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	3.367	5.77	6.85	2.03	
Oil Mist Eliminate # 2	7.12	11.04	11.67	1.64	
Emergency DC Lo Pump	5.19	6.21	6.60	1.27	
AC Lube Oil Pump # 1	3.486	5.28	5.98	1.71	
AC Lube Oil Pump # 2	4.21	6.45	7.17	1.70	
Air Compressor Motor					

Date: 10-31-11 Humidity: 33% Temperature: 75°

Test done by: George MacLin Signature: George MacLin

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	79.8	247.1	382.5	4.79	
Oil Mist Eliminate # 2	31.84	44.5	46.1	1.45	
Emergency DC Lo Pump	26.69	58.9	72.6	2.72	
AC Lube Oil Pump # 1	71.8	147.8	191.7	2.66	
AC Lube Oil Pump # 2	28.33	33.58	40.6	1.43	
Air Compressor Motor					

**Motor Meggering - Seq. # 50000**  
**Meggering must be done every three months**

Date: 1-31-12 Temp.: 66° Humidity: 54%

Test done by: George MacLin Voltage Used: 500

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	83.8	286.6	427	5.09	
Oil Mist Eliminate # 2	40.5	70.8	163.6	4.01	
Emergency DC Lo Pump	25.49	60.9	85.8	3.36	
AC Lube Oil Pump # 1	58.8	151.5	246.1	4.18	
AC Lube Oil Pump # 2	27.18	83.3	142.3	5.88	
Air Compressor Motor					

Date: 4-19-12 Humidity: 47% Temperature: 70°

Test done by: George MacLin Signature: George MacLin

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	83.2	225.6	323.7	3.89	
Oil Mist Eliminate # 2	33.61	63.1	72.7	2.16	
Emergency DC Lo Pump	20.84	45.8	58.1	2.79	
AC Lube Oil Pump # 1	66.7	140.6	187.7	2.81	
AC Lube Oil Pump # 2	52.9	242.5	356.6	6.74	
Air Compressor Motor					

**Motor Meggering - Seq. # 50000**  
**Meggering must be done every three months**

Date: 7-21-12 Temp.: 88 Humidity: 63%

Test done by: George MacLain Voltage Used: 500

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	5.13	7.92	8.12	1.58	
Oil Mist Eliminate # 2	5.91	6.10	6.27	1.06	
Emergency DC Lo Pump	8.62	14.39	17.23	2.00	
AC Lube Oil Pump # 1	20.38	63.6	108.1	5.30	
AC Lube Oil Pump # 2	1.949	2.481	2.939	1.51	
Air Compressor Motor					

Date: 10-9-12 Humidity: 43% Temperature: 74°

Test done by: George MacLain Signature: George MacLain

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	60.5	174.7	242.8	3.98	
Oil Mist Eliminate # 2	29.72	57.1	65.8	2.21	
Emergency DC Lo Pump	26.88	56.9	71.6	2.66	
AC Lube Oil Pump # 1	85.1	210.4	292.7	3.44	
AC Lube Oil Pump # 2	66.4	114.3	167.1	2.52	
Air Compressor Motor					

**Motor Meggering - Seq. # 50000**  
 Meggering must be done every three months

Date: 1-26-13 Temp.: 58° Humidity: 44%

Test done by: George MacLin Voltage Used: 500

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	117.4	284.9	402	3.42	
Oil Mist Eliminate # 2	70.5	141.9	153	2.17	
Emergency DC Lo Pump	36.05	82.7	113.2	3.17	
AC Lube Oil Pump # 1	167.4	358.2	562	3.36	
AC Lube Oil Pump # 2	74.9	170.4	219.6	2.93	
Air Compressor Motor					

Date: 4-17-13 Humidity: 73% Temperature: 76°

Test done by: George MacLin Signature: George MacLin

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	2.766	3.497	4.24	1.53	
Oil Mist Eliminate # 2	2.635	3.407	3.767	1.43	
Emergency DC Lo Pump	11.23	21.13	25.34	2.26	
AC Lube Oil Pump # 1	22.04	49.1	80.7	3.66	
AC Lube Oil Pump # 2	24.83	51.9	56.5	2.27	
Air Compressor Motor					

**Motor Meggering - Seq. # 50000**  
**Meggering must be done every three months**

Date: 7/19/13 Temp.: 85° Humidity: 70%  
 Test done by: George MacLina Voltage Used: 500

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	18.54	23.06	22.95	1.24	
Oil Mist Eliminate # 2	5.43	6.94	8.69	1.60	
Emergency DC Lo Pump	8.46	17.02	19.59	2.31	
AC Lube Oil Pump # 1	17.08	37.54	49.9	2.92	
AC Lube Oil Pump # 2	18.95	26.39	53.4	2.81	
Air Compressor Motor					

Date: 10/8/13 Humidity: 50% Temperature: 75°  
 Test done by: George MacLina Signature: George MacLina

Test A,B,& C to ground for PI / 500Volts

Motor	1 Min	5 Min	10 Min	P.I.	Heater Amps
Oil Mist Eliminate # 1	40.9	52.3	118.6	2.90	
Oil Mist Eliminate # 2	26.06	61.5	74.3	2.85	
Emergency DC Lo Pump	19.25	39.17	48.6	2.52	
AC Lube Oil Pump # 1	49.6	116.4	166.6	3.36	
AC Lube Oil Pump # 2	37.81	68.12	74.8	1.98	
Air Compressor Motor					

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 12-15-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.6 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

AECI		MONTHLY TURBINE		Date of Test: 12-15-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	25%			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 1-21-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	lom			
Hooked Heater / Check power source	3.5 Amps lom			
Visual Check for Rust/Corrosion	lom			
Check for Rodent or Pest problems	lom			
Check Facility conditions	lom			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George Maclin	George Maclin		

AECI		MONTHLY TURBINE		Date of Test: 1-21-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	lom			
Visual Check for Rust/Corrosion	lom			
Check for Rodent or Pest problems	lom			
Check Facility conditions	lom			
Internal Humidity	25%			
Notes:				
	Print	Signature		
Performed By:	George Maclin	George Maclin		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 2-28-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	sm			
Hooked Heater / Check power source	3.5 Amps sm			
Visual Check for Rust/Corrosion	sm			
Check for Rodent or Pest problems	sm			
Check Facility conditions	sm			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

AECI		MONTHLY TURBINE		Date of Test: 2-28-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	sm			
Visual Check for Rust/Corrosion	sm			
Check for Rodent or Pest problems	sm			
Check Facility conditions	sm			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 8-23-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Hooked Heater / Check power source	3.6 Amps km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 3-23-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	23%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 4-17-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	gm			
Hooked Heater / Check power source	3.5 Amps gm			
Visual Check for Rust/Corrosion	gm			
Check for Rodent or Pest problems	gm			
Check Facility conditions	gm			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 4-17-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	gm			
Visual Check for Rust/Corrosion	gm			
Check for Rodent or Pest problems	gm			
Check Facility conditions	gm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 5-23-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	gm			
Hooked Heater / Check power source	3-6 Amps gm			
Visual Check for Rust/Corrosion	gm			
Check for Rodent or Pest problems	gm			
Check Facility conditions	gm			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 5-23-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	gm			
Visual Check for Rust/Corrosion	gm			
Check for Rodent or Pest problems	gm			
Check Facility conditions	gm			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 6-29-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.6 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

AECI		MONTHLY TURBINE		Date of Test: 6-29-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	22%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 7-19-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Hooked Heater / Check power source	3.6 Amps km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 7-19-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	24%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 8-20-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	DC			
Hooked Heater / Check power source	3.5 Amps DC			
Visual Check for Rust/Corrosion	DC			
Check for Rodent or Pest problems	DC			
Check Facility conditions	DC			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	Dwight Cooper	Dwight Cooper		

AECI		MONTHLY TURBINE		Date of Test: 8-20-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	DC			
Visual Check for Rust/Corrosion	DC			
Check for Rodent or Pest problems	DC			
Check Facility conditions	DC			
Internal Humidity	19%			
Notes:				
	Print	Signature		
Performed By:	Dwight Cooper	Dwight Cooper		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 9-10-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Hooked Heater / Check power source	3.5amps km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 9-10-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	22%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 5-18-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Hooked Heater / Check power source	3.3 Amps bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 5-18-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 6-11-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	GM			
Hooked Heater / Check power source	GM 34 AMP			
Visual Check for Rust/Corrosion	GM			
Check for Rodent or Pest problems	GM			
Check Facility conditions	GM			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George Macdon	George Macdon		

AECI		MONTHLY TURBINE		Date of Test: 6-11-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	GM			
Visual Check for Rust/Corrosion	GM			
Check for Rodent or Pest problems	GM			
Check Facility conditions	GM			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George Macdon	George Macdon		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 7-22-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	h m			
Hooked Heater / Check power source	3.9 Amps h m			
Visual Check for Rust/Corrosion	h m			
Check for Rodent or Pest problems	h m			
Check Facility conditions	h m			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George Mulla	George Mulla		

AECI		MONTHLY TURBINE		Date of Test: 7-22-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	h m			
Visual Check for Rust/Corrosion	h m			
Check for Rodent or Pest problems	h m			
Check Facility conditions	h m			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George Mulla	George Mulla		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 8/17/13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	GM			
Hooked Heater / Check power source	3.2 Amps GM			
Visual Check for Rust/Corrosion	GM			
Check for Rodent or Pest problems	GM			
Check Facility conditions	GM			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 8/17/13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	GM			
Visual Check for Rust/Corrosion	GM			
Check for Rodent or Pest problems	GM			
Check Facility conditions	GM			
Internal Humidity	41%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 9-25-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.3 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George Madin	George Madin		

AECI		MONTHLY TURBINE		Date of Test: 9-25-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	39%			
Notes:				
	Print	Signature		
Performed By:	George Madin	George Madin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 10-12-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.5 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	20%			
Notes:				
Print		Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 10/12/13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	36%			
Notes:				
Print		Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 11-4-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Hooked Heater / Check power source	3.4 Amps bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 11-4-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 10-20-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	10 m			
Hooked Heater / Check power source	3.6 Amps 10 m			
Visual Check for Rust/Corrosion	10 m			
Check for Rodent or Pest problems	10 m			
Check Facility conditions	10 m			
Internal Humidity	20 %			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

AECI		MONTHLY TURBINE		Date of Test: 10-20-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	10 m			
Visual Check for Rust/Corrosion	10 m			
Check for Rodent or Pest problems	10 m			
Check Facility conditions	10 m			
Internal Humidity	21 %			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

## UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 11-28-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	g m			
Hooked Heater / Check power source	3.6 Amps g m			
Visual Check for Rust/Corrosion	g m			
Check for Rodent or Pest problems	g m			
Check Facility conditions	g m			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George Marlin	George Marlin		

AECI		MONTHLY TURBINE		Date of Test: 11-28-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	g m			
Visual Check for Rust/Corrosion	g m			
Check for Rodent or Pest problems	g m			
Check Facility conditions	g m			
Internal Humidity	17%			
Notes:				
	Print	Signature		
Performed By:	George Marlin	George Marlin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 12-18-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Hooked Heater / Check power source	3.6 Amps bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLlin	George MacLlin		

AECI		MONTHLY TURBINE		Date of Test: 12-18-12
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George MacLlin	George MacLlin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 1-19-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	com			
Hooked Heater / Check power source	3.6 Amps com			
Visual Check for Rust/Corrosion	com			
Check for Rodent or Pest problems	com			
Check Facility conditions	com			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

AECI		MONTHLY TURBINE		Date of Test: 1-19-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	com			
Visual Check for Rust/Corrosion	com			
Check for Rodent or Pest problems	com			
Check Facility conditions	com			
Internal Humidity	22%			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 2-27-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Hooked Heater / Check power source	3.6 Amps bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 2-27-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	22%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 3-21-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Hooked Heater / Check power source	3.9 Amps bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 3-21-13
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	22%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 4-23-19
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Hooked Heater / Check power source	3.4 Amps bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 4-23-19
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	bm			
Visual Check for Rust/Corrosion	bm			
Check for Rodent or Pest problems	bm			
Check Facility conditions	bm			
Internal Humidity	bm 19%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 6-24-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	JS			
Hooked Heater / Check power source	JS			
Visual Check for Rust/Corrosion	JS			
Check for Rodent or Pest problems	JS			
Check Facility conditions	JS			
Internal Humidity				
Notes:				
Performed By:	Print JIM SIMMONS	Signature <i>Jim Simmons</i>		

AECI		MONTHLY TURBINE		Date of Test:
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	JS			
Visual Check for Rust/Corrosion	JS			
Check for Rodent or Pest problems	JS			
Check Facility conditions	JS			
Internal Humidity	28%			
Notes:				
Performed By:	Print JIM SIMMONS	Signature <i>Jim Simmons</i>		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 7-23-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.5 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 7-23-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	34%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 8-4-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.5 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

AECI		MONTHLY TURBINE		Date of Test: 8-4-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	33%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 9-23-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.5amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 9-23-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 10-22-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Hooked Heater / Check power source	3.6 AMPS km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

AECI		MONTHLY TURBINE		Date of Test: 10-22-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	km			
Visual Check for Rust/Corrosion	km			
Check for Rodent or Pest problems	km			
Check Facility conditions	km			
Internal Humidity	21%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 11-19-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.5 Amp ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

AECI		MONTHLY TURBINE		Date of Test: 11-19-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	20%			
Notes:				
	Print	Signature		
Performed By:	George MacLin	George MacLin		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 2-8-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	<i>[Signature]</i>			
Hooked Heater / Check power source	<i>[Signature]</i>			
Visual Check for Rust/Corrosion	<i>[Signature]</i>			
Check for Rodent or Pest problems	<i>[Signature]</i>			
Check Facility conditions	<i>[Signature]</i>			
Internal Humidity	<i>[Signature]</i>			
Notes:				
	Print	Signature		
Performed By:				

AECI		MONTHLY TURBINE		Date of Test:
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	<i>[Signature]</i>			
Visual Check for Rust/Corrosion			RUST ON EXTERIOR BOLTS	
Check for Rodent or Pest problems	<i>[Signature]</i>			
Check Facility conditions	<i>[Signature]</i>			
Internal Humidity	50%			
Notes:				
	Print	Signature		
Performed By:				

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 3-11-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.4 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

AECI		MONTHLY TURBINE		Date of Test: 3-11-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok		Rust on OUTSIDE Bolts	
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	54%			
Notes:				
	Print	Signature		
Performed By:	George MacLain	George MacLain		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 4-26-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Hooked Heater / Check power source	3.5 Amps ok			
Visual Check for Rust/Corrosion	ok			
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

AECI		MONTHLY TURBINE		Date of Test: 4-26-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	ok			
Visual Check for Rust/Corrosion	ok		Rust on Bolts	
Check for Rodent or Pest problems	ok			
Check Facility conditions	ok			
Internal Humidity	70%			
Notes:				
	Print	Signature		
Performed By:	George MacLip	George MacLip		

UTILITY METER READING:

AECI		MONTHLY GENERATOR		Date of Test: 5-25-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	gm			
Hooked Heater / Check power source	3.5 Amps gm			
Visual Check for Rust/Corrosion	gm			
Check for Rodent or Pest problems	gm			
Check Facility conditions	gm			
Internal Humidity	30%			
Notes:				
	Print	Signature		
Performed By:	George Maclean	George Maclean		

AECI		MONTHLY TURBINE		Date of Test: 5-25-11
INSPECTIONS	Condition Acceptable	Conditions Not Acceptable	Action Item Number and Actions Taken	
Inspect of security and integrity	gm			
Visual Check for Rust/Corrosion	gm			
Check for Rodent or Pest problems	gm			
Check Facility conditions	gm			
Internal Humidity	44%			
Notes: Checked on 5-26-11 with dehumidifier on humidity 15%				
	Print	Signature		
Performed By:	George Maclean	George Maclean		



AECI - Scheduled Maintenance Actions

Building 972 Bay A & B

Pack #	Action	Oct 10	Nov 10	Dec 10	Jan 2011	Feb 2011	Mar2011	Apr 2011	May 2011	June 2011	July 2011	Aug 2011
30050 - 10	Rotate Fan	bm		JS		bm		JS		bm		bm
30050 - 11	Rotate Fan	bm		JS		bm		JS		bm		bm
30050 - 12	Rotate Fan	bm		JS		bm		JS		bm		bm
30050 - 13	Rotate Fan	bm		JS		bm		JS		bm		bm
31030 - 07	Amp check for heater op.	1.5	1.5	1.5	3.1	3.1	3.1	3.1	1.5	1.6	1.5	1.6
72100	Rotate Motor	bm	JS	JS	JS	bm	bm	JS	bm	bm	bm	bm
72100	Amp check Heater Op	.17	.17	.17	.17	.18	.18	.18	.17	.18	.18	.17
65000	Rotate Motor	bm		JS	SHIPPED OUT							
83905-001	Check for Rust,			JS								

Write in details and take pictures of any actions needed or concerns. Be sure to date findings.  
 A separate report will be done on all findings in addition to this summary.

Comments and Concerns:

---



---



---



---



---



---



---



---



---



---







**Walk Down Inspection  
AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	Dec 09	Jan 10	Feb 10	Mar 10	Apr 10	May 10
83050	1	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	2	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	3	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	4	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	5	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	6	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	7	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	8	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	9	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	10	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	11	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	12	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	13	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	14	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	15	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	16	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	17	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	18	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	19	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	20	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	21	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	22	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	23	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	24	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	25	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	26	970E/1 <del>e</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr
83050	27	970E/1 <del>d</del>	Cooling Air/Comp. Bleed Pipe	gr	JS	sm	sm	gr	gr



Walk Down Inspection  
 AECI - ESSEX II

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	Jun 10	July 10	Aug 10	Sept 10	Oct 10	Nov 10
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	JS	JS	bm	JS



**Walk Down Inspection  
AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	Dec 10	Jan 11	Feb 11	Mar 11	Apr 11	May 11
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	JS	km	km	JS	km



**Walk Down Inspection  
AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	June 11	July 11	Aug 11	Sept 11	Oct 11	Nov 11
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	JS	gm	gm	gm	JS	gm



**Walk Down Inspection  
 AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	Dec 11	Jan 12	Feb 12	Mar 12	Apr 12	May 12
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	JS	bm	bm	bm	bm



**Walk Down Inspection  
 AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	June 12	July 12	Aug 12	Sept 12	Oct 12	Nov 12
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm



**Walk Down Inspection  
AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	bm



**Walk Down Inspection  
 AECI - ESSEX II**

During the walk down, Look at each piece. Inspect for Rust, Cribbing support condition, Boxes for integrity and rodent intrusion, and general condition. Document and defects or unusual finding below. Initial each line for the given month, that item was inspected.

The following Items for inspection are all located in the Covered area of 970 bay E

Seq #	Pk#	Location	Inlet Duct - Item	June 13	July 13	Aug 13	Sept 13	Oct 13	Nov 13
83050	1	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	2	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	3	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	4	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	5	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	6	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	7	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	8	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	9	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	10	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	11	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	12	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	13	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	14	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	15	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	16	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	17	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	18	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	19	970E/1e	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	20	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	21	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	22	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	23	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	24	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	25	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	26	970E/1c	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	
83050	27	970E/1d	Cooling Air/Comp. Bleed Pipe	bm	bm	bm	bm	bm	



**AECI – Scheduled Maintenance Actions**

Area 924 Outside on Pad north of Building 925

Pack #	Action	Nov 09	Dec 09	Jan 2010	Feb 2010	Mar2010	Apr 2010	May 2010	June 2010	July 2010	Aug 2010	Sept 2010
50000-01	Check Ground / Power	gpt	gpt	gpt	gom	gom	gpt	gpt	gpt	gom	JS	JS
50000-01	Check rodent traps	gpt	gpt	gpt	gom	gom	gpt	gpt	gpt	gom	JS	JS
50000-01	Check Heater	gpt	gpt	gpt	gom	gom	gpt	gpt	gpt	gom	JS	JS
50000-01	Lube oil filter.					gom						JS
50000-01	Oil Mist Vessel					gom						JS
40000-01	Check Ground / Power					gom						JS
40000-01	Check rodent traps	gpt	gpt	gpt	gom	gom	gpt	gpt	gpt	gom	JS	JS
40000-01	Check HVAC filters						gpt					
80100-01	Pressure reading	4 psi		4 psi		4.5 psi				5 psi		5 psi
80100-01	Rotate Fan/Motor	gpt		gpt		gom				gom		JS
80100-01	Check power / Ground	gpt		gpt		gom				gom		JS
80300-01	Pressure reading	2 psi		3 psi		3 psi				3 psi		4 psi
80300-01	Rotate Fan/Motor	gpt		gpt		gom				gom		JS
80300-01	Check power / Ground	gpt		gpt		gom				gom		JS
Date of inspection		11/29/09	12-22-09	1-22-10	2-26-10	3-31-10	4-21-10	5-27-10	6-11-10	7-29-10	8/31/10	9/29/10

Document and report all discrepancies and actions needed.

---



---



---



---



---

AECI - Scheduled Maintenance Actions

Area 924 Outside on Pad north of Building 925

Pack #	Action	OCT 10	Nov 10	Dec 10	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	June 2011	July 2011	Aug 2011
50000-01	Check Ground / Power	bm	JS	JS	JS	bm	bm	JS	bm	bm	bm	bm
50000-01	Check rodent traps	bm	JS	JS	JS	bm	bm	JS	bm	bm	bm	bm
50000-01	Check Heater	bm	JS	JS	JS	bm	bm	JS	bm	bm	bm	bm
50000-01	Lube oil filter, Internal Rust					bm						bm
50000-01	Oil Mist Vessel, Internal Rust					bm						bm
40000-01	Check Ground / Power					bm						bm
40000-01	Check rodent traps	bm	JS	JS	JS	bm	bm	JS	bm	bm	bm	bm
40000-01	Check HVAC filters						bm					
80100-01	Pressure reading	5PSI		5PSI		4PSI		5psi		6PSI		5PSI
80100-01	Rotate Fan/Motor	bm		NB JS		bm		JS		bm		bm
80100-01	Check power / Ground	bm		JS		bm		JS		bm		bm
80300-01	Pressure reading	4PSI		2.5PSI		2PSI		4PSI		4PSI		4PSI
80300-01	Rotate Fan/Motor	bm		NB JS		bm		JS		bm		bm
80300-01	Check power / Ground	bm		JS		bm		JS		bm		bm

Document and report all discrepancies and actions needed.

---



---



---



---



---

**AECI - Scheduled Maintenance Actions**

Area 924 Outside on Pad north of Building 925

Pack #	Action	Sept '11	Oct '11	Nov '11	Dec '11	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	June 2012	July 2012
50000-01	Check Ground / Power	bm	JS	bm	bm	bm	bm	bm	bm	bm	bm	bm
50000-01	Check rodent traps	bm	JS	bm	bm	bm	bm	bm	bm	bm	bm	bm
50000-01	Check Heater	bm	JS	bm	bm	bm	bm	bm	bm	bm	bm	bm
50000-01	Lube oil filter. Internal Rust					bm						bm
50000-01	Oil Mist Vessel, Internal Rust					bm						bm
40000-01	Check Ground / Power					bm						bm
40000-01	Check rodent traps	bm	JS	bm	bm	bm	bm	bm	bm	bm	bm	bm
40000-01	Check HVAC filters						bm					
80100-01	Pressure reading	4PSI		4PSI		4PSI		4PSI		4PSI		4PSI
80100-01	Rotate Fan/Motor	bm		bm		bm		bm		bm		bm
80100-01	Check power / Ground	bm		bm		bm		bm		bm		bm
80300-01	Pressure reading	3PSI		3PSI		3PSI		3PSI		3PSI		3PSI
80300-01	Rotate Fan/Motor	bm		bm		bm		bm		bm		bm
80300-01	Check power / Ground	bm		bm		bm		bm		bm		bm

Document and report all discrepancies and actions needed.

HAD TO PUT SOME SHRINK WRAP TAPE ON UNIT 50000 BY THE DOOR, 10/14

Re wrapped 50000 DUE TO WATER INTRUSION April 2012

**AECI – Scheduled Maintenance Actions**

Area 924 Outside on Pad north of Building 925

Pack #	Action	Aug '12	Sept '12	Oct '12	Nov '12	Dec '12	Jan 2013	Feb 2013	Mar2013	Apr 2013	May 2013	June 2013	July 2013
50000-01	Check Ground / Power	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm
50000-01	Check rodent traps	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm
50000-01	Check Heater	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm
50000-01	Lube oil filter. Internal Rust						bm						bm
50000-01	Oil Mist Vessel, Internal Rust						bm						bm
40000-01	Check Ground / Power						bm						bm
40000-01	Check rodent traps	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm	bm
40000-01	Check HVAC filters	bm						bm					
80100-01	Pressure reading		4PSI		4PSI		3PSI		3PSI		3PSI		4PSI
80100-01	Rotate Fan/Motor		bm		bm		bm		bm		bm		bm
80100-01	Check power / Ground		bm		bm		bm		bm		bm		bm
80300-01	Pressure reading		3PSI		3PSI		2PSI		2PSI		2PSI		3PSI
80300-01	Rotate Fan/Motor		bm		bm		bm		bm		bm		bm
80300-01	Check power / Ground		bm		bm		bm		bm		bm		bm

Document and report all discrepancies and actions needed.

**AECI - Scheduled Maintenance Actions**

Area 924 Outside on Pad north of Building 925

Pack #	Action	Aug '13	Sept '13	Oct '13	Nov '13	Dec '13	Jan 2014	Feb 2014	Mar2014	Apr 2014	May 2014	June 2014	July 2014
50000-01	Check Ground / Power	bm	bm	bm									
50000-01	Check rodent traps	bm	bm	bm									
50000-01	Check Heater	bm	bm	bm									
50000-01	Lube oil filter. Internal Rust												
50000-01	Oil Mist Vessel, Internal Rust												
40000-01	Check Ground / Power												
40000-01	Check rodent traps	bm	bm	bm									
40000-01	Check HVAC filters	bm											
80100-01	Pressure reading		4PSI										
80100-01	Rotate Fan/Motor		bm										
80100-01	Check power / Ground		bm										
80300-01	Pressure reading		3PSI										
80300-01	Rotate Fan/Motor		bm										
80300-01	Check power / Ground		bm										

Document and report all discrepancies and actions needed.



















d) GSU Transformer Information

Picture of the unit.



EPS Inventory # T1016

**PROLEC**



www.prolecge.com

**TRANSFORMER**

SERIAL No G2692-01, THREE-PHASE, 60 Hz, ALTITUDE 3300 ft

**VOLTAGE RATING**

230 000 GrdY/132 800 X 115 000 GrdY/66 400 - 13 800

kVA RATING 90 000 CONTINUOUS @ 65 °C RISE ONAN

kVA RATING 120 000 CONTINUOUS @ 65 °C RISE ONAF

kVA RATING 150 000 CONTINUOUS @ 65 °C RISE ONAF

**APPROXIMATE WEIGHTS (POUNDS)**

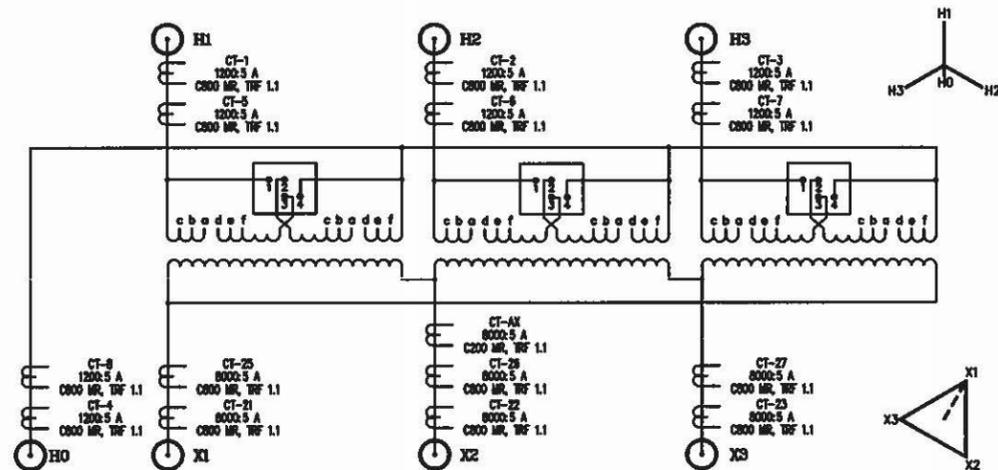
CORE AND COILS	172530
TANK AND FITTINGS	73145
MAIN TANK LIQUID ( 15186 GALS )	114120
COOLING EQUIPMENT LIQUID ( 486 GALS )	3665
CONSERVATOR TANK LIQUID ( 566 GALS )	4475
TOTAL WEIGHT	367935
UNTANKING WEIGHT ( HEAVIEST PIECE )	172530
SHIPPING WEIGHT (WITHOUT OIL)	219440

**IMPEDANCE @ 65 °C**

KZ	KVA BASE	KV BASE
	90 000	115 - 13.8
	90 000	230 - 13.8

**BASIC IMPULSE LEVEL (kV)**

	H1,H2,H3		X1,X2,X3	HO
	SERIES	PARALLEL		
BUSHING	900	900	150	110
WINDING	900	660	110	110



**HIGH VOLTAGE WINDING (SERIES)**

VOLTS	AMPERES	DE-ENERGIZED TAP CHANGER	DUAL-VOLTAGE BOARD
H1, H2, H3	150 000 kVA	TAP CONNECTS	CONNECTS
241 500	359	1 a TO d	2 TO 3
235 750	367	2 d TO b	
230 000	377	3 b TO e	
224 250	386	4 e TO c	
218 500	396	5 c TO f	

**LOW VOLTAGE WINDING**

VOLTS	AMPERES
X1, X2, X3	150 000 kVA
13 800	6275

**CAUTION !**

- BEFORE INSTALLING OR OPERATING READ INSTRUCTIONS G2692
- DO NOT OPERATE TRANSFORMER WHEN THE READING OF LIQUID LEVEL GAUGE IS BELOW THE LOW POINT OF THE SCALE.
- DO NOT OPERATE DE-ENERGIZED TAP CHANGER OR DUAL VOLTAGE BOARD WITH THE TRANSFORMER ENERGIZED.

**HIGH VOLTAGE WINDING (PARALLEL)**

VOLTS	AMPERES	DE-ENERGIZED TAP CHANGER	DUAL-VOLTAGE BOARD
H1, H2, H3	150 000 kVA	TAP CONNECTS	CONNECTS
180 750	717	1 a TO d	1 TO 2
117 575	735	2 d TO b	
115 000	753	3 b TO e	
112 125	772	4 e TO c	
109 250	793	5 c TO f	

**NOTES**

- MAXIMUM OPERATING PRESSURES OF LIQUID PRESERVATION SYSTEM: 0 lb/in<sup>2</sup> (ATMOSPHERIC PRESSURE).
- TANK DESIGNED FOR 15 lb/in<sup>2</sup> VACUUM FILLING
- ALL WINDINGS COPPER.
- FILLED WITH MINERAL OIL WHICH CONTAIN NO DETECTABLE LEVEL OF PCB AT THE TIME OF MANUFACTURE.
- TRANSFORMER SHIPPED FROM THE FACTORY AT THE HIGH VOLTAGE WINDING CONNECTION FOR 230 kV (SERIES VOLTAGE).

SUITABLE FOR STEP-UP OPERATION

MANUFACTURE DATE \_\_\_/201\_\_\_



TRANSFORMER DESIGNED FOR A NOMINAL IMPEDANCE OF 10.50% @ 90 000 kVA THE ACTUAL MEASURED IMPEDANCE VALUE WILL BE SHOWN ON THE NAMEPLATE

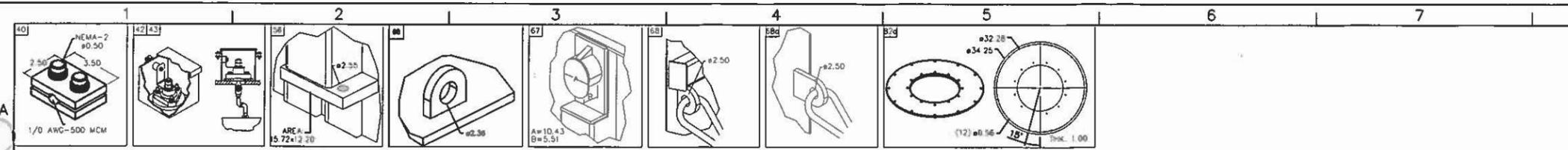
MATERIAL: STAINLESS STEEL DIMENSIONS: 20' x 17'

**PROLEC**  
APPROVAL DRAWING  
APR/15/2011

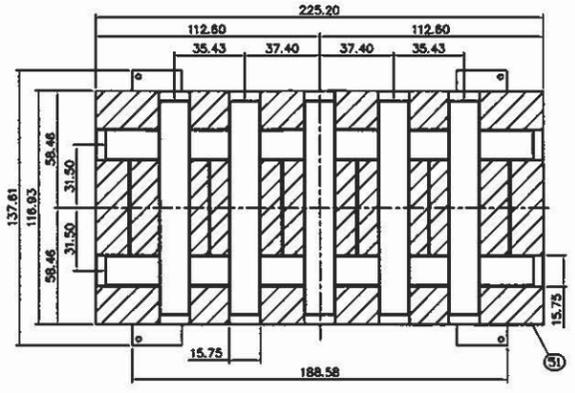
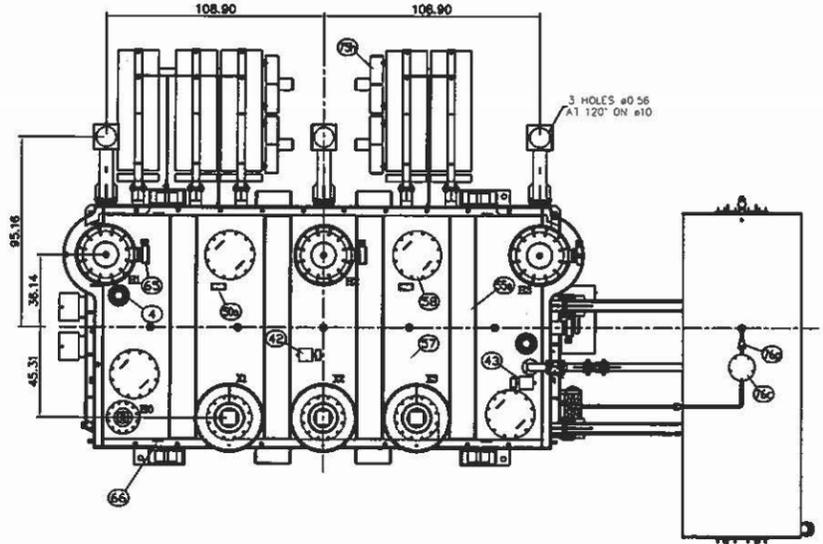
PROENERGY SERVICES  
P.O. No. Eps6309  
CE Reg No: 420-18071  
PROLEC CE Serial No: G2692-01  
Substation: T1006 PO

STEP UP TRANSFORMER  
ONAN/ONAF/ONAF  
90/120/150 MVA  
60 HZ, THREE PHASE, 65°C, 3300 FASL  
230/132.800 X 115/66.340 KV - 13.8 KV

REV	DESCRIPTION
6	DESIGN GROUP 1
<p><b>PROLEC</b> PROLEC GE ENGINEERING POWER DIVISION http://www.prolecge.com</p>	
<p>NAMEPLATE</p>	
DTM:	ROM
CHKD:	EBL
DATE:	04/12/11
DATE:	04/12/11
DRAWING No.:	G269201D802
SHEET:	1 OF 1
PROJECTION:	NONE
SCALE:	NONE
DIMENSIONS IN:	NONE
REVISION:	0

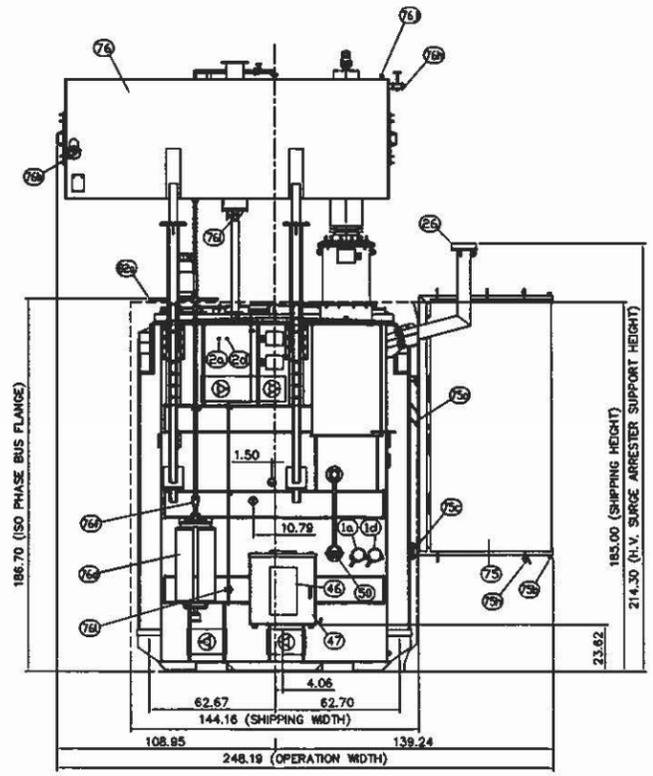
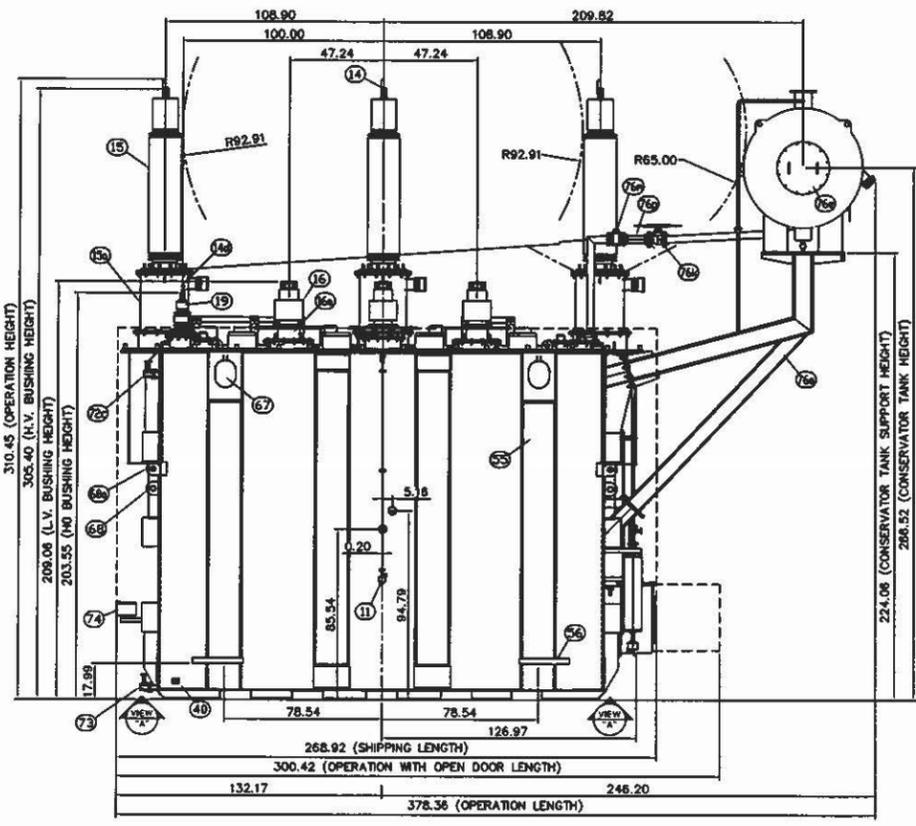


QTY	ITEM	DESCRIPTION	CAT./MOD.
1	16	L.V. WINDING TEMPERATURE INDICATOR (48T-1)	MESSKO, MT-S1160RM/AC/AM
1	17	L.V. LIQUID TEMPERATURE INDICATOR (200-1)	MESSKO, MT-S1160RM/2C/AM
1	20	L.V. THERMO-WELL FOR WINDING TEMPERATURE INDICATOR	
1	21	THERMO-WELL FOR LIQUID TEMPERATURE INDICATOR	
1	24	PRESSURE RELIEF DEVICE WITH SEMAPHORE (83PR-1/2)	QUALITROL, LPR000-00008306
1	11	PRESSURE-VACUUM GAUGE FOR SHIPPING	QUALITROL 050-35E
5.15	3	H.V. BUSHING CONNECTOR	DELTA, DPM58AC12-1-4N-E
5.15	14	NEUTRAL BUSHING HO CONNECTOR	DELTA, PM59C12-1-4N-E
3.2	3	H.V. BUSHING	ABB, 16690000A
3.2	15	H.V. REMOVABLE BUSHING TURRET	ABB, 025V0750W
3.1	3	H.V. BUSHING	
3.1	16	H.V. REMOVABLE BUSHING TURRET	
3.2	19	NEUTRAL BUSHING HO	ABB, 025W0412AT
4.1	3	H.V. SURGE-ARRESTER SUPPORT	
4.1	40	GROUND PAD	
4.1	42	CORE GROUND BUSHING TERMINAL BOX (MAIN UNIT)	
4.1	43	FRAME GROUND BUSHING BOX	
4.1	1	NAMEPLATE	
4.1	46	NAMEPLATE	
4.1	47	CONTROL CABINET	
4.1	50	DE-ENERGIZED TAP-CHANGER	ABB DTWC 2 DECKS
4.1	2	NAMEPLATE	
4.1	51	REINFORCED BASE WELDED TO TANK	
4.1	14	TANK BRACES	
4.1	55	TANK BRACES	
4.1	4	JACKING PADS AND PULLING EYES	
4.1	56	JACKING PADS AND PULLING EYES	
4.1	1	MAIN COVER	
4.1	58	INSPECTION MANHOLE (COVER)	
4.1	65	CT TERMINAL BOX	
4.1	4	LIFTING EYE COVER ONLY	
4.1	67	LIFTING HOOK FOR LIFTING COMPLETE UNIT	
4.1	68	SHIPPING LUGS FOR SECURING THE UNIT LONGITUDINALLY (SHORT LUGS)	
4.1	69	SHIPPING LUGS FOR SECURING THE UNIT LONGITUDINALLY (LONG LUGS)	
1.3	1	TOP FILTER PRESS VALVE (2.00 ø) GLOBE-TYPE	
1.3	73	MAIN TANK DRAIN VALVE (2.00 ø) GLOBE-TYPE WITH SAMPLING DEVICE (0.38 ø) AND PLUG	
1.3	74	IMPACT RECORDER FOR SHIPPING	
1.3	16	COOLING FAN	
1.3	75	COOLING RADIATORS	
1.3	10	RADIATOR VENT AND DRAIN PLUG (1.00 ø)	
1.1	10	RADIATOR VALVE FLAPPER-TYPE (5.00 ø)	KRENZ, F260-A9712
1.4	4	TOP/BOTTOM RADIATOR SUPPORTS	
1.2	3	RADIATOR BRACE	
2.3	1	CONSERVATOR TANK WITH INTERNAL BLADDER	
2.3	2	CONSERVATOR TANK SUPPORT	
2.2	1	CONSERVATOR MAGNETIC LIQUID LEVEL GAUGE (710-1)	QUALITROL, 042-145-01
5.8	1	HANDHOLE TO INSTALL BLADDER	
5.8	1	SILICA-GEL BREATHER WITH PIPE	PROLEC, RM66
5.8	1	CONSERVATOR MANHOLE	
5.8	1	SILICA-GEL SHUT OFF VALVE (1.00 ø) GLOBE-TYPE	
5.8	1	CONSERVATOR PRESSURE EQUALIZATION VALVE (1.00 ø) GLOBE-TYPE	
5.8	1	CONSERVATOR FILL VALVE (2.00 ø) GLOBE-TYPE	
5.8	1	CONSERVATOR DRAIN VALVE (1.00 ø) GLOBE-TYPE	
5.8	1	CONSERVATOR TANK NIPPLE FOR VENT WITH CAP	
2.2	1	CONSERVATOR TANK TO MAIN TANK VALVE (3.00 ø) BALL-TYPE	
5.13	1	GAS SAMPLING DEVICE	
2.4	1	PROTECTIVE RELAY FOR GAS ACCUMULATION RELAY (63BH-1)	EMB, 53-28-44-0311
2.4	3	L.V. ISO PHASE BUS FLANGE	



VIEW "A-A"  
BASE DETAIL

\* THE HATCHED AREA REPRESENT THE BOTTOM OF THE TRANSFORMER, THIS AREA DOES NOT SIT ON THE FLOOR



EPS Inventory # T1016

APPROXIMATE WEIGHTS (POUNDS)	
CORE AND COILS	172530
TANK AND FITTINGS	73145
MAIN TANK LIQUID ( 15106 GALS )	114120
COOLING EQUIPMENT LIQUID ( 488 GALS )	3685
CONSERVATOR TANK LIQUID ( 596 GALS )	4475
TOTAL WEIGHT	367935
UNTANKING WEIGHT ( HEAVIEST PIECE )	172530
SHIPPING WEIGHT (WITHOUT OIL)	219440

TOLERANCES	
Centerline distance of not inclined bushings	±.25
Centerline distance of inclined bushings	+1.00
Outlet of control cabinet distance	±.50
Bushings height (distance to floor)	±.25
Hv & Lv bushings center line	±.25
Bushings & surge arrester center line	±.25
Surge arrester height (distance to floor)	±.50
Center tank distance to short side	±.50
Center tank distance to large side	±.50
Conservator height	±.50
Anchoring center line	±.12
Bracing base center line	±.12
Pattern distance	+0.00
Outline	-0.18
Dimensions	±1.00
	±1.50
	±2.00

**PROLENGY SERVICES**  
P.O. No: EP56309  
GE Req No: 420-J8071  
PROLEC GE Serial No: G2692-01  
Substation: T1006 PC

**PROLEC**  
APPROVAL DRAWING  
APR/15/2011

STEP UP TRANSFORMER  
ONAN/ONAF/ONAF  
90/120/150 MVA  
60 HZ, THREE PHASE, 65°C, 3300 FASL  
230/132.800 X 115/66.340 KV - 13.8 KV

- NOTES:**
- a) ITEMS REMOVED FOR SHIPMENT ARE MARKED WITH (\*).
  - b) NUMBERING IS ACCORDING WITH G.E. PROLEC STD. LIST.
  - c) THE NUMBER IN COLUMN "GUIDE" CORRESPONDS TO THE "IN-FIELD ASSEMBLY GUIDE"

- OPERATION CENTER OF GRAVITY
- ⊗ SHIPPING CENTER OF GRAVITY

**PROLEC** THIS DRAWING CONTAINS PROPRIETARY INFORMATION WHICH CAN NOT BE REPRODUCED WITHOUT PERMISSION OF PROLEC GE.

PROLEC GE ENGINEERING POWER DIVISION  
http://www.prolecge.com

TITLE: TRANSFORMER'S OUTLINE

DFTM: Montoyo 01/15/11  
CHKD: ROM 04/15/11

PROJECTION:

SCALE: \*\*\*\*\*

DIMENSIONS: IN

REVISION: 0

DRAWING NO.: G269201D801  
sheet 1 of 1



Date: Jul. 04,2011

# TRANSFORMER TEST REPORT

90.00 / 120.00 / 150.00 MVA

230.000 x 115.000Y - 13.800 kV

ONAN / ONAF1 / ONAF2

Serial No.: **G2692-01**

Purchaser:

**ENERGY PARTS SOLUTIONS**

  
\_\_\_\_\_  
Test Engineer

  
\_\_\_\_\_  
Test Leader

  
\_\_\_\_\_  
Design Engineer

Report can not be reproduced either partially or totally without previous consent from the test department



POWER TRANSFORMERS

## TEST REPORT

Purchaser: ENERGY PARTS SOLUTIONS  
Rating: 90.000/120.000/150.000 MVA

Serial No: G2692-01  
230.000 x 115.000Y - 13.80 Date: 07/04/2011

CONTENTS	PAGE
GENERAL CHARACTERISTICS	1
ROUTINE TESTS	
INSULATION RESISTANCE TESTS	2
INSULATION POWER FACTOR TEST	3
RATIO AND POLARITY	4
WINDINGS RESISTANCE MEASUREMENTS	5
NO LOAD LOSSES AND EXCITATION CURRENT	7
LOAD LOSSES, IMPEDANCE AND TOTAL LOSSES	8
REGULATION AND EFFICIENCY	10
ZERO PHASE SEQUENCE IMPEDANCE	12
LIGHTNING IMPULSE TEST	13
APPLIED VOLTAGE TEST	14
INDUCED VOLTAGE TEST AND P. D. MEASUREMENT	15
COOLING EQUIPMENT LOSSES	17
SINGLE PHASE EXCITATION CURRENT TEST	18
CORE AND FRAME INSULATION TESTS	19
OPERATION TESTS OF ALL DEVICES	20
DESIGN TESTS	
RESISTANCE MEASUREMENTS FOR THE SHUTDOWN	21
TEMPERATURE RISE	22
AUDIBLE SOUND LEVEL	28
CURRENT TRANSFORMERS	
RATIO , POLARITY AND DC RESISTANCE TESTS	34
SATURATION CURVES	35
BUSHINGS	
POWER FACTOR TEST	36
CERTIFIED TEST REPORTS	37
INSULATING FLUID ANALYSIS	38
ADDITIONAL ELECTRICAL TESTS	
SWITCHING IMPULSE TEST	39

This report must not be reproduced partially without previous consent from the Test Department



## e) ProEnergy Services Capabilities

### **Operations & Maintenance**

ProEnergy's Operations and Maintenance services are packaged to deliver the specific customized services you need, whether it is for a short-term or a long-term project. Through our O&M division, ProEnergy Services operates and supports our customers' projects with the same corporate commitment we have toward our own company: We treat your business as if it were our own. Using our proven processes, our O&M professionals bring unmatched leadership, hands-on technical knowledge and a wealth of experience to each project. We pledge to provide the technical, managerial and administrative services required to maximize profitability, ensure the highest safety standards and exceed environmental requirements, all in the most economical fashion possible. Our O&M team will handle the care, custody, and control of your project, leaving you with unmatched peace of mind.

### **Professional Services**

ProEnergy's Professional Services group recruits and staffs professionals for our industry clients through all phases of a project, including development, engineering, construction, commissioning, and ongoing operations and maintenance. Whatever the scope of your project, be it long-term or short-term, requiring one person or a team, we educate ourselves on your project and choose the perfect people to fill available positions through our targeted selection process. Our vast network of trained personnel has worked for some of the industry's finest companies around the world. Every one of our consultants is fully screened and tested before mobilizing to any project. Our talent, experience and resources are unparalleled in the power generation industry.

### **Field Services**

ProEnergy's Field Services division prides itself on providing the highest quality workmanship, on time and cost-effectively, while exceeding environmental responsibilities. We understand what is important to our customers: staying on schedule and controlling costs. Other competitors use staffing services, but at ProEnergy, we send our own trained and experienced professionals to all of our projects. Whether we're executing a turnkey project or seamlessly supplementing your team, we deliver efficient productivity through proactive planning, project management, quality assurance and attention to safety.

### **Technical Services**

ProEnergy's Technical Services team provides complete guidance on all aspects of your project such as start-up and commissioning services, training services, procedure development services, CMMS implementation, fire system services, and predictive maintenance services. Our trainers are experts in the field who know how to effectively communicate to all levels of staff, using a combination of interactive classroom instruction, hands-on experience and site-specific training. Our custom-developed training programs are renowned in the industry and focus on teaching your staff the principles of operation, maintenance and efficiency maximization. ProEnergy's Technical Services professionals provide the knowledge and backbone to support any project requirements while laying the ground work so a project can start off on the right foot.



### **Process Services**

ProEnergy's Process Services division provides experienced teams of technical specialists and craftsmen to help industrial customers make the changes necessary to improve plant processes, productivity and efficiency. We provide individual and packaged services to execute a wide range of projects to install, modify, relocate, operate and maintain assets in manufacturing, food processing, fuel refining, material handling, water treatment, and chemical and petroleum refining processes. We understand the losses involved with downtime and inefficiencies, so we make sure we respond quickly and accurately, with the highest safety practices.

### **EPC Services**

ProEnergy's professional team of EPC specialists provide turnkey engineering, design, procurement, and construction management, as well as start-up, commissioning and testing for aeroderivative and frame units. We work with you to design all of the details of a project to fit your specific needs. All projects are managed by ProEnergy personnel. Subcontractors are most often obtained from resources local to the project area, but if local resources are not available, ProEnergy will recruit the required qualified expertise. All subcontractors used for local engineering or start-up meet our stringent requirements for quality, service and safety.

### **Energy Parts Solutions**

Energy Parts Solutions supplies the highest quality parts and equipment to the energy industry at competitive prices. To help power providers continue operations and repair outages with minimal downtime, EPS keeps a vast inventory of replacement parts for all major industrial gas turbine technologies in stock at all times. In addition to our extensive inventory, EPS offers 24/7/365 service with same-day quotes and same- or next-day shipping from our multiple distribution centers.

### **Fabrication Services**

ProEnergy's Fabrication Services division, ProSteel Manufacturing, executes projects for industrial customers around the world, including those close to home. Through our relentless pursuit of perfection, we establish unmatched craftsmanship with our customers, while exceeding the expectations of our ISO 9001:2008 and AISC certifications. In our full-service facility, ProEnergy manufactures, retrofits, installs and tests a variety of steel products used in construction, operations and maintenance for industrial customers in manufacturing, food processing, fuel refining, material handling, water treatment, and chemical and petroleum refining processes. ProEnergy is also a specialty skid manufacturer and reconditions and repackages equipment. ProEnergy holds the following certifications:

ISO 9001:2008 Certified

AISC Certified Fabricator

AISC Sophisticated Paint Endorsement

ASME: B31.1, B31.3, B31.5, B31.8, B31.9, STS-1, Selection VIII Division 1



---

Code Stamps: ASME S-Stamp, ASME U-Stamp, NBIC R-Stamp, ASME UM-Stamp, NBIC NB-Stamp

AWS D1.1

### **Turbine Services**

ProEnergy's Turbine Services team comprises some of the most experienced turbine repair professionals in the industry. In our state-of-the-art facility, the Turbine Services division can meet all of your turbine repair and refurbishment needs, including rotor repair and balancing; component refurbishment; complete overhaul of units; welding processes such as laser cladding, fusion and plasma arc welding, and high temperature brazing; mechanical material removal processes; and coatings for high temperature conditions. We offer the latest technology in non-destructive testing and a complete metallurgical laboratory.

### **Renewable Energy Services**

Rules, regulations and criteria for alternative and green energy projects are continually changing, creating unique opportunities in the industry. Our Renewable Services division leverages ProEnergy's core competencies to provide customized services to assist renewable/alternative energy owners in generating sustainable power. The experience of our diversified personnel enables us to offer a portfolio of services including technology development, project siting, planning and management, overhaul/repair services, start-up and commissioning, EPC services, turnkey O&M and staffing augmentation.

### **Controls Solutions**

ProEnergy Controls Solutions designs, integrates, installs and maintains control systems for virtually all makes and models of gas and steam turbine driven generators and mechanical drive systems. No job is too small or too large. As a single source service provider, ProEnergy Controls Solutions offers minor modifications and upgrades to your existing controls and instruments, or fully integrated turbine/balance-of-plant controls and SCADA systems. Our experienced team can also support your existing systems, making all necessary repairs to controls and calibration of associated instruments and devices. Or, we can deliver custom-built solutions to replace practically any control system. Our innovative group of engineers is hands-on in their approach to deliver technically superior solutions that will ensure exceptional customer satisfaction. Regardless of your industry, or where you are in the world, ProEnergy will work with you to provide solutions that will improve your plant's overall operability, reliability and efficiency.

### **High Voltage Solutions**

ProEnergy's High Voltage Solutions group further expands the company's single source capabilities, offering innovative high voltage power solutions to energy providers throughout the world. Our High Voltage division gives customers the competitive advantage of speed and technical knowledge through our services related to construction, testing, maintenance, training and failure recovery. We maintain an inventory of High Voltage equipment such as High Voltage transformers and breakers to service our customers' fast track requirements.

5

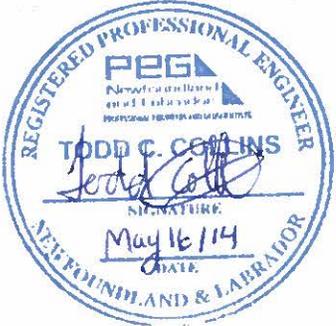
## NEWFOUNDLAND AND LABRADOR HYDRO

### CONTRACT

### FOR

Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxillary  
Equipment for the Holyrood Thermal Generating Station

2014-57952-TB

	Electrical
	Mechanical
	Civil
	Protection & Control
	Transmission & Distribution
	Telecontrol
	System Planning

*Nelson Seymour*

Approved for Release

*May 16<sup>th</sup>, 2014*

Date

5



5

## **CONTRACT AGREEMENT**

**PROJECT TITLE Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxillary Equipment for the Holyrood Thermal Generating Station**

### **CONTRACT**

**THIS CONTRACT** made as of the \_\_\_\_\_ day of May, 2014.

**BETWEEN:** NEWFOUNDLAND AND LABRADOR HYDRO, a corporation constituted by statute and an agent of Her Majesty the Queen in right of the Province of Newfoundland and Labrador and having its head office at Hydro Place, St. John's, in the said Province (hereinafter called "Owner") of the one part;

**AND** PROENERGY SERVICES, LLC, a company organized under the laws of the State of Missouri, United States, and having its head office at 2001 ProEnergy Blvd., Sedalia, Missouri 65301 USA(hereinafter called "Contractor") of the other part.

### **C 1 Contract Documents**

- .1 The following documents, sometimes referred to the Contract Documents, form part of this Contract:

Schedule A – NOT USED  
Schedule B – GENERAL CONDITIONS  
Schedule C – SPECIAL CONDITIONS  
Schedule D – PAYMENT  
Schedule E – SPECIFICATIONS  
Schedule F – NOT USED

- .2 Execution by Owner and by Contractor of this Contract shall constitute acceptance and approval by the parties of all the provisions, terms and conditions of all of the Contract Documents as if each had been executed by both parties.

### **C 2 Work**

- .1 The Contractor hereby undertakes to perform and complete the Work as described in this Contract.
- .2 Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, agrees to furnish all labour, Material and Plant necessary or required for the performance of the Work, unless specified elsewhere in the Contract.

### **C 3 Price and Payment**

- .1 Owner, in consideration of the performance of the Contract by Contractor, agrees to pay Contractor in accordance with the rates and prices set forth in the Schedule D – PAYMENT subject to any additions or deductions provided for elsewhere in the Contract Documents. Such payment shall be made in accordance with the procedures set forth in Schedule D - PAYMENT.

#### **C 4 Interpretation**

- .1 The Contract embodies the entire agreement between the parties with respect to the subject matter hereof. Reference should be made to the Definitions set out in Schedule B - GENERAL CONDITIONS.
- .2 The Contract Documents are intended to be correlative and complementary and any Work required by one document and not mentioned in another shall be executed as though required by all documents.
- .3 The Contract is intended to cover all the Work to be done by Contractor; and, unless expressly excluded in the Contract, any and all Material, Plant and labour not indicated herein but which may be necessary or required to complete any part of the Work in a proper, substantial and workmanlike manner shall be furnished by Contractor.
- .4 If Contractor, in the course of the Work, discovers any discrepancy in the Specifications or finds any error, omission or ambiguity in the Contract Documents, Contractor shall immediately apply in writing to Owner for clarification. Owner will promptly clarify such matters and so inform Contractor. Any part of the Work affected by any or all such discoveries which is performed by Contractor prior to clarification by Owner shall be done at Contractor's risk and Contractor shall be liable for any loss, damage or expense which Owner may incur, suffer or be put to as a result of Contractor's failure to obtain such clarification.
- .5 In case of conflict between the Contract Documents, the said documents shall be considered in the following order of precedence, unless otherwise provided: the executed CONTRACT, GENERAL CONDITIONS, SPECIAL CONDITIONS, SPECIFICATIONS (drawings of a larger scale shall govern over a smaller scale), PAYMENT, and .
- .6 In the Contract Documents all references to dollar amounts and all references to any other money amounts are, unless specifically otherwise provided, expressed in terms of currency of Canada.
- .7 Words in the Contract Documents importing the singular number shall include the plural and vice versa and words importing the masculine gender shall include the feminine and neuter genders.
- .8 Where a word is defined anywhere in the Contract Documents, other parts of speech and tenses of the same word have a corresponding meaning.



- .9 Wherever in the Contract Documents a number of days is prescribed for any purpose, the days shall be reckoned exclusively of the first and inclusively of the last.
- .10 Whenever the Contract Documents require either a notice to be given or a request to be made, and the time within which any right will lapse or expire shall terminate on a Saturday, Sunday or legal holiday, such time will continue to run until the next succeeding normal business day.
- .11 In the Contract Documents the headings and any tables of contents and indexes attached thereto are inserted for convenience of reference only and shall not affect the construction or interpretation thereof.
- .12 Any reference in any Contract Document to an article, a clause, a subclause, a paragraph or a schedule shall, unless the context otherwise specifically requires, be taken as a reference to an article, a clause, a subclause, a paragraph or a schedule to that Contract Document.
- .13 This Agreement may be executed in two or more counterparts, each of which when so executed shall be deemed to be an original, but all of such counterparts together shall constitute one and the same instrument.
- .14 The rights and recourses of Owner and Contractor contained in the Contract Documents are cumulative and not in the alternative. The exercise of any such rights or recourses shall not constitute a waiver or renunciation of any other rights or recourses.

**C 5 Assignment**

- .1 Neither Owner nor Contractor may assign or otherwise transfer any rights or interests created under the Contract without the prior written consent of the other, provided always that Owner or Contractor may assign its rights and interests under the Contract with the written consent of the other party, not to be unreasonably withheld, to one of its own Affiliate provided the assigning party remains responsible for any obligations under the Contract not fulfilled by its Affiliate.

**C 6 Waiver**

- .1 No act or failure to act or delay in the enforcement of any right by either party hereto constitutes a waiver of any right under the Contract, and any such act, failure to act or delay does not constitute an approval of or acquiescence in any breach or continuing breach under the Contract except as expressly agreed to in writing and no waiver of any breach of any provision of the Contract constitutes a waiver of any preceding or succeeding breach of such provision or of any other provision of the Contract.

**C 7 Severability**

- .1 In the event that any provision of the Contract, or part thereof, is determined to be invalid,

void or otherwise unenforceable, the remaining provisions of the Contract are to be construed (provided the Contract remains capable of completion in all material respects as contemplated hereunder) as if such invalid, void or unenforceable provision, or part thereof, was omitted and the Contract continues in full force and effect without being impaired or invalidated in any way, and the parties hereto agree to be bound by and perform the same as thus modified.

**C 8 Law and Jurisdiction**

- .1 The Contract is governed by and is to be construed in accordance with the local domestic laws of the Province of Newfoundland and Labrador, Canada (including the laws of Canada applicable therein) without reference to its conflict of law rules. With respect to any action or proceeding to which the parties do not consent to mediated negotiation or arbitration as provided for in the Contract, the parties agree to and each of them do hereby exclusively submit to the jurisdiction of the Courts of the Province of Newfoundland and Labrador, Canada.

**C 9 Notices**

- .1 Any written notice provided for herein to be given to one party by the other party shall be deemed properly given and received if:
  - (a) delivered to the receiving party's designated representative at the Site; and
  - (b) either:
    - i. being mailed by prepaid registered mail; or
    - ii. transmitted by electronic methods;

to the receiving party's address as either stated in this Article or as changed through written notice to the other party.
- .2 Any notice which is sent by prepaid registered mail or transmitted by electronic methods shall be deemed to be given and received forty-eight (48) hours after mailing or transmission, as applicable; provided that if such time expires on a Saturday, Sunday or legal holiday, the notice shall be deemed to be given and received on the next normal business day.

.3 Addresses of parties are:

Owner: NEWFOUNDLAND AND LABRADOR HYDRO  
P.O. Box 12400  
Supply Chain Management  
4th Level, Hydro Place  
St. John's, Newfoundland and Labrador, A1B 4K7

Attention: Stephen Parsons, P.Eng.  
Title: Project Manager

5

FAX: 709-737-1900

Contractor: PROENERGY SERVICES, LLC

2001 ProEnergy Blvd.

Sedalia, Missouri 65301 USA

Attention: Jeff Canon

Title: President and CEO

FAX: 660-580-1160

#### **C 10 Survival of Covenants**

- .1 All covenants, warranties, obligations, indemnities and provisions of the Contract which expressly or by their nature require observance and/or performance by Contractor after the expiration or other termination of the Contract, howsoever caused or arising, continue in full force and effect subsequent to, and notwithstanding, such expiration or other termination of the Contract until they are satisfied in full or by their nature expire.

#### **C 11 Binding Effect**

- .1 The Contract enures to the benefit of and is binding upon the parties hereto and their respective successors and permitted assigns.

5

**IN WITNESS WHEREOF**, the parties hereto have executed this Contract by the hands of their duly authorized representatives as of the day and year first above written.

Signed and delivered in the presence of:

NEWFOUNDLAND AND LABRADOR HYDRO  
(Owner)

  
\_\_\_\_\_  
(Witness)  
A. Bay-Publie NL

BY:   
\_\_\_\_\_  
(Name)

VP - NLH  
\_\_\_\_\_  
(Title)

  
\_\_\_\_\_  
(Witness)  
A. Bay-Publie NL

AND:   
\_\_\_\_\_  
(Name)

VP PETS/A.M.  
\_\_\_\_\_  
(Title)

Signed and delivered in the presence of:

PROENERGY SERVICES, LLC  
(Contractor)

\_\_\_\_\_  
(Witness)

BY:   
\_\_\_\_\_  
(Name)

CEO  
\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Witness)

AND: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

Replace G.C page 3 - P. 40  
with email May 29/14  
9:18pm from S. D. Ball to  
TSN. page numbers then  
end at G.C-39

Replace S.C. to  
"Blanket order per P.O. No  
20962-000-0B"

**SCHEDULE B  
GENERAL CONDITIONS**

**(This will become  
Schedule B to the  
Contract)**



**CONTRACT TITLE: Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxiliary Equipment for the Holyrood Thermal Generating Station**

		<u>Page</u>
GC 1	Definitions .....	i
GC 2	Owner's Instructions .....	7
GC 3	Contractor's Representative .....	8
GC 4	Contractor's Investigations .....	8
GC 5	Performance of Work.....	9
GC 6	Prosecution of the Work .....	9
GC 7	Material .....	10
GC 8	Plant.....	10
GC 9	Access to Work.....	10
GC 10	Inspection.....	11
GC 11	Site Conditions.....	12
GC 12	Changes in the Work .....	12
GC 13	Emergency Work .....	16
GC 14	Delays and Extensions of Time .....	16
GC 15	Ownership.....	20
GC 16	Drawings and Manuals .....	20
GC 17	Protection of Work .....	21
GC 18	Owner-Furnished Material and Plant.....	22
GC 19	Payments by Contractor .....	22
GC 20	Guarantees .....	22
GC 21	Determination of Quantities .....	23
GC 22	Records.....	24
GC 23	Compensation.....	21
GC 24	Other Contracts .....	21
GC 25	Lines and Grades .....	22
GC 26	Health, Safety and Environment.....	22
GC 27	Clean Up.....	23
GC 28	Use of Site .....	23
GC 29	Documents at Site .....	23
GC 30	Royalties and Title to Property Found at the Site.....	23
GC 31	Subcontracts and Assignments .....	23
GC 32	Indemnity .....	24
GC 33	Intellectual Property Indemnity and Ownership.....	30

5

GC 34	Workers' Compensation .....	32
GC 35	Suspension of Work.....	33
GC 36	Taking Over Performance.....	33
GC 37	Termination.....	34
GC 38	Dispute Resolution.....	31
GC 39	Permits, Taxes, Canadian Custom Duties and Shipping Charges.....	33
GC 40	Laws.....	41
GC 41	Confidentiality .....	42
GC 42	Owner's Policies .....	45
GC 43	Insurance .....	45



*June 4/14 Replaced from original contract  
contract with email from S. 11/2/14 date May 30/14 9:18*

**GC 1 Definitions**

- .1 "Affiliate" means a body corporate directly or indirectly controlling, controlled by or under direct or indirect common control with Owner or Contractor, as the context requires.
- .2 "Authority" means any governmental, regulatory or other authority having jurisdiction, or purporting to have jurisdiction, in respect of the parties hereto, the Works and/or the Contract.
- .3 "Business Day" means Monday through Friday inclusive, except any days that are observed other than a day that is observed by the construction industry as a holiday in the Province of Newfoundland and Labrador .
- .4 "Change Order" means a written amendment to the Contract covering a substitution for, addition to or deletion of any Work or other requirement of the Contract, the performance of or compliance with which is contemplated by the Contract Documents and which may result in a change in the method of adjustment or the amount of the adjustment in the Contract Price, if any, or an adjustment in the Contract time, if any.
- .5 "Confidential Information" means all information and knowledge which is the exclusive property of the disclosing Party or of any third party which is being used by, or is in the control or possession of the disclosing Party and/or its Affiliates (whether or not the subject of a separate non-disclosure or confidentiality agreement between the disclosing Party and/or its Affiliates and such third party), including without limiting the generality of the foregoing, technical information, Data, documents, Drawings, reports, analyses, tests, designs, plans, drawings, models, correspondence, communications, data, specifications, formulae, lists, customer names, computer programs, software, technology, techniques, methods, processes, services, routines, systems, procedures, practices, operations, modes of operation, apparatus, equipment, know-how, manuals, business opportunities and trade and/or other secrets, whether verbal, written or existing, stored or communicated in any form or medium, together with all copies thereof, however and whenever made; but excludes (but solely to the extent demonstrably established by the receiving Party) the following:
  - (a) information or knowledge which is part of the public domain or that, through no fault of the receiving Party or their respective personnel, becomes part of the public domain at some future time but only thereafter;
  - (b) information or knowledge which is, legally and as a matter of right, in receiving Party's possession as of the date of the Contract and not the subject of another non-disclosure or confidentiality agreement between Owner and Contractor or the receiving Party and any third party (including any of Owner's Affiliates);
  - (c) information or knowledge which has been or is hereafter furnished or made known to receiving Party, legally and as a matter of right, by third parties (other than any of disclosing Party's Affiliates) without any restriction on use or disclosure; and
  - (d) information or knowledge which is bona fide independently developed by receiving Party, provided that such information or knowledge has been developed entirely without reference to, or consideration of, the information or knowledge hereinbefore described by the disclosing Party.
- .6 "Consultant" means a person, firm, association or corporation designated by the Owner and may

include those licensed to practice as a professional consultant, and includes architects and engineers.

- .7 "Contract" means the agreement between the parties to perform their respective duties, responsibilities and obligations as prescribed in the Contract Documents, together with approved Change Orders, and represents the entire agreement between the parties.
- .8 "Contract Documents" comprise those documents listed in Clause C1 of the Contract and any addenda thereto which are incorporated therein by reference, together with each and every schedule or appendix annexed to or expressly incorporated in any of the foregoing and/or forming a part thereof, each and every document, plan, drawing, specification, instruction and rule referred to therein or in any such schedule or appendix and each and every amendment thereto made in accordance with the Contract.
- .9 "Contract Price" means the aggregate of the amounts applicable to the Work as set forth in Schedule D – Payment, as may be increased or decreased during the performance of the Work in accordance with the provisions of the Contract Documents.
- .10 "Contractor" means the party or parties named in the Contract with Owner for the Work and the successors and permitted assigns of the said party or parties.
- .11 "Contractor's Representative" means Contractor's representative appointed from time to time by Contractor and designated to the Owner in writing to act as Contractor's representative for the purposes of the Contract.
- .12 "Contract Time" means the time from when the Contractor is required to commence the Work and deliver the Material as stipulated in Schedule C - SPECIAL CONDITIONS, Clause SC 3 for completion of the Work.
- .13 "Data" means all technical and economic knowledge, know-how and other information prepared or developed during the course of the performance of the Work or arising out of the Work and in particular, but without limitation of the generality of the foregoing, includes economic evaluations, plans, maps, drawings, field notes, sketches, photographs, specifications, reports, improvements, inventions, secret processes, licenses, formulas, technology, geological surveys and evaluations, and core samples.
- .14 "Defect" means in respect of Contractor and any Subcontractor:
  - (a) any work done or Materials, designs, services or equipment supplied, provided or furnished by Contractor; or
  - (b) that is of poor workmanship, is damaged, defective or deficient; that causes the Works, or any part thereof, or the work, supply and/or services of any other contractor, or part thereof, to be damaged, defective or deficient; or
  - (c) that is otherwise not in full accordance with, or in full compliance with, the Contract; and
  - (d) any Work omitted from being done or Materials, designs, services or equipment omitted from being supplied, provided or furnished.

- .15 "Dispute" means any dispute between the parties to the Contract as to the interpretation, application or administration of the Contract, or any failure to agree where agreement between the parties is called for.
- .16 "Drawings" means the drawings listed in Schedule E - SPECIFICATIONS and all of the following:
- (a) Manufacturer's Drawings - all drawings prepared showing details of Material to be incorporated into the Work and submitted to Owner by Contractor from time to time during the performance of the Work;
  - (b) Shop Drawings – all drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which the Contractor provides to illustrate details of portions of the Work;
- and all revisions thereof made in accordance with the Contract.
- .17 "Harmonized Sales Tax" or "HST" means all amounts exigible pursuant to Part IX of the Excise Tax Act (Canada), including, for greater certainty, the taxes commonly referred to as the goods and services tax (GST) and the harmonized sales tax (HST).
- .18 "Intellectual Property Rights" means:
- (a) any and all proprietary rights anywhere in Canada and the U.S. provided under:
    - i. patent law;
    - ii. copyright law (including moral rights);
    - iii. trade-mark law;
    - iv. design patent or industrial design law;
    - v. semi-conductor chip or mask work or integrated circuit topography law; or
    - vi. any other statutory provision or common law principle applicable to this Contract, including trade secret law, any of above which may provide a right in either Data, Contract Documents and their contents, Drawings, Materials, Plant, Specification, Confidential Information, Work, ideas, formulae, algorithms, concepts, inventions, processes or know-how generally, or the expression or use of such;
  - (b) any and all applications, registrations, licenses, sub-licenses, franchises, agreements or any other evidence of a right in any of the foregoing;
  - (c) all licenses and waivers and benefits of waivers of the intellectual property rights set out in above, all future income and proceeds from the intellectual property rights set out in above, and all rights to damages and profits by reason of the infringement or violation of any of the intellectual property rights set out in above; and
  - (d) all such rights to any such intellectual property rights set out above developed by Contractor, Subcontractors or their servants, agents and employees during and in connection with the performance of the Work.
- .19 "Law" or "Laws" means all statutes, regulations, by-laws, statutory orders, ordinances and decrees, ministerial orders, requisitions, rules, codes or specifications having application to the

parties hereto, the Works and the Contract, enacted, issued, promulgated, made or adopted by any Authority, and includes such Laws as amended or varied from time to time.

- .20 "Material" means all the major generating equipment and components to be supplied and delivered to the Site by Contractor, including the Gas Turbine and Generator Packages, Transformer, Black Start, Controls and other Major Auxiliary Equipment, Components, Parts, and all other items built into or intended to be built into or form a permanent part of the Work, all as more fully described in the Contract Documents including the Schedule E - Specifications. All Material, except where expressly designated "Owner-Furnished", shall be furnished by Contractor.
- .21 "Notice" means any notice, request, demand, document, order, instruction or other communication by the terms of the Contract required or permitted to be given by either party to the other.
- .22 "Owner" is the entity identified in the Contract and includes its successors and assigns.
- .23 "Owner's Representative" means Owner's Representative appointed from time to time by Owner and designated to the Contractor in writing to act as Owner's representative for the purposes of the Contract.
- .24 "Owner-Furnished" as a prefix to the words Material or Plant, means that Material or Plant provided by Owner and delivered by Owner to Contractor in accordance with the terms of the Contract Documents.
- .25 "Plant" means material, supplies, plant, machinery, equipment, tools and buildings, including warehouses, offices, batch plants, camps, garages and shops and all other items consumed or used or intended to be consumed or used in the performance of the Work and not built into or forming a permanent part of the Work.
- .26 "Project" means the total of the work and services contemplated of which the Work is a part.
- .27 "Province" means the Province of Newfoundland and Labrador.
- .28 "Punchlist Item" means any uncompleted part of the Work that (considered individually or in the aggregate of all Punchlist Items) does not and will not adversely affect the performance of the Facility or the ability to operate the Facility safely and in the ordinary course of business, and remain after Substantial Completion.
- .29 "QST" means all amounts eligible pursuant to An Act Respecting the Québec Sales Tax (Quebec), commonly referred to as the QST or TVQ.
- .30 "Schedule" means the work schedule (including milestone) in respect of the Work as set out in Schedule C - SPECIAL CONDITIONS, Clause SC 3.
- .31 "Site" means the designated site or location where the Work is to be delivered as identified in Schedule C - SPECIAL CONDITIONS, Clause SC 1.
- .32 "Specifications" is that portion of the Contract Documents consisting of the requirements and standards for the performance of the Work and include the technical specification and Drawings.

- .33 "Subcontractor" means any person, firm or corporation employed by or having a direct contract with Contractor for the performance of any portion of the Work including supply of labor and/or the furnishing of goods, materials, equipment and/or services, but excluding employees of Contractor.
- .34 "Substantial Acceptance" has the meaning as set forth in the agreement between Owner and its third party contractor for the engineering, construction, commissioning, and start-up of the Facility.
- .35 "Tax" or "Taxes" means any tax, fee, levy, rental, duty, (including, for greater certainty, all customs duties, anti dumping and countervailing duties) charge, royalty or similar charge including, for greater certainty, any federal, state, provincial, municipal, local, aboriginal, foreign or any other assessment, governmental charge, imposition or tariff wherever imposed, assessed or collected, and whether based on or measured by gross receipts, income, profits, sales, use and occupation or otherwise, and including, without limitation, any income tax, capital gains tax, payroll tax, fuel tax, capital tax, goods and services tax, harmonized sales tax, value added tax, sales tax, withholding tax, property tax, ad valorem tax, transfer tax, franchise tax or excise tax, together with all interest, penalties, fines or additions imposed, assessed or collected with respect to any such amounts.
- .36 "Work" means the procurement, supply and delivery of the Materials by Contractor or Subcontractor as described in Clause C2 of the Contract and as contracted herein whether tangible, or intangible and including Intellectual Property Rights conveyed or licenced to the Owner herein, as the context requires, and any extras or amendments to the Work.
- .37 "Work Day" means any day other than a day that is observed by the construction industry as a holiday in the Province of Newfoundland and Labrador.

## **GC 2 Owner's Instructions**

- .1 All claims of Contractor, all questions concerning interpretation of the Contract Documents or the acceptable fulfilment of the Contract on the part of Contractor, and all questions as to compensation, shall be submitted in writing to Owner, or Consultant (if any), for determination by Owner in writing.
- .2 All determinations and instructions of Owner shall be issued in writing to Contractor no later than five (5) days after minuted or written request by Contractor and shall be final, and shall be conclusively deemed to be accepted by Contractor as being in conformity with the Contract Documents without recourse to any courts of law or other forum, unless Contractor shall, within seven (7) calendar days after Owner notifies Contractor of any such determinations or instructions, files with Owner a minuted or written protest, stating clearly and in detail the basis thereof.
- .3 At all times Contractor shall proceed with the Work in accordance with the determinations and instructions of Owner, subject to (i) any right of action for compensation or extension of time that Contractor may have where a protest is filed within the time prescribed in this Clause GC 2 or (ii) Contractor reasonably determines that to do so would impose safety risks to personnel or

property. Contractor shall be solely responsible for requesting instructions or interpretations where expressly required by the Contract Documents and shall be solely liable for all costs and expenses arising from its failure to do so.

- .4 The Owner shall give Notice to the Contractor of the name of the Owner's Representative who shall have authority to act for Owner.

### **GC 3 Contractor's Representative**

- .1 Prior to commencing the Work, Contractor shall give Notice to Owner of the name of Contractor's Representative who must be approved by Owner such approval not to be unreasonably withheld. The Notice shall include the name, address and telephone number (by day and night) of the Contractor's Representative. Contractor's Representative shall have complete charge and authority over the Work unless Owner is otherwise notified by Contractor stating the limits of authority of the Contractor's Representative. Contractor shall give Notice to the Owner prior to any changes being made thereto.
- .2 As determined by the Owner and as communicated to the Contractor, upon the written request of Owner, the Contractor's Representative shall be replaced immediately with a competent person acceptable to Owner.

### **GC 4 Contractor's Investigations**

- .1 Contractor acknowledges that it has fully informed itself in regard to the conditions of the Site and in regard to the local and other conditions affecting the delivery of the Materials to the Site, and in particular but without limiting the generality of the foregoing, in regard to meteorological, geological, labour and transport conditions and the character of the terrain.
- .2 Contractor shall have the sole responsibility of satisfying itself concerning all conditions which may affect the cost of or the time required for the performance of the Work. Time lost, damage or cost suffered by Contractor due to conditions differing from those anticipated by Contractor, including without limitation adverse weather shall not entitle Contractor to additional compensation or be a reason for extension of time within which the Contract is to be completed, or both, except as provided in Clause GC 4.3, Clause GC 6.3 or Clause GC 14, Schedule A, or Schedule F.

### **GC 5 Performance of Work**

- .1 Contractor shall have complete control of the Work and shall effectively direct and supervise the Work so as to ensure conformance with the requirements of the Contract Documents. The Contractor shall be solely responsible of all means, methods, techniques, sequences, procedures and safety and for coordinating all parts of the Work.
- .2 Contractor has entered into the Contract and shall perform the Work as an independent contractor and not as an employee or agent of Owner. Contractor shall have exclusive and

complete control over its employees, Subcontractors or agents, and shall be solely responsible for their acts and omissions.

- .3 Contractor shall organize and schedule its performance of the Work so as to comply at all times with the Schedule as set forth in the Contract Documents.
- .4 Contractor shall give Owner full information, including copies of working Drawings, in advance of its plans for carrying on each part of the Work. Contractor shall be solely responsible for the safety and adequacy of its Material, Plant, labour force and work methods.

#### **GC 6 Prosecution of the Work**

- .1 Time is an important element in the parties performing their respective obligations under the Contract.
- .2 Contractor shall prosecute the Work with due diligence and energy and complete the Work and each phase thereof, within the applicable time set forth in the Contract Documents.
- .3 Neither party to the Contract shall be considered in default in performance of its obligations hereunder to the extent that performance of such obligations is delayed, hindered or prevented by Force Majeure. "Force Majeure" means Acts of God including lightning, earthquake, tempest, flooding, fire, cyclone, hurricane, typhoon, tidal waves, whirlwind, storm, drought or lack of water and other unusual or extremely adverse weather or extremely adverse environmental conditions, meteorites, aircraft or objects falling from aircraft or other aerial devices, the occurrence of pressure waves caused by aircraft or other aerial devices traveling at supersonic speeds, acts of public enemies, any strike, work stoppage, slowdown or other industrial action or labor dispute, acts of a competent Authority and includes any other cause or which could not have been avoided by the exercise of reasonable human foresight and skill not within the affected party's reasonable control. To the extent that the same are caused by events or circumstances that are themselves a Force Majeure, shortage of labor; delay in delivery, loss or damage to Materials or Equipment or Plant in transit or on-site; delay in performance of a Subcontractor; and breakdown of Equipment or Plant shall be considered a Force Majeure event. In the event of Force Majeure the affected party's performance shall be excused and extended for such period of time as the Force Majeure exists.

#### **GC 7 Material**

1. Whenever, in the Schedule E - SPECIFICATIONS, Material is specified by patent or proprietary name or by the name of a manufacturer, without the words "or equal" or words conveying the same meaning following the specified name, Contractor shall provide the Material specified. Where the words "or equal" or words conveying the same meaning follow the said specified name, Contractor may offer for Owner's consideration Material which shall be equal in every respect to that specified, provided however that if, in the reasonable opinion of Owner, the Material offered by Contractor is not equal in every respect to that specified, then Contractor shall furnish the Material specified.

2. It is the Contractor's responsibility to ensure that the substituted Material is equivalent to the Material specified with regard to design, function, durability, operation and quality.
  3. In offering Material in place of specified Material or where required by the Schedule E - SPECIFICATIONS or by Owner, Contractor shall submit samples and full information concerning Material for Owner's review and approval at least thirty (30) days, if reasonably possible based on considerations of the fast-track nature of the Schedule, prior to the date Contractor proposes to order the said Material. The information required shall include, but shall not be limited to, records of prior use for similar applications and certified test reports. Approval by Owner of substitution does not relieve the Contractor from its obligation to ensure that the substitute is equivalent to the Schedule E - SPECIFICATIONS.
4. Unless otherwise provided elsewhere in the Contract Documents, all Material shall be new and of the most suitable grade for its intended use.
5. Contractor shall make available to Owner, if requested, all packing and delivery slips for Material shipped to the Site by Contractor.
6. To control scheduling and completion of the Work, Contractor shall immediately advise Owner in writing of losses or damage to Material and Plant by theft, fire or accident.

**GC 8 Plant**

**Not Applicable**

**GC 9 Access to Work**

- .1 Owner, its inspectors, agents and employees and other persons authorized by Owner shall, at all reasonable times and for any purpose, have access to the Work and the premises used by Contractor and Subcontractors for the performance of the Work and Contractor shall provide safe and proper facilities therefor.
- .2 Owner, its inspectors, agents, employees and other persons authorized by Owner shall at all reasonable times have immediate access to all places where Material or Plant is being manufactured, produced, or fabricated for use in the Work, and shall be provided with full facilities for determining that all such Material or Plant is being made strictly in accordance with the Contract Documents. Contractor shall, whenever so requested, give Owner access to all redacted subcontracts, purchase orders, invoices, bills of lading, Specifications, Drawings and similar Documents as are deemed necessary by Owner for proper inspection and expediting.
- .2 All subcontracts and purchase orders for Material or Plant shall contain a provision to the effect that the order is subject to inspection and that it may occur at any time during manufacture and prior to shipment, by Owner, its inspectors, agents and employees and other persons authorized by Owner provided such inspection does not impact or delay the schedule or increase the cost of manufacture.

#### **GC 10 Inspection**

- .1 Contractor shall be responsible for inspection and quality assurance of all Material and Plant to assure compliance with the Schedule E - SPECIFICATIONS and for this purpose Contractor shall appoint qualified inspectors.
- .2 All Material, Plant and Work shall, at Owner's option, be subject to inspection, examination and test by Owner or its authorized representatives at all reasonable times and all places. The parties shall agree on a schedule on which such inspections, examinations and testing by Owner shall be carried out on Owner's behalf. Owner shall have the right to reject defective Material, Plant and Work. Contractor shall, at its expense, correct rejected Work and replace rejected Material or Plant, all to the reasonable satisfaction of Owner.
- .3 Contractor shall furnish promptly all facilities, labour, Material and Plant necessary for any inspections and tests that may be required by Owner. Any additional inspections or tests over and above those contemplated in the Contract shall be performed in such a manner that the Work will not be delayed unnecessarily or increasing the cost to complete the Work.
- .4 If so designated in the schedule to be agreed between the parties pursuant to Clause GC 10.2 above, Material shall not be shipped from the place of production or manufacture to the Site or be incorporated in the Work prior to inspection by or without the consent of Owner.
- .5 Owner may at any time before Substantial Acceptance examine Work already performed by removing, disassembling or tearing out same. Contractor shall, on request from Owner, promptly furnish all necessary facilities, labour, Material, Work and Plant for such examination. If such Work is found to be defective in any material respect, or if it is found that such Work is not in material conformity with the Contract Documents, or if Contractor has failed to comply with the requirements of Clause GC 10.4, the expense of such examination and of satisfactory reconstruction shall be at the cost to Contractor and no extension of time for performance of Work shall be granted. If, however, such Work is found to meet the requirements of the Contract Documents, and Clause GC 10.4 has been complied with, Contractor shall be entitled to additional compensation in accordance with Clause GC 12 - Changes in the Work for the cost of labour, Plant and Material necessarily involved in the examination and replacement and in addition, if completion of the Work has been delayed thereby, Contractor shall be granted a suitable extension of time in accordance with Clause GC 14 - Delays and Extensions of Time.
- .6 Owner's inspection of Material, Plant and the Work, or lack of such inspection, shall not relieve Contractor of its responsibility to execute the Work in full compliance with all requirements of the Contract Documents.

#### **GC 11 Site Conditions**

Not Applicable

#### **GC 12 Changes in the Work**

- .1 Owner may at any time make changes in the Work or the Contract which may require Contractor to perform extra Work. Before any change in the work is commenced, such change or extra Work shall be authorized by a written Change Order specifying the basis of the compensation to be paid to the Contractor.
- .2 Owner will issue to Contractor written Change Orders which may be accompanied by additional or revised Drawings. Upon receipt of such Change Order, Contractor shall promptly commence the ordered Work so that, subject to Clause GC 12.3, all the dates set forth in the Schedule shall be met.
- .3 Within ten (10) calendar days of receipt of such Change Order, Contractor shall advise Owner in writing of any anticipated change in the Schedule arising from the Change Order. If, such change in the Schedule is justified, an equitable adjustment in the time for completion of such items will be made and the Schedule shall be revised to reflect such adjustment and shall be resubmitted for approval.
- .4 If any change or extra Work causes an increase or decrease in the actual cost to Contractor of completing the Contract in comparison with what Contractor's actual cost would have been had no change or extra Work been made, an equitable adjustment to the Contract Price will be made in accordance with the following provisions and the Contract shall be modified accordingly by a written Change Order.
  - (a) Any claim by Contractor for equitable adjustment to the Contract Price because of a change or extra Work shall be submitted to Owner in writing within thirty (30) calendar days from the date of receipt by Contractor of the notification of change. For changes or extra Work, such adjustment shall be made as follows:
    - i. to the extent set forth in the Contract Documents, applicable unit prices shall apply;
    - ii. to the extent such unit prices alone are not applicable, in the opinion of Owner, adjustment shall be made on the basis of a lump sum or a combination of lump sum and unit prices as agreed upon by Contractor and Owner;
    - iii. to the extent adjustment is not made as provided in subparagraphs (i) and (ii) of Clause GC 12.4 adjustment shall be computed in accordance with Clause GC 12.6.
  - (b) To the extent that the provisions of Clause GC 12.4 (a)(i) are not applicable in the opinion of Owner and the provisions of Clause 12.4 (a)(ii) have not been agreed upon prior to Contractor's commencement of the Work constituting the change, Contractor shall maintain records of its costs in accordance with Clause GC 12.6 below, during the performance of the change or extra Work until such time as the change is completed and payment shall be made on a cost plus basis pursuant to Clause GC 12.6.
- .5 Contractor shall not perform changes or extra Work unless authorized by a written Change Order which specifies the basis of compensation to be paid Contractor for the changes or extra Work. If such changes or extra Work is not to be performed on a lump sum or unit price basis, the Change Order shall specify that the change or extra Work shall be performed on a cost plus basis and payment shall be made pursuant to Clause GC 12.6.

- .6 Where Clause 12.4(a)(iii) is applicable, Contractor shall maintain records of the actual cost to Contractor of completing the extra Work and payment for such extra Work shall be in accordance with the following provisions:

(a) Direct Labour Costs

Charges for all of the labour furnished and used by Contractor in the performance of changes and extra Work which may include working foremen, superintendents, assistant superintendents, general foremen, office personnel, timekeepers and maintenance mechanics but only to the extent such personnel spend time in the performance of the changes or extra Work. Hourly rates charged shall be no higher than that used or employed under work of similar character and location in the performance of the Contract.

The time charged to changes or extra Work shall be subject to the daily or weekly approval of Owner and evidence of such approval shall be submitted by Contractor with its billing. Labour rates used to calculate the costs shall be those rates in effect during the accomplishment of the changes or extra Work. The direct labour costs shall include, in addition to the direct payroll costs, payroll taxes and insurance, vacation allowance, subsistence, travel time and any other payroll additives required to be paid by Contractor, by law or collective bargaining agreements with respect to any labour furnished by Contractor for which compensation is to be paid on an hourly basis.

(b) Premium Time

Premium time costs shall be paid for classifications in (a) above for overtime work for which the Owner has given prior written authorization. The payroll percentage additives stipulated in Clause GC 12.6 (f) shall not apply to premium time costs.

(c) Equipment Costs

For the operation of equipment with a new unit cost of five thousand dollars (\$5,000.00) or more, Contractor shall be reimbursed at the "operated rate", excluding operator, to be determined as follows:

- i. For the operation of equipment, Contractor shall be reimbursed at the "hourly operated rate" in accordance with the terms set forth elsewhere in the Contract Documents, approved by Owner, including additional items of equipment added thereto from time to time with the approval of Owner.
- ii. For equipment for which no hourly rate is provided in the terms set forth elsewhere in the Contract Documents, Contractor shall be reimbursed at the "hourly operated rate" provided in the edition of the publication of the Government of Newfoundland and Labrador, Department of Transportation and Works, Highway Design Division's Specification Book, Division 10, Form 1000 entitled "Newfoundland Equipment Rental Schedule" current as of the date of the Contract. For this Contract, references within Form 1000 to Department shall be construed as meaning Owner.

- iii. For equipment for which no hourly rate is provided in the terms set forth elsewhere in the Contract Documents and which is not listed in the Newfoundland Equipment Rental Schedule, as described in Clause GC 12.6 (c) (ii), Contractor shall be reimbursed at an hourly rate, reasonably approved by Owner and Contractor.
- iv. Unless Contractor, within seven (7) days of notification of a change or extra Work, advises Owner otherwise, the hourly rate shall be computed as either:
  - .7 for equipment not owned by Contractor, the standard rate charged to Contractor by an equipment rental company, plus a rate agreed by Owner for the provision of fuel, lubricants and normal maintenance provided by Contractor; or
  - .8 for equipment owned by Contractor, the dollar value obtained by multiplying together the following two components:
    - (a) the purchase cost to Contractor of Contractor-owned equipment; and
    - (b) a percentage hourly rental factor of 0.00066 (equal to 1/1515);

where the percentage hourly rental factor is based on the ownership and operating costs of the equipment used on a single shift basis. Where equipment is operated on a double shift basis, the hourly rate will be reduced to five/sixths of the single shift rate (i.e. using a percentage hourly rental factor of 0.00055 (equal to 1/1818)).

- i. Payment at the operated rate described above shall be the full compensation to Contractor, other than the cost of the operator, for the supply and operation of the equipment. The cost of the operator shall include direct labour costs as provided for in Clause GC 12.6 (a) and premium time as provided for in Clause GC 12.6 (b). No premium shall be paid over and above the rate as set out above for the operation of the equipment on shift work, or for operation on Sundays or holidays.
- ii. The operated rate shall apply only for the period when the equipment is actually operating in respect of the Work.
- iii. Payment at an hourly rate to be termed the "stand-by rate" and equal to fifty percent (50%) of the operated rate, shall apply for the period when the equipment is:
  - not operating, but in an operable condition, and held at the designated location with Owner's approval in readiness to perform Work; or
  - being transported to or from the location of the cost plus Work, subject to the limitations following.
- iv. Payment at the stand-by rate shall be made for a normal day shift basis only and shall not exceed ten (10) hours in any twenty-four (24) hour period.
- v. The rates set forth shall apply to all equipment which Contractor uses to perform Work on a cost plus basis. The availability of equipment for such Work shall be subject to an agreement between Owner and Contractor for each occasion.

- vi. When the Work performed on a cost plus basis requires the use of equipment not available at the designated site, and Owner so authorizes, Contractor will be reimbursed for the transportation costs of bringing such equipment from and returning it to its point of origin.
- vii. In addition to the transportation costs, Contractor will be paid at the stand-by rate, as established herein, for the time the equipment is in transit up to a maximum of ten (10) hours per day up to a maximum of twenty-four (24) hours for any one shipment.
- viii. Time sheets shall be presented daily to Owner, in a form approved by Owner, for equipment rented during the previous day. The time sheets, approved by Owner without delay, shall be the sole basis from which Contractor shall prepare its invoices for payment of equipment rental.

(d) Material Costs

Charges for materials furnished by Contractor and used in performing changes or extra Work shall be the net actual cost, allowing for discounts and rebates to Contractor, and Contractor's invoice shall accompany the billing along with the verification by Owner of such use. All such furnishing and use of such material shall be specifically authorized in the Change Order. An amount of fifteen percent (15%) on material costs shall also be allowed.

(e) Subcontracted Work and Services Costs

Charges for Work and services subcontracted by Contractor in the performance or completion of changes or extra Work shall be allowed only when both the Subcontractor and the terms of payment to the Subcontractor have been approved in writing by the Owner before the Subcontractor starts such work. Such charges shall be allowed only for the net actual cost to the Contractor. An amount of ten percent (10%) on subcontracted Work and services costs shall also be allowed.

(f) Payroll Additives

Contractor shall be paid twenty-five percent (25%) of direct labour costs in Clause 12.6 (a) above to cover employee fringe benefits. The payroll percentage additives stipulated shall not apply to premium time costs defined in Clause GC 12.6 (b).

(g) Tools, Supplies, Overhead, Supervision and Profit

A charge for tools and equipment with a new cost each of less than five thousand dollars (\$5,000.00) and for supplies, overhead, supervision and profits shall be allowed in the amount of the sum of the following percentages of direct labour costs:

- i. Twenty percent (20%) of the total direct labour costs as defined in (a) above, for the initial ten thousand dollars (\$10,000.00) of the total direct labour costs of the specific cost plus items in a Change Order.

- ii. Fifteen percent (15%) of the total direct labour costs, as defined in (a) above, for the amount exceeding ten thousand dollars (\$10,000.00) up to and including one hundred thousand dollars (\$100,000.00) of the total direct labour costs of the specific cost plus items in a Change Order.
- iii. Ten percent (10%) of the total direct labour costs, as defined in (a) above, for the amount exceeding one hundred thousand dollars (\$100,000.00) of the total direct labour costs of the specific cost plus items in a Change Order.

### GC 13 Emergency Work

Not Applicable

### GC 14 Delays and Extensions of Time

- .1 Where a delay to the performance of the Work occurs, other than due to Owner, Owner's agents or other contractors, the cause of which was reasonably beyond the control of and not reasonably ascertainable by Contractor at the time the Contract was entered into or otherwise considered an event of Force Majeure, Contractor's sole remedy for delay shall be an extension of the time in which the Work is to be performed which may only be extended in accordance with Clause GC 14.2. Adverse weather shall not entitle Contractor to an extension of time or additional compensation except as otherwise provided for in Clause GC 6.3.
  - (a) Where a delay is occasioned by the fault of the Owner as stipulated in the Contract Documents, the Contractor shall notify within one Business Day the Owner of such delay and within five Business Days the Contractor shall compile and provide all supporting documentation including actual cost and primary data to support the delay claim, the Contractor shall be entitled to:
    - i. An extension of time in which the Work is to be performed in accordance with Clause GC 14.1 (b) and
    - ii. An equitable adjustment for costs which Contractor has clearly documented and justified, to the Owner's reasonable satisfaction, as having been reasonably incurred by such delay.
    - iii. Contractor shall take all reasonable measures necessary to mitigate the impacts of such delay and show evidence reasonably satisfactory to Owner to such effect.
    - iv. Failure of Contractor to provide timely notice or data sufficient in the reasonable opinion of Owner will disallow the delay claim.
  - (b) If an event occurs which, in the opinion of Contractor, will cause a delay to the Work as described in Clause GC 14.1 for which an extension of time may be made, Contractor shall notify the owner as soon as practicable following its discovery of the commencement of the event and shall within ten days, give written Notice to Owner of the cause and of the anticipated outcome of such cause. Owner shall promptly advise Contractor if, in its opinion, the event specified by Contractor does not warrant an extension to the time in which the Work is to be performed. Within ten (10) days after Contractor's discovery that such cause of

delay has ceased, Contractor shall file with Owner a written statement of the actual delay, if any, resulting from such cause. If the Owner agrees the cause of delay was such as to warrant an extension of the time in which the Work is to be performed, Owner shall issue a Change Order within ten (10) days of Contractor's written statement setting forth the number of calendar days by which the Work to be performed shall be extended. Failure of Owner to issue a Change Order shall not prejudice Contractor's rights to an extension to the time to perform its Work.

- (c) Failure by Contractor either to give written Notice to Owner of the cause of delay or to give a written statement setting out the actual delay suffered once the cause of delay has ceased, within the time permitted, shall constitute sufficient reason for Owner not extending the time in which the Work is to be performed.
- .2 The Contract Time may be extended for such reasonable time as the Owner and the Contractor agree. An extension of time shall be the sole remedy to Contractor for delays described in Clause GC 14.1 and Contractor shall not be entitled to any damages on account thereof unless such time extends more than thirty (30) days in which event Contractor shall be entitled to reimbursement by Owner for the actual costs incurred.
- .3 In the event of any delay to the Work occurring, Contractor shall take all necessary measures to mitigate the effect of the delay on the Work and be prompt and diligent in proceeding with the performance of the Contract.
- .4 In the event of interruption of the Work by any Authority, or use by such Authority of Contractor's personnel and Plant, time for performance under the Contract shall be extended for a period of time equivalent to such interruption and Owner shall pay Contractor for services performed by Contractor for such Authority. No extension shall be provided where the interruption of the work was the fault of the Contractor.

#### **GC 15 Ownership**

- .1 All title in and to the Material and interest of Contractor in licences, powers and privileges acquired, used or provided by Contractor for the exclusive purposes of the Work or Contract shall, from the time such Material is to be shipped from the U.S., be vested in and become the property of Owner for the purposes of the Work and this Contract.
- .2 Contractor shall, unless otherwise provided in the Contract Documents, be solely at risk and be liable for any loss or damage to all such Material and Plant until Substantial Acceptance notwithstanding that the Material and Plant are the property of Owner.
- .3 Owner may, upon giving written Notice to Contractor, take possession of or use any completed or partially completed portion of the Work. Such possession or use shall not be deemed to be an acceptance of the Work, nor shall it relieve Contractor of any of its responsibilities under the Contract; provided that Owner, and not Contractor, shall be responsible for risk of loss and ordinary wear and tear with respect to any portion so used by Owner and warranty on said portion of Work shall commence at that point.

**GC 16 Drawings and Manuals**

.1 Contractor shall perform the Work in accordance with requirements stipulated in the Contract Documents. All drawings submitted by Contractor will be for informational purposes only and will not require approval by Owner or Owner's Engineer.

**GC 17 Protection of Work**

- .1 Until Substantial Acceptance or as otherwise provided for under Clause 15.3, Contractor shall be responsible for the security of all Material and Plant provided for the Work. Contractor and Subcontractors shall protect all Material, Plant and the Work, whether or not supplied by Owner to Contractor, against loss or damage from any cause whatsoever until the completion of the Work and Substantial Acceptance, and Contractor shall not remove, use or dispose of them without the written approval of Owner or as otherwise provided for in Clause 15.4, except as may be essential for the performance of the Work. Contractor shall immediately advise Owner in writing of losses or damage to Material and Plant by theft, fire or accident.
- .2 Contractor acknowledges that all Material and Plant destined for the Site may be subjected to frequent handling, heavy hauling and exposed to harsh weather conditions. Contractor shall be responsible for proper preparation of all articles for shipment from source to the Site and Contractor shall make good at its own expense any damages resulting from improper or inadequate preparation. The type of packaging shall be dictated by the nature of the article and the method of transportation but in each case shall be such as will ensure ease of handling and safety of the article. All items requiring handling by cranes shall be fitted with adequate lifting eyes or marked as to sling positions.
- .4 Contractor shall plainly mark (or cause to be marked when shipment is by others) on the outside of all articles shipped, sufficient information to ensure prompt identification. On all bills of lading, address labels and other shipping documents the Project title as defined in SCHEDULE C - SPECIAL CONDITIONS shall be marked in a conspicuous place.
- .5 All Work, including the work of others, which is disturbed, damaged or destroyed in the course of such remedial work shall be made good at Contractor's expense. If Contractor fails to proceed at once with the replacement or the correction of such disturbed, damaged or destroyed work, Owner may after written notice thereof to Contractor and a reasonable time period to correct, by contract with a third party or otherwise, replace or correct such work, and charge the cost thereof to Contractor, or may avail itself of the remedies set forth in Clause GC 36 - Taking Over Performance.

**GC 18 Owner-Furnished Material and Plant**

Not Applicable

**GC 19 Payments by Contractor**

- .1 Contractor shall make and cause all Subcontractors to make payments promptly when due for all Material, Plant, labour and services obtained by it or them in the execution of the Work. In the

event any Subcontractor falls or neglects to make any such payment when due, Contractor shall immediately pay same. Should Contractor fail to promptly make any payments required to be made by it, Owner may after advance written notice to Contractor make such payments on Contractor's behalf, and Contractor hereby agrees to the immediate repayment to Owner of all such sums so paid, or to the deduction by Owner of all such sums from any money due or to become due to Contractor. Contractor shall expeditiously settle any outstanding amounts owing to Owner. If payment is not forthcoming within a reasonable time, Owner reserves the right to set off these amounts against progress billing payments or other monies owing to Contractor.

- .2 Contractor shall ensure that all Work performed and Material supplied is and remains free of all claims, liens, privileges or encumbrances of any kind. Owner may, at any time, request Contractor to furnish satisfactory evidence that all Work performed and Material supplied are free and clear of encumbrances, claims, liens or privileges of any nature and kind whatsoever. Such request having been made, Owner shall, in addition to any other remedies, be entitled to withhold any payments due Contractor until such evidence is furnished. Notwithstanding this section, this section does not limit the Contractor's right to lien or otherwise enforce remedies available to it in this Contract or at law.

#### GC 20 Guarantees

- .1 Contractor warrants and guarantees that it shall provide quality workmanship which is first-class in every respect and that it shall furnish Material and Plant which is in accordance with the Contract Documents, and further warrants that all equipment and systems so furnished shall perform in accordance with the requirements of the Contract Documents.
- .2 Promptly upon receipt of Notice from Owner prior to the expiration of the warranty period as to any Defects in such workmanship or Material, or deficiencies in performance, Contractor shall remedy such Defects or deficiencies at its expense and to the reasonable satisfaction of Owner; provided that such Defects or deficiencies in performance must have appeared within one (1) year after the date of Substantial Acceptance or as otherwise provided for under Clause 15.3 (or two (2) years after the date of Substantial Acceptance in the case where Contractor or one of its Affiliates is furnishing the personnel and associated services for the full-time operation and maintenance of the Facility during the course of said two (2) year period). All work done to remedy such Defects or deficiencies in performance shall be guaranteed and warranted to the same extent and for ninety (90) days or the remainder of the initial warranty period, whichever is longer. If the Defects or deficiencies are not promptly remedied by Contractor to the reasonable satisfaction of Owner, Owner may on written notice to Contractor proceed to perform the necessary work at Contractor's risk and expense, and the costs thereof shall be payable forthwith by Contractor to Owner. This section of the Contract Documents sets forth the exclusive remedies for all claims based on failure of or effect in the Contractor's Work provided under the Contract Documents whether the failure arises before, during or after the warranty period and whether said claim is based on contract, indemnity, warranty, tort (including negligence), strict liability or otherwise. The duties, liabilities and obligations of Contractor do not extend to any repairs, adjustments, alterations, replacements or maintenance that may be required as a result of normal wear and tear, normal degradation in the performance of equipment, or as a result of (a) improper repair or alteration by Owner or other persons other than Contractor or its subcontractors, (b) misuse, negligence or damage by Owner or other persons other than Contractor or its subcontractors, (c) excessive operation at peak firing capacity, frequent starting,

type of fuel, detrimental air inlet conditions, or erosion, corrosion or material deposit of fluids. The warranty and remedies are further conditioned upon (i) the proper storage, installation, operation and maintenance of the equipment and conformance with the operation and instruction manuals provided by the suppliers and manufacturers and (ii) repair or modification pursuant to the instructions of the suppliers and manufacturers and as otherwise directed by Contractor. **NO IMPLIED, STATUTORY, OR COMMON LAW WARRANTY OF ANY KIND, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY.**

- .3 Any and all manufacturers' warranties shall be in the name of the Owner or otherwise assignable to Owner, and originals shall be provided to the Owner at no cost. The time frame of any warranty shall be in addition to any warranty provided by the Contractor herein or otherwise but recourse in such case shall be limited directly with the manufacturer providing such warranty.

#### **GC 21 Determination of Quantities**

- .1 The quantity of Work to be paid for under any item for which a unit price is fixed in the Contract Documents shall be the amount or number, as determined jointly by Owner and Contractor and approved by Owner, of units of Work satisfactorily completed in accordance with the Contract Documents. Payment shall not be made for Work done outside the limits specified in the Contract Documents.
- .2 Payment for quantities, computed as specified herein, shall constitute full compensation for all furnishing, handling, installing and placing of all the various items of Work for which a unit price is fixed in the Contract Documents.

#### **GC 22 Records**

- .1 Contractor and Subcontractors shall maintain full records pertaining to the Contract for two (2) years following the Substantial Acceptance and shall make them available for audit and inspection and shall allow copies thereof and extracts therefrom to be taken by Owner and its authorized representatives.
- .2 Contractor shall require all Subcontractors and all firms, corporations and persons directly or indirectly controlled by or affiliated with Contractor and all firms, corporations and persons directly or indirectly having control of Contractor to comply with this Clause as if they were Contractor.

#### **GC 23 Compensation**

- .1 Contractor agrees to accept the Contract Price as full compensation for performing the Work pursuant to the terms and conditions of the Contract and for all risks, costs and contingent liabilities of every description arising from or connected with the Work.
- .2 For payments owed to Contractor under the Contract Documents not received by Contractor within ten (10) days from the date of Owner's receipt of Contractor's invoice, a late fee of the

lesser of one percent (1.0 %) per month or the highest rate allow by applicable law will be assessed and owed by Owner except with respect to any invoice payment (or portion thereof) that is disputed in good faith by Owner by sending written Notice thereof with the particulars of such dispute to Contractor within the ten (10) day period. Once such dispute Notice is received by Contractor the parties will use reasonable efforts to resolve such dispute in an expeditious manner, and once settled, any payment resulting thereunder owed to Contractor shall be paid within ten (10) days of such settlement.

#### **GC 24 Other Contracts**

- .1 Owner reserves the right to let other contracts in connection with the Project or to do work with Owner's forces, and Contractor shall properly coordinate the Work with that of such other contractors or Owner's forces with any disagreements to be referred promptly to Owner for settlement and conclusive decision provided such decision does not have a material adverse affect on the time or cost of Contractor to carry out the Work.
- .2 Should any part of the Work depend for its proper execution or result upon the work of others, Contractor shall report promptly to and advise Owner in detail of any Defects or delays in the work of others as may interfere with the proper execution of the Work. Should Contractor fail to so report, it shall have no claim against Owner by reason of the defective or unfinished work of others, except as to latent Defects which would not have been reasonably noticeable by inspection.
- .3 Contractor and Subcontractors shall cooperate in the performance of the Work so as not to hinder, delay or interfere with Owner, other contractors or Owner's forces in the progress of their work.

#### **GC 25 Lines and Grades**

Not Applicable

#### **GC 26 Health, Safety and Environment**

- .1 Contractor shall comply with all occupational health and safety requirements required by Law.
- .2 Contractor shall provide all safeguards and make available protective equipment necessary for the safety of workers.
- .3 Contractor shall designate a qualified safety advisor for the duration of the Contract.
- .4 If during the performance of Work, Owner informs the Contractor that Contractor is not conducting the Work in compliance with the safety and health requirements of the Contract, then the Contractor shall remedy that discrepancy promptly. Owner may direct the Contractor to suspend Work until such time as the Contractor satisfies Owner that the Work will be resumed in conformance with applicable safety and health and environment provisions. If the Contractor fails to rectify any breach of safety and health for which the Work has been suspended, or if the Contractor's performance has involved recurring non-conformance with safety and health

requirements, Owner may at its option terminate the Work without further obligation to the Contractor.

- .5 Before commencing Work, Contractor shall at its expense carry out promptly and fully the safety, sanitary and medical requirements as stated herein, or otherwise prescribed by Law, as established in the safety program and as required by Owner. To properly safeguard the safety and health of employees and local communities, Contractor further agrees that failure of personnel to comply with and to enforce the safety rules and fire prevention precautions shall be cause for removal of such personnel.
- .6 Before commencing Work, Contractor shall, without cost to Owner, require Subcontractors to comply with the provisions of this Clause GC 26 and shall take such action as may be required to ensure such compliance.
- .7 Contractor shall promptly report all occurrences resulting in medical treatment, death or property damage or loss to the appropriate Authorities and Owner and shall provide written details of all such occurrences using prescribed forms where applicable.
- .8 Hazardous conditions noted by Owner will be promptly reported to Contractor's safety coordinator for immediate correction.

**GC 27 Clean Up**

Not Applicable.

**GC 28 Use of Site**

Not Applicable

**GC 29 Documents at Site**

Not Applicable

**GC 30 Royalties and Title to Property Found at the Site**

Not Applicable

**GC 31 Subcontracts and Assignments**

- .1 Contractor shall not, without having obtained the prior written consent of Owner not to be unreasonably withheld or as otherwise disclosed to Owner prior to the execution of the Contract Documents:

- (a) subcontract or assign the Work or any part thereof; or
  - (b) assign any monies due or to become due under the Contract other than as part of Contractor's normal banking obligations; or
  - (c) permit any subcontract to be assigned or transferred.
- .2 No subcontract nor the granting of consent by Owner pursuant to Clause GC31.1 shall relieve Contractor of any of its liabilities or obligations under the Contract, and Contractor agrees that it is fully responsible to Owner for the acts and omissions of Subcontractors and of persons directly and indirectly employed by them in the performance of the Work.
  - .3 Nothing contained in the Contract shall create any contractual relationship between any Subcontractor and Owner.
  - .4 Any subcontract entered into by Contractor shall ensure compliance by Subcontractor with the provisions of the Contract which are applicable to the portion of the Work to be performed by Subcontractor.

#### **GC 32 Indemnity**

- .1 Contractor shall indemnify and hold harmless Owner and any of its directors, officers, representatives, agents, affiliates and employees, from and against any and all liability, losses, damages, claims, costs, charges and expenses, including reasonable legal fees, incurred by Owner and any of its directors, officers, representatives, agents, affiliates and employees on account of personal injuries, loss of life, loss of or damage to any personal and real property of any third person or third party, and loss of or damage to property belonging to or in the custody of Contractor and Subcontractors or their employees or agents, to the extent resulting from or arising out of or in any way connected with Contractor's and Subcontractors' performance of the Work, or the use by Contractor and Subcontractors or their employees or agents of Plant, Material, personnel and services provided by Owner.
- .2 Contractor hereby agrees that it will, at its expense, promptly assume the defence of and fully defend against every such claim, suit or other proceeding, on account of such personal injury, loss of life, loss of or damage to any such personal and real property pursuant to Clause GC 32.1, and promptly to pay any and all such costs, charges, reasonable legal fees, and other expenses and any and all such judgments that may be rendered against Owner or any of its directors, officers, representatives, agents, affiliates and employees arising out of or in any way connected with Contractor's and Subcontractors' performance of the Work under the Contract.
- .3 If any judgment, attachment, execution or other lien be placed upon or obtained against the interest of Owner in any property, or against any of its directors, officers, representatives, agents, affiliates and employees, Contractor shall at once cause the same to be discharged and dissolved and may, at the Owners discretion, require further security in the form of a bond or security.
- .4 Save and except for liens brought against the Owner by the Contractor as a result of disputes that arise between the Contractor and the Owner over payment, Contractor shall indemnify and hold harmless Owner from and against any and all encumbrances, claims, liens or privileges of any

nature and kind whatsoever to the extent arising from or in connection with the Work including, without limiting the generality of the foregoing, claims, liens or privileges arising under any Laws and legal provisions relating to liens or privileges in favour of workers, builders, architects or suppliers of Material.

- .5 Owner shall indemnify and hold harmless Contractor and any of its directors, officers, representatives, agents, affiliates and employees, from and against any and all liability, losses, damages, claims, costs, charges and expenses, including reasonable legal fees, incurred by Contractor and any of its directors, officers, representatives, agents, affiliates and employees on account of personal injuries, loss of life, loss of or damage to any personal and real property of any third person or third party, to the extent resulting from or arising out of the acts or omissions of Owner, its agents and their personnel.
- .6 Owner hereby agrees that it will, at its expense, promptly assume the defence of and fully defend against every such claim, suit or other proceeding, on account of such personal injury, loss of life, loss of or damage to any such personal and real property pursuant to Clause GC 32.5, and promptly to pay any and all such costs, charges, reasonable legal fees, and other expenses and any and all such judgments that may be rendered against Contractor or any of its directors, officers, representatives, agents, affiliates and employees arising out of or in any way connected with the acts or omissions of Owner, its agents and their personnel.
- .7 Owner and Contractor when seeking indemnity protection under the provisions of the Contract Documents shall provide the other party with prompt written Notice of any such claim and shall provide all reasonable assistance and cooperation to the other party in connection with the party fulfilling its indemnity obligations hereunder.

### **GC 33 Intellectual Property Indemnity and Ownership**

- .1 Contractor shall indemnify and hold harmless Owner and any of its directors, officers, representatives, agents, affiliates and employees from and against any and all losses, costs, damages and expenses, including legal fees, incurred by Owner or any of its directors, officers, representatives, agents, affiliates or employees, as a result of or in connection with any demand, suit, claim, or proceeding based upon infringement or violation or alleged infringement or violation of any Canadian or U.S. patent, trademark, copyright or industrial design and arising out of the possession or use of any or all of the Material or Plant furnished by Contractor and Subcontractors under the Contract, and out of the processes or actions employed by Contractor and Subcontractors in connection with the performance of the Work. Contractor shall also, at its expense, promptly defend against any and all such demands, suits, claims or proceedings and shall pay any and all awards, judgments, damages, costs and expenses, including reasonable legal fees, assessed against Owner or any of its directors, officers, representatives, agents, affiliates and employees in any and all such suits or proceedings. Owner shall give to Contractor prompt notice in writing of the institution of any such demand, suit, claim or proceeding and permit Contractor to defend the same and, at Contractor's expense. Owner shall give Contractor information, assistance and authority to enable Contractor to do so. Subject to the approval of Owner, Contractor may, in order to avoid such infringement or violation, substitute, at its own expense, non-infringing Material, Plant or processes or, at its own expense, modify such infringing Material, Plant or processes so they become non-infringing, provided that such substituted and modified Material, Plant and processes shall meet the requirements of the Contract Documents including such testing and demonstration as Owner may require.

- .2 Any royalty, licence, fee or other charge arising from or in connection with the use or incorporation in the Work of any article, device or process, provided by Contractor or Subcontractors to Owner pursuant to the Contract, which is or may become the subject of a patent, trademark, copyright or industrial design shall be for the account of Contractor, and Contractor shall pay any and all royalties, fees and charges. In the event that Owner shall have paid such royalty, fee or charge after notifying Contractor in writing first of such claim and its intent to pay after Contractor's refusal to pay the same, Contractor shall promptly reimburse Owner therefor.
- .3 Contractor hereby assigns to Owner all right, title and interest to all such Intellectual Property Rights including the right to file and obtain registration for such Intellectual Property Rights anywhere in the world, Contractor agrees to waive, or have waived, all moral rights which may subsist in any Intellectual Property Rights Contractor agrees to execute, or cause to be executed, such further documents as Owner may prepare and suggest in order to evidence the foregoing assignment to Owner and waiver of moral rights in favour of Owner. Contractor represents and warrants that it has entered into written agreements with its servants, agents and employee's subcontractors and licensors to give effect to the assignments, waivers and further assurances contemplated herein.
- .4 Owner is and will be the exclusive owner of all of the Intellectual Property Rights. All right, title and interest in the Intellectual Property Rights, will vest in Owner, immediately upon creation and regardless of the state of completion. Save and except for liens brought against the Owner by the Contractor as a result of disputes that arise between the Contractor and the Owner over payment, Contractor will not assert any lien right, or other encumbrance, on the Intellectual Property Rights and will permit Owner to always have full, free and unfettered access to the Intellectual Property Rights.
- .5 To the extent that any Intellectual Property Right does not automatically and immediately vest in Owner, Contractor:
  - (a) hereby assigns and transfers to Owner;
  - (b) agrees to assign and transfer to Owner; and
  - (c) agrees to cause Subcontractors, all Contractor servants, agents and employees, and any other personnel of Contractor or Subcontractors (collectively, the "Contractor Personnel") to assign and transfer to Owner, as and when created, all Intellectual Property Rights, throughout the world. Contractor will cause all Contractor Personnel to waive, for the benefit of Owner and its successors, assigns, licensees and Subcontractors, their respective moral rights (and any similar rights to the extent that such rights exist and may be waived in each and any jurisdiction throughout the world) in and to the Intellectual Property Rights.
- .6 Contractor agrees to cooperate fully, and to cause all Subcontractors, Contractor servants, agents and employees, and any other personnel of Contractor or Suppliers to cooperate fully, at any and all times with respect to signing such documents and doing such acts and other things reasonably requested by Owner to confirm the assignment of ownership and waiver of moral and similar rights referred to in this Contract and to obtain registrations of Intellectual Property. Without limiting the generality of the foregoing, Contractor represents and warrants that it has entered

into written agreements with Subcontractor, all Contractor servants, agents and employees and any other personnel of Contractor or Suppliers to give effect to the assignments, waivers and further assurances contemplated by this Contract.

- .7 Contractor grants to Owner, a perpetual, irrevocable, fully paid-up, royalty-free, worldwide, non-exclusive license to access, use, copy, support, maintain, modify, sublicense, assign, distribute or otherwise exploit any Intellectual Property Right not otherwise conveyed to the Owner under this Contract that is integrated with, embedded in, forms part of, or is otherwise required in order to access, use, copy, support, maintain, modify, sublicense, assign, distribute or otherwise exploit, any other Intellectual Property Rights, Work, Materials or Plant delivered hereunder.
- .8 Contractor agrees that during the term of the Contract and following its termination or expiration, none of Contractor or its Subcontractors, Contractor servants, agents and employees, and any other personnel of Contractor or Suppliers will assert any of their Intellectual Property Rights, that are issued or for which an application for a patent has been made prior to the effective date of the expiration or termination of the Contract, against Owner or any of its directors, officers, representatives, agents and employees in connection with: (1) the use or procurement of the Work, Materials or Plant provided under the Contract; or (2) the exercise of any of the license rights granted to Owner hereunder.
- .9 Contractor's obligations under this Clause GC 33 are subject to: (i) Contractor's right to settle or defend such claim or seek the right of continued use or to modify or replace the infringing Work, (ii) only Work which is provided according to Contractor's design or instructions, (iii) the Work is being used for by the Owner for its intended use, and (iv) any Work not manufactured or developed by Contractor will be limited only to the indemnity and similar obligations, if any, of the manufacturer or vendor of said Work, (v), with respect to the Siemens gas turbine equipment, Owner understands that Contractor is not purchasing said equipment directly from Siemens and that such indemnity may therefore not be commercially available from Siemens or the party selling the equipment to Contractor, but notwithstanding, in advance of the acquisition of the Siemens equipment, the Contractor shall have the duty to take all reasonable steps to obtain full right title and interest or an indemnity from Siemens and if it cannot, to make all reasonable inquiries as to any question or fetter on title to the intellectual property in said equipment and to report them to the Owner as soon as they are known so that the Owner can take steps to clear the title, and Contractor agrees that it shall provide all reasonable assistance to Owner in acquiring such protection to the extent Owner so chooses to pursue the same.

#### **GC 34 Workers' Compensation**

Not Applicable

#### **GC 35 Suspension of Work**

- .1 Owner may, at its sole discretion from time to time and for such period as it may deem expedient, delay or suspend the Work, in whole or in part, by giving written Notice thereof to Contractor, who shall immediately give Notice to its Subcontractors. In the event such Notice of delay or suspension is given, Contractor's right to an extension of time and to additional compensation shall be governed by Clause GC 12 Changes in the Work and Clause GC 14 Delays and Extension of Time.

- .2 No such delay or suspension initiated by the Owner shall vitiate or void the Contract or any part thereof. Upon Contractor receiving Notice from Owner requiring it to resume the Work, it shall at once resume and diligently carry on operations.

#### **GC 36 Taking Over Performance**

- .1 Should Contractor at any time in the reasonable opinion of Owner, refuse or neglect to prosecute the Work or any separable portion thereof with promptness and diligence, or fail in the performance of any of its material obligations hereunder, specifically including, without limiting the generality of the foregoing, its obligations to comply with Clause GC 6.2 Prosecution of the Work, or become insolvent or suffer financial difficulties impairing Contractor's ability to satisfactorily perform the Work, and subject to any rights of Contractor to be excused therefrom pursuant to the terms of the Contract Documents, Owner may after fifteen (15) days written Notice to Contractor and Contractor's failure to rectify within said fifteen (15) day period or, if such default is not capable of being remedied within such fifteen (15) days, to diligently commence to correct such condition within fifteen (15) days of receipt of such written Notice and to rectify the same no later than forty-five (45) days after receipt of such Notice, or without Notice in case of emergencies or to protect the Work, correct any such default, or terminate in whole or in part Contractor's right to proceed with the Work or such part of the Work as to which defaults have occurred, and Owner may perform any such obligation and deduct the out-of-pocket and reasonable cost thereof from any money due, or thereafter to become due under the Contract.
- .2 In any such event, Owner may enter upon the site where Work is being performed and, for the purpose of completing the Work, take possession of all Material and Plant thereon belonging to, or under the control of, Contractor and may finish the Work or any part thereof by whatever method it may deem expedient, including the hiring of another contractor or contractors under such terms and conditions as Owner may deem reasonably advisable. In such case Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the amount to be paid on the Contract shall exceed the cost of completing the Work, such excess shall be paid to Contractor. If such expense shall exceed such unpaid balance, Contractor shall be liable for and shall pay the difference to Owner.
- .3 Where, in the reasonable opinion of Owner, Contractor has failed to perform its duties and obligations under the Contract, Owner may use the Performance Security to provide for completion of the Work to the limits of the Performance Security as follows:
  - (a) where the Performance Security has been provided in the form of a Performance Bond and a Labour and Materials Bond, the Work shall be completed in accordance with the terms and conditions stipulated in the Performance Security; or
  - (b) where the Performance Security has been provided in the form of certified cheque(s) or a Letter of Credit, Owner shall use sufficient funds obtained from the Performance Security up to the limit of the Performance Security, to complete the Work.
- .4 Any use of the Performance Security in the form of certified cheque(s) or Letter of Credit, as applicable, to secure completion of the Work shall not invalidate any recourse Owner may have under the Contract for damages for failure of the Contractor to perform under the Contract.

- .5 The Performance Security in the form of a Letter of Credit or in an amount equal to negotiated cheque(s) and subject to any adjustments as provided for in this GC 36 will be returned to Contractor following Substantial Acceptance.
- .6 Failure of Owner to exercise any of the rights outlined in the Contract shall not excuse Contractor from compliance with the provisions of the Contract nor prejudice rights of Owner to recover damages for such default except as expressly limited or excluded under the terms of the Contract Documents.
- .7 The total liability of Contractor for all claims of any kind, whether based on contract, warranty, tort (including negligence), indemnity, strict liability or otherwise, for any loss or damage arising out of, connected with, or resulting from the Contract Documents or its Work shall in no case exceed the total Contract Price for the Work giving rise to such claim plus any insurance proceeds recovered under the coverages furnished by Contractor under the Contract Documents. Notwithstanding anything in the Contract Documents or at law to the contrary, Contractor shall in no event be liable for exemplary, special, incidental, indirect or consequential damages of any kind including, but not limited to, loss of use, profits or revenue. Contractor shall have no liability for its competent performance of instructions given by Owner or its personnel or representatives in the event such instructions prove to be defective.

#### GC 37 Termination

- .1 Owner shall have the right in its sole discretion, upon thirty (30) days written Notice to Contractor, to terminate the Contract for its convenience as to all or any part or parts of the Work not theretofore completed. Such termination shall be effective in the manner specified in the Notice and shall be without prejudice to any claims which Owner may have against Contractor.
- .2 Upon receipt of such Notice, Contractor shall, unless the Notice directs otherwise, immediately discontinue the Work and the placing of orders for Material, Plant and services and shall thereafter do only such work as may be necessary or required to preserve and protect the Work already in progress and to protect Material on the site where located or in transit.
- .3 Notwithstanding the provision of Clause GC 37.5, Contractor shall, if requested, make every effort to procure cancellation of all existing orders or subcontracts upon such additional terms as are satisfactory to Owner.
- .4 Upon such termination it is agreed that:
  - (a) the obligations of Contractor shall continue as to the Work already performed and as to bona fide obligations assumed by Contractor prior to date of cancellation or termination; and
  - (b) Owner will pay to Contractor the sum of the following as full compensation under the Contract:
    - i. the value of the Work performed prior to such termination including partially completed Work less payments previously made to Contractor; and

- ii. any expenses which,
  - (1) were necessitated by the cancellation of such commitments as were not taken over by Owner; or
  - (2) were specifically caused by the termination of the Contract and would not have been incurred had the Contract not been terminated; or
  - (3) were incurred by Contractor in its performance of the Work prior to termination and were not reasonably compensated, provided that in no event shall Owner or any of its directors, officers, representatives, agents or employees be responsible for Contractor's loss of profits or other damages on account of such termination.
- .5 Contractor shall where commercially and reasonably possible provide for termination of subcontracts and supply contracts on terms whereby:
  - (a) termination may be arranged on short notice and at minimum expense; and
  - (b) no allowance shall be made for loss of profits;and no compensation shall be payable to Contractor hereunder for obligations which were incurred by Contractor through failure to obtain such termination provisions.
- .6 Should Owner at any time, in the reasonable opinion of Contractor, fail to fulfill any of its material obligations hereunder, specifically including, without limiting the generality of the foregoing, its obligations to make any payment due and owing to Contractor under the Contract Documents not otherwise disputed in good faith, and subject to any rights of Owner to be excused therefrom pursuant to the terms of the Contract Documents, Contractor may after fifteen (15) days written Notice to Owner and Owner's failure to rectify within said fifteen (15) day period or, if such default is not capable of being remedied within such fifteen (15) days, to diligently commence to correct such condition within fifteen (15) days of receipt of such written Notice and to rectify the same no later than forty-five (45) days after receipt of such Notice, suspend or terminate in whole or in part its performance under the Contract Documents and Owner shall be liable to Contractor for any expenses, costs and damages as may be allowed under the law as a result of Owner's default under the terms of the Contract Documents.
- .7 Failure of Contractor to exercise any of the rights outlined in the Contract shall not excuse Owner from compliance with the provisions of the Contract nor prejudice rights of Contractor to recover damages for such default except as expressly limited or excluded under the terms of the Contract Documents.
- .8 The total liability of Owner for all claims of any kind, whether based on contract, warranty, tort (including negligence), indemnity, strict liability or otherwise, for any loss or damage arising out of, connected with, or resulting from the Contract Documents or its performance thereunder shall in no case exceed the total Contract Price. Notwithstanding anything in the Contract Documents or at law to the contrary, Owner shall in no event be liable for exemplary, special, incidental, indirect or consequential damages of any kind including, but not limited to, loss of use, profits or revenue.

### GC 38 Dispute Resolution

- .1 Any Dispute between the parties as to the interpretation, application or administration of the Contract or any failure to agree where agreement between the parties is called for which are not resolved in the first instance by findings of the Owner and the Consultant, if any, shall be settled in accordance with the provisions of this Clause and shall be subject to the provisions of GC 41, Confidentiality.
- .2 The claimant will give written Notice of a Dispute to the other party no later than 30 days after the event giving rise to the Dispute occurs, setting forth the particulars of the Dispute, the probable extent and value of the occurrence giving rise to the Dispute and the relevant provisions of the Contract. The other party will reply to such Notice no later than 14 days after receipt or deemed receipt thereof, setting out in such reply its position, the grounds for such position and the relevant provisions of the Contract.
- .3 If the dispute is not resolved promptly by the parties, Owner may, at any time, in its absolute discretion, give such instructions to Contractor as it deems necessary for the proper undertaking of the Works and to prevent delays pending attempts to settle the Dispute. the parties will thereupon act immediately according to such instructions and pay any disputed sums to a third party arms length escrow agent in trust with instructions that the sums are to be released upon written direction of both parties or by written arbitration order but by so doing neither party is deemed to have waived any claim it may have. If it is subsequently determined that such instructions were in error or at variance with the Contract, Owner will pay Contractor the direct costs incurred by Contractor in carrying out such instructions beyond that required under the Contract.
- .4 No act by either party will be construed as a renunciation or waiver of any of its rights or recourse in relation to the Dispute, provided such party has given the Notice(s) in accordance with GC 38.2 and complied fully with any instructions given under GC 38.3.
- .5 If the Dispute cannot be settled by negotiation between the parties, then in the event both parties consent in writing, but not otherwise, the Dispute will be determined by mediation, the mediator, location for the mediation, and the time allowed for mediation to be selected by agreement between the parties. The mediated negotiations shall be conducted in accordance with the procedure adopted by the mediator. In such case, the parties agree to make all reasonable efforts to resolve the Dispute by mediation and agreed to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate mediated negotiations. Either party may determine that mediation is at an end at any time absent agreement to the contrary.
- .6 If the Dispute cannot be resolved by mediation within the period agreed by the parties, either party may give Notice within 10 days after the termination of negotiations or mediation to refer the Dispute to be resolved by final and binding arbitration which shall proceed in the following manner:
  - (a) The party desiring such reference will appoint an arbitrator and give written Notice thereof, and of its intention to so refer, to the other party, who will within thirty (30) days after receipt of such Notice appoint on its behalf an arbitrator, and give written notice thereof to the first party.
  - (b) The two arbitrators appointed in accordance with GC 38.6 (a) will select a third arbitrator and

the award of the 3 arbitrators or a majority of them, made after (i) due notice to both parties of the time and place of hearing the matter referred, and (ii) hearing the party or parties who may attend, is final and binding on both parties, and Owner and Contractor expressly agrees to abide thereby.

- (c) In case the two arbitrators first appointed should fail to appoint a third within thirty (30) days after they have both been appointed, then either party may serve the two arbitrators with a written Notice to appoint a third arbitrator within ten (10) days after service of said Notice, failing which, the International Chamber of Commerce (ICC), on application by the party who gave the Notice, shall appoint a third arbitrator who has the like powers to act and to make an award as if such arbitrator had been appointed by the two arbitrators first appointed. Each arbitrator must be qualified by having at least ten (10) years' experience in the construction and engineering of power generation facilities or in the electric utility industry.
  - (d) In the case of the death or refusal or inability to act of any arbitrator, or if for any cause the office of an arbitrator becomes vacant, such arbitrator's successor will be appointed in the same manner as is provided for such arbitrator's appointment in the first instance, unless the parties otherwise agree.
  - (e) The place of arbitration will be Toronto, Ontario, unless the parties otherwise agree.
  - (f) The costs of any arbitration hereunder will be apportioned against the parties or against any one of them as the arbitrator(s) may decide.
  - (g) The award of the arbitrators shall be based upon principles of law and shall be final and binding upon the parties without the right of appeal to the courts. Judgment on the award may be entered by any court having jurisdiction thereof. In deciding the substance of any such claim, dispute or controversy, the arbitrators shall apply the applicable Laws without reference to any rule thereof that would require the application of the law of another jurisdiction; provided, however, that the arbitrators shall have no authority to award punitive damages under any circumstances (whether it be exemplary damages, treble damages, or any other penalty or punitive type of damages) regardless of whether such damages may be available under applicable Law, the parties hereby waiving their right, if any, to recover punitive damages in connection with any such claims, disputes or disagreements.
- .7 The Rules of Arbitration promulgated by the ICC, except as modified by the provisions of this Clause GC 38, shall apply with respect to such arbitration. The only exception to arbitration being the exclusive forum for resolution of Disputes shall be those Disputes concerning Confidential Information and the parties rights and obligations thereto under Clause GC 41 which, if the parties do not consent in writing to the settlement of such Dispute by arbitration as hereinbefore provided, then each party shall be entitled to exercise all rights and seek all remedies otherwise available to it at Law or in equity in connection with the Dispute in any court having proper jurisdiction to hear such Dispute
- .8 Notwithstanding any disagreement or Dispute relating directly or indirectly to the Work, there shall be no interruption of the Work by Contractor, or fulfilment of Owner's payment obligations to Contractor under the Contract Documents, during the continuance of such disagreement or Dispute unless specifically so agreed by Owner and Contractor in writing.
- .9 All information that is not known to the general public which is produced or communicated in mediation or arbitration proceedings, including the existence of mediation or arbitration

proceedings, or the decision or award rendered, whether embodied in documents, things, oral testimony, sworn statements or any other material, shall be confidential and shall not be disclosed to any person not a party to mediation or arbitration proceeding to which such confidential information relates, except as follows:

- (a) with the unanimous written consent of the parties to mediation or arbitration proceeding;
- (b) to an Affiliate provided that the party that disclosed such information to an Affiliate shall be liable to the other parties for any breach by such Affiliate in respect of the obligations contained in this Clause 38.9;
- (c) to the legal representatives, expert witnesses or other such persons appointed by a party to mediation or arbitration for the sole purpose of conducting mediation or arbitration proceeding or enforcing the award, provided that any such person agrees in writing to be bound by the terms of this Clause 38.9;
- (d) as required for the purposes of action to enforce the arbitral award; and
- (e) as may otherwise be required by applicable Law.

**GC 39 Permits, Taxes, Canadian Custom Duties and Shipping Charges**

.1 In the absence of any express provision to the contrary,

- (a) Owner shall be the "importer of record" for the purpose of importing the Goods into Canada and shall pay all GST/HST and Canadian Import Taxes payable upon the importation of the Goods into Canada.
- (b) Contractor shall supply Owner with a North American Free Trade Agreement (NAFTA) certificate prior to exporting the Goods to Canada.
- (c) If through further review by the applicable authority, the Goods do not meet NAFTA criteria, Owner and Contractor agree to equally be responsible for any and all duties payable related to the importation of the Goods.
- (d) Contractor shall pay for all permits and shipping charges, levies, imposts and assessments of whatsoever nature and kind, imposed by federal, provincial and local laws, except that Owner shall provide and pay for all building permits and any other permits and licenses and easements required for right-of-entry and for permanent structures, or changes thereto.
- (e) Contractor shall indemnify and save harmless Owner, and shall promptly reimburse Owner for payments made by Owner, in connection with any payments made or required to be made under the provisions of paragraph (c) and paragraph (d) above.

.2 Contractor shall not factor into the Contract Price any amount in respect of a Tax payable by Contractor to the extent that such Tax is recoverable, in any manner whatsoever, by the Contractor.

.3 If and to the extent that Contractor is entitled to reimbursement from Owner under this Agreement for any expense incurred by the Contractor, Contractor shall not include any Taxes which are recoverable (in any manner whatsoever) by Contractor in any claim for reimbursement of such expense.

.4 In the absence of any express provision to the contrary, the Contract Price shall not be adjusted to reflect a significantly change in cost to perform the Work due to changes in rates of all Taxes and duties or the imposition of new Taxes, which occur after receipt of Tender.

.5 Contractor shall forthwith provide all documentation and information requested by Owner or by any governmental authority to substantiate rates of Taxes, and without restricting the generality of the foregoing, copies of all contracts, subcontracts and any other documents relating to the Contract Price paid for the Work.

.6 Contractor shall ensure that the terms of this Agreement applicable to the payment of Taxes shall apply to all agreements with its Subcontractors.

.7 For greater certainty, Contractor and Owner acknowledge that, notwithstanding any other provision of this Contract, amounts payable by Owner to Contractor pursuant to this Contract are exclusive of any HST payable pursuant to the Excise Tax Act (Canada). If Contractor is required to collect from Owner an amount of HST with respect to the provision of any goods or services supplied pursuant to this Contract, then Owner, subject to compliance by Contractor with this Clause, shall pay the amount of such HST to Contractor.

.8 Contractor agrees to prepare and to file in a timely manner all Tax returns or declarations required by any applicable authority or applicable laws having jurisdiction over this Contract or any portion thereof. Contractor shall lawfully discharge its Tax obligations.

.9 Subject to the obligation of the Owner to pay HST pursuant to this Clause, Contractor shall pay all Taxes and shall use its best efforts to ensure payment by subcontractors of all Taxes which may be lawfully assessed upon Contractor or any subcontractor by any authority having jurisdiction over Contractor, subcontractor or this Contract.

.10 Notwithstanding any other provision of this Contract, to the extent that Contractor is otherwise permitted to assign its interest in this Contract to another person, it shall not be permitted to do so where the other person is not resident in Canada for Canadian income tax purposes, except with the prior written consent of the Owner.

.11 If required by the applicable laws of any country having jurisdiction, Owner shall have the right to withhold amounts, at the withholding rate specified by such applicable laws, from any compensation payable for the Work performed by Contractor, and any such amounts paid by Owner to an authority pursuant to such applicable laws shall, to the extent of such payment, be credited against and deducted from amounts otherwise owing to Contractor hereunder. Contractor shall note on each invoice whether any portion of the Work covered by such invoice was performed inside or outside of Canada for the purposes of Canadian income tax legislation or such other information requested or required by Owner to properly assess withholding requirements. At the request of the Contractor, Owner shall deliver to Contractor properly

documented evidence of all amounts so withheld which were paid to the proper authority for the account of Contractor.

#### **GC 40 Laws**

- .1 Contractor shall ensure that it and its Subcontractors shall comply with all Laws which regulate the performance of the Work and of all requirements of any Authority over the same. If any discrepancy or inconsistency should be discovered in the Contract Documents in relation to any such Laws, Contractor shall forthwith report the same in writing to Owner.
- .2 Contractor shall ensure that it and its Subcontractors shall at all times observe and comply with all such applicable Laws in effect or which may become effective before completion of the Contract, and shall protect and indemnify Owner, and any of its directors, officers, representatives, agents and employees from and against any and all liability, losses, damages, claims, costs, charges and any expenses to the extent arising from or based on the violation of any such Laws, whether by it or by Subcontractors or of either of their employees or agents.
- .3 Contractor and Owner each covenants and agrees not to act in violation of the U.S. Foreign Corrupt Practices Act, and in connection therewith, shall not directly or indirectly receive, authorize, make, or promise to make any offer, payment, or gift of anything of value that would violate the laws of the United States of America, or the laws of Canada or countries in which any of the Work is performed, to or for the use or benefit of (a) any official, candidate for political office, or employee of any agency or instrumentality of any government, political party, public international organization, or any other person, or (b) any person, while knowing that all or a portion of such money or thing of value will be directly or indirectly offered, given, or promised to any official, candidate for political office, or employee of any agency or instrumentality of any government, political party, public international organization, or any other Person. Contractor agrees to indemnify, defend and hold harmless Owner from and against any and all fines, penalties, related costs and expenses, including reasonable legal expenses, attributable to any failure of Contractor and its Subcontractors and their officers, directors, agents, representatives and personnel to comply with this Clause GC 40.3. Owner agrees to indemnify, defend and hold harmless Contractor from and against any and all fines, penalties, related costs and expenses, including reasonable legal expenses, attributable to any failure of any of the Owner and its officers, directors, agents, representatives and personnel to comply with this Clause GC 40.3.

#### **GC 41 Confidentiality**

- .1 During the performance of the Contract, Contractor and Owner may have access to Confidential Information of the other Party. The receiving Party acknowledges that Confidential Information is, as between the parties hereto, the sole and exclusive property of the disclosing Party or its Affiliates, as the case may be, and receiving Party will not make, or enable, authorize, permit or acquiesce in any other person making, any copy or abstract of any Confidential Information unless (i) such copying or abstracting is done strictly in accordance with the Contract and for the sole purpose of undertaking the Work in accordance with the Contract, or (ii) with the prior written consent of the disclosing Party.
- .2 Receiving Party will at all times, and both during performance of the Contract and after termination thereof, however caused, hold the Confidential Information in trust for the disclosing

Party and in strictest confidence, and will not, either during performance of the Contract or at any time after termination thereof, however caused, disclose or permit or acquiesce in the disclosure to any person, firm, corporation or association whatsoever such Confidential Information, except:

- (a) to an Affiliate provided the party who disclosed such information to an Affiliate shall be liable to the other parties for any breach by such Affiliate in respect of the obligations contained in this Clause GC 41;
  - (b) to the extent such information is required to be furnished in compliance with any disclosure requirements of any Laws, or pursuant to any legal proceedings or because of any order of any court binding upon a party or its Affiliates, provided that the disclosing party shall make all commercially reasonable efforts to give prompt written notice to the other parties before the time of disclosure to allow the other parties an opportunity to seek a protective order or other appropriate remedy;
  - (c) to the Canada Revenue Agency, or any government agency having jurisdiction currently exercised by the Canada Revenue Agency, where such disclosure is undertaken by a party in the course of a tax audit, review or investigation and is in the judgement of that party in its best interest;
  - (d) to prospective or actual professional advisors, contractors or consultants engaged by any party where disclosure of such information is essential to such professional advisors, contractors or consultants work for such party;
  - (e) to a bank, other financial institution or credit rating agency to the extent appropriate to a party arranging for funding, or to provide security;
  - (f) any information which is already in possession of the public or which becomes available to the public other than through the act or omission of a party or of any person to whom such information was disclosed by a party pursuant to this Clause GC41;
  - (g) if received by a party on a non-confidential basis pursuant to applicable Laws or from a source other than a party which disclosure was not a breach or violation of any applicable Laws or other obligation;
  - (h) in respect of information which has been independently acquired or developed by the receiving party without breaching any of its obligations hereunder;
  - (i) in the case of the Owner, as wholly owned corporation and affiliate of the Crown, the Owner has disclosure obligations to the Crown and the Crown has in turn obligations to disclose information to the public surrounding the nature, cost, progress, parties and schedule of the Work. Matters protected by the exclusions set out in the Access to Information and Privacy Act and the Energy Corporation Act of NL will be otherwise exercised and
  - (j) to any mediator or arbitrator in a proceeding pursuant to the Contract.
- .3 Disclosure of confidential information pursuant to Clauses GC41.1(d) or GC41.1(e) shall not be made unless prior to such disclosure the disclosing party has obtained a written undertaking from the recipient person to keep the information strictly confidential upon terms that are no less

onerous than the confidentiality provisions of this Agreement and to use the information for the sole purpose described in Clauses 41(d) or 41(e), whichever is applicable, with respect to the disclosing party.

- .4 Forthwith upon demand by the disclosing Party and, in any event, forthwith upon termination of the Contract, however caused, receiving Party will, at the disclosing Party's option, with respect to all Confidential Information that was provided to receiving Party by any person, firm, corporation or association (including the disclosing Party and its Affiliates), or that is in receiving Party's possession or control or in the possession or control of any third party or their respective personnel or any other person, firm, corporation or association in respect of which receiving Party exercises or is entitled to exercise control, either:
  - (a) destroy such Confidential Information in circumstances and in a manner approved of and supervised by the disclosing Party, or
  - (b) return such Confidential Information to the disclosing Party.
- .5 Receiving Party will implement, monitor, control and enforce all measures required or advisable to cause all its personnel, and all Subcontractors in cases where Contractor is the receiving Party, and their respective personnel to fully observe and comply with this Clause GC 41.
- .6 Contractor nor Owner will not at any time during the performance of the Contract or at any time after the termination thereof, however caused, disclose to any other person, firm, corporation or association whatsoever the fact of, or any terms in respect of, the Works or the Contract without the prior written consent of the other Party, which consent may be arbitrarily withheld.
- .7 Receiving Party acknowledges and agrees that any unauthorized use or disclosure of Confidential Information may cause irreparable harm and result in significant damages to the disclosing Party or its Affiliates, which harm and/or damages may be difficult to ascertain. Accordingly, the disclosing Party or any of its Affiliates is entitled to immediately enjoin any breach or reasonably anticipated breach by the receiving Party and enforce the provisions of this Clause GC 41 by means of injunction or otherwise.
- .8 Receiving Party, and the Subcontractors in cases where Contractor is the receiving Party, and its personnel may, at any time and from time to time, prior to commencing or during performance of the Contract and at the disclosing Party's request, be required to sign and deliver to the disclosing Party a separate non-disclosure agreement respecting Confidential Information. Upon request by the disclosing Party, receiving Party and/or its personnel will forthwith sign and deliver the same to the disclosing Party.
- .9 All publicity releases or advertising dealing with the Work shall be submitted for approval of Owner prior to release to the news media. Contractor shall require all Subcontractors and suppliers to adhere to this requirement.
- .10 The Owner and the Contractor agree that neither will disclose this Contract or any term hereof or any information or documents received by it in connection with the preparation or negotiation hereof or pursuant to the provisions hereof without the consent of the other, provided that disclosure of any of the foregoing shall be permissible in each of the following cases:

- (a) in the case of information, if the same is available to the public generally;
- (b) if the disclosing party is required to make such disclosure by Law, in connection with any legal proceedings or it is legally necessary to file, record or register the relevant agreement, term, information or document, in which case the other party shall be notified as soon as possible;
- (c) for the purpose of obtaining advice thereon and provided that the recipient of such information agrees to keep such information confidential in accordance with the terms of this Contract; and
- (d) for the purposes of disclosing to a potential purchaser or assignee provided that such purchaser or assignee agrees to keep such Information confidential in accordance with the terms of this Contract.

#### .11 ATIPPA Requests

- (a) Owner and its Affiliates are subject to the provisions of Newfoundland and Labrador legislation, including, but not limited to, the Access to Information and Protection of Privacy Act, S.N.L. 2002, c. A-1.1 (in this Section 17.1, "ATIPPA") and the Energy Corporation Act, S.N.L. 2007, c. E-11.01 (in this Section 17.1, "ECNL Act").
- (b) The parties acknowledge that Owner and its Affiliates may incur disclosure obligations pursuant to the provisions of ATIPPA or other provincial legislation, and disclosure pursuant to such an obligation shall not be a breach of this Contract.
- (c) To the extent that the confidential information meets the third party confidential information tests set out in ATIPPA, or the third party commercially sensitive information tests in the ECNL Act, s. 27 of ATIPPA or s. 5.4 of the ECNL Act, as applicable, will require that disclosure of such information be refused if requested by a third party. Where there is a challenge to such refusal, a review by the Access to Information and Privacy Commissioner, and ultimately the Supreme Court of Newfoundland Trial Division, may occur.

#### GC 42 Owner's Policies

- .1 Contractor shall use its best efforts to follow the general policies of Owner as promulgated from time to time. Owner shall timely provide Contractor with a copy of such policies so that Contractor may become fully familiar with all such policies that are relevant to its performance of the Work.

#### GC 43 Insurance

- .1 Liability Insurance

Contractor shall, without limiting its obligations or liabilities, put in place and maintain at its expense such insurance as will protect Contractor and Owner and its Consultants from claims and damages for personal injury, including death, and from claims for property damage which may arise from Contractor's or Subcontractor's operations under the Contract.

All insurance shall include the Owner as an additional insured with a cross liability clause and shall insure against liabilities arising out of or in any way connected with the Work, including two years' completed operations after Substantial Acceptance. The coverage shall include all extensions including Personal Injury, Owner's Protective Liability, Property Damage on Occurrence Basis, Broad Form Property Damage, Blasting Liability where specified in Schedule C - SPECIAL CONDITIONS, Contingent Employer's Liability, Blanket Contractual, and Employees as Additional Insured. Such insurance shall state that it is primary insurance and that any other insurance carried by Owner shall be specified excess and not contributing thereto.

Such insurance shall have limits not less than the minimum limits specified in Schedule C - SPECIAL CONDITIONS.

The insurance policy shall contain the following clause or one of the like effect:

"The insurance afforded by this policy shall apply, with respect to any liability, or alleged liability, of any one insured to any other insured, or to any employee of such other insured, as if separate policies had been issued to each insured.

It is hereby further agreed that the act or omission on the part of any insured hereunder shall not prejudice the interest of any other insured under this policy.

It is further understood and agreed that any liability insurance carried by Owner shall be considered excess of that provided by this policy notwithstanding the provision of any other insurance clause to the contrary."

**.2 Material and Transport All Risks Insurance**

Contractor shall, at its expense, without limiting its obligations or liabilities, insure the Work and all articles, materials and supplies including Contractor's equipment and buildings and Owner-Furnished Material to the full value of such Work, articles, Material and supplies (such insurance to be in the joint names of Contractor and Owner, as their interests may appear, against all loss or damage from whatever cause arising (other than risks which may be uninsurable under the terms of such Policy) for which Contractor is responsible under the terms of the Contract and in such manner that Owner and Contractor and all Subcontractors are covered from the commencement of the Contract until Substantial Acceptance.

In addition, Contractor shall provide and pay for and cause Subcontractors to provide and pay for All Risks Insurance on Plant and Material while in transit by any means of conveyance in an amount at least equal to the value of such Plant and Material. Such insurance shall be made subject to a waiver of subrogation against any other contractor, subcontractor or Owner.

**.3 The insurance specified shall be effected with an insurer and on terms acceptable to Owner.**

**.4 Prior to commencement of the Work under the Contract, Contractor shall deposit with Owner a Certificate of Insurance on Owner's form completed and signed by an authorized representative of the Insurer which provides for the coverages specified under this Clause GC 43. By written Notice to Contractor the Owner shall accept or reject such Certificate within ten (10) days of receipt otherwise it shall be deemed accepted after said date.**

- .5 All such Insurance reflected in the Certificate of Insurance provided by Contractor under Clause GC 43.4 shall be maintained continuously until the date the Owner issues a letter of Substantial Acceptance, including the making good of Work or Material pursuant to Clause GC 20 Guarantees; except that the coverage of completed operations liability shall, in every event, be maintained as provided for in Clause GC 43.1.
- .6 All insurance policies shall contain a term to provide that the insurance shall not be cancelled or materially changed in any way without thirty (30) days notice, except in the event of non-payment when policy conditions dealing with termination will apply. Such Notice shall be sent by prepaid registered mail to the Owner.
- .7 In the event of any such cancellation, reduction, restriction, termination or change or lapse in any insurance, Contractor shall immediately replace such insurance. Failing immediate receipt of evidence of such replacement of insurance, Owner reserves the right to effect such insurance according to the terms of this Clause GC 43 and Contractor shall pay the premium in respect thereof. However, it is expressly provided that any action on the part of Owner in this respect shall in no way change or reduce Contractor's responsibilities and liabilities under the Contract.
- .8 Additional insurance coverages may be required as provided for in Schedule C – SPECIAL CONDITIONS.

**SPECIAL CONDITIONS**  
**CONTRACT 2014-57952-TB**

**SCHEDULE C**  
**SPECIAL CONDITIONS**

**(This will become  
Schedule C to the  
Contract)**

**SCHEDULE C**  
**SPECIAL CONDITIONS**

**(This will become  
Schedule C to the  
Contract)**



**CONTRACT TITLE: Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxiliary Equipment for the Holyrood Thermal Generating Station**

	<u>Page</u>
SC 1 Project Title and Site Location .....	2
SC 2 Scope of Contract .....	2
SC 3 Schedule .....	2
SC 6 Insurance .....	3
SC 9 Metrication .....	3
SC 10 Shipping, Unloading, Handling and Storage of Materials .....	4
SC 12 Environmental Protection.....	4
SC 13 Explosives and Blasting .....	5
SC 14 Procedures, Manuals and Other Documentation .....	5
SC 15 Construction Power .....	7
SC 16 Outages and Grid Coordination .....	7
SC 17 Disposal of Excavated Materials .....	7
SC 18 Owner-Furnished Materials .....	7
SC 19 Contractor's Tools and Equipment .....	7
SC 20 Owner's Tools and Equipment at Holyrood Generating Station .....	7
SC 21 Contractor's Safety Requirements at Holyrood Generating Station .....	7
SC 22 Asbestos Notification .....	7
SC 23 Aircraft .....	7

**SC 1 Project Title and Site Location**

1. The Project title is: Supply 100 MW's (Nominal) of Combustion Turbine Generation and Auxiliary Equipment.
2. The Project Site is located at the Holyrood Thermal Generating Station.

**SC 2 Scope of Contract**

1. The scope of the Contract is: Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxiliary Equipment delivered to the Holyrood Thermal Generating Station.
2. Except for Material specifically stated elsewhere in the Contract Documents as Owner-Furnished Material, the Work covered under the Contract comprises the supply of all the Work described in the Schedule E- SPECIFICATIONS, including but not limited to:
  - 100 MW (Nominal) Combustion Turbine Generator
  - Generator Step-up Transformer
  - Balance of Plant Control System
  - Remote Operation Capability
  - Combustion Turbine Black Start Capability
  - Transporting the Work to the Site
3. Work which are not specifically mentioned in the Contract Documents but which are usual or necessary for the satisfactory completion of the Work shall be deemed to be included in the Contract and shall be provided by Contractor without extra charges unless expressly excluded from Contractor's scope of work under the Contract Documents or expressly required to be furnished by Owner under the Contract Documents.

**SC 3 Schedule**

- i. 1.  
The Contractor shall deliver the Work at such times to support the construction schedule of the Facility which will take approximately 7 months to complete and so that Substantial Completion of the Facility shall be completed no later than December 7, 2014.

**SC 4 Board, Lodgings and Transportation**  
**NOT APPLICABLE**

**SC 5 Construction Meetings**  
**NOT APPLICABLE**

**SC 6 Insurance**

- .1 Contractor shall provide, at its cost, insurances with limits not less than stated in this Clause 6. Upon award, as evidence of insurance, Insurer shall be required to provide a completed Certificate of Insurance, on Owner's form located in Schedule A – Tender Submission, Appendix XI, Certificate of Insurance.
- .2 Contractor shall provide Commercial General Liability (CGL) Insurance which shall have a limit of not less than \$1 million for any one occurrence to cover property damage or loss, bodily injury and loss of life including Sudden and Accidental Pollution Liability. Owner has no liability and no coverage under its insurance for Contractor's equipment used in carrying out the Work.
- .3 Contractor shall provide Automobile Liability Insurance with a limit of not less than \$1 million combined for any one occurrence including personal injury, loss of life or property damage or loss.
- .4 In addition, Contractor shall provide Transporation Insurance in an amount not less than the sum of:
  - (a) the amount of the Contract Price for the Work

**SC 7 Substantial and Final Acceptance**  
NOT APPLICABLE

**SC 8 Labour Relations**  
NOT APPLICABLE

**SC 9 Metrication**

- .1 The International System of Weights and Measures (SI Metric System) shall be used in measuring the Work. Where manufacturers' products are produced in imperial sizes, substitutions shall be made to the nearest metric size. Contractor's engineer shall manage the interface connections between metric and standard interfaces.
- .2 SI Units shall be those referred to in the National Building Code - latest edition and to publications CAN3-Z234.1-79 and CAN3-Z234.2-76 issued by the Canadian Standards Association, as amended.
- .3 For the purposes of this Contract, the abbreviations and symbols that will apply shall be in accordance with the Metric Bulletin SI-6 published by Public Works Canada.

**SC 10 Shipping, Unloading, Handling and Storage of Materials**

**.1 Shipping**

- (a) Other than Owner-Furnished Plant and Material, Contractor shall be responsible for all costs associated with shipping the Work, including costs for insurance coverage for Work in transit until delivered and unloaded at the Site.
- (b) Contractor, on request, shall supply Owner with the following information relating to such shipments:
  - i. estimated date of dispatch;
  - ii. summary of the contents of the shipment;
  - iii. method of transport; and
  - iv. estimated time of arrival at the Site.

**.2 Unloading and Handling**

Except as provided elsewhere, Contractor shall provide all necessary Work handling, transportation, lifting and storage services until incorporation of the Work.

**SC 11 Protection of Persons and Property**  
NOT APPLICABLE

**SC 12 Environmental Protection**

**.1 Storage, Handling and Transfer of Fuels and Other Hazardous Material**

- (a) Contractor and Subcontractors and their employees and agents shall take all necessary precautions to prevent and minimize the spillage, misplacement, or loss of fuels and other hazardous material.
- (b) Contractor and Subcontractors shall, before transporting or positioning fuel or oil, present to Owner a copy of the fuel and oil spill contingency plan, as amended, and which is acceptable to Owner.

**.2 Hazardous or Controlled Products**

- (a) Contractor shall not use or deliver a hazardous or controlled product, as defined by the relevant Laws, for the purposes of this Contract without the prior approval of Owner except as contemplated in carrying out the Work.
- (b) Contractor shall ensure that a hazardous or controlled product is not used, stored or handled for the purposes of the Contract unless all of the requirements of the relevant laws and regulations in respect of labels, identifiers, material safety data sheets and worker education are complied with.
- (c) Contractor shall ensure that all persons who work with a hazardous or controlled product or work in proximity to a hazardous or controlled product are informed about all hazard information received from the supplier of the said product as well as any other hazard information of which Contractor is aware of, or ought to be aware of, concerning the use, storage and handling of the hazardous or controlled product.
- (d) Contractor shall ensure that, prior to delivery of the hazardous or controlled product to the Site, it is labelled with the supplier's label or with a label in accordance with requirements of all applicable Laws. Contractor shall provide Owner with all such information prior to delivery of the hazardous or controlled product to the Site.

**SC 13 Explosives and Blasting**

NOT APPLICABLE

**SC 14 Procedures, Manuals and Other Documentation**

- .1 In accordance with the dates indicated on the Schedule, Contractor shall submit to Owner for review detailed Procedures, Manuals and other documentation related to the Work.
- .2 All such documentation shall include erection, commissioning and testing procedures (factory and Site), software, operation and maintenance manuals and all other documentation required for the safe and efficient operation, maintenance and repair of all Work supplied under the Contract.
- .3 Contractor shall clearly mark documentation submitted to Owner for review as follows:
  - (a) Name of Owner
  - (b) Name of Project
  - (c) Title clearly indicating the content
  - (d) revision number and date of revision
- .4 Contractor shall not change documentation after issuance or acceptance by Owner without the revision number being changed. Documentation that does not have the same revision number shall be considered different.
- .5 Contractor shall not use any documentation bearing reference to the Project or Owner for any

- other purpose without the prior written consent of Owner.
- .6 Documentation prepared by or on behalf of Contractor for use in the Work shall be subject to acceptance by Owner.
  - .7 The process for the review of documentation shall be as outlined in Clause SP 8 – Drawings.
  - .8 Unless otherwise agreed by Owner, Contractor and Owner shall supply documentation in electronic format. Documentation shall be produced using the following formats:
    - (a) Manuals and other written text – Microsoft Word, latest release, or compatible
    - (b) Spreadsheets – Microsoft Excel, latest release, or compatible
    - (c) Manufacturer’s catalogue information – Microsoft Word, or Adobe Acrobat, latest release, or compatible
  - .9 Documentation shall become the exclusive property of Owner, who shall be free to make any use in connection with the construction, operation and/or maintenance and repair of the Facility which in the opinion of Owner is reasonable and required in Owner’s interest.
  - .10 Operating and Maintenance manuals shall be fully detailed and directly relate to Work supplied by Contractor. Generalized manuals shall not be acceptable. Following review by Owner, Contractor shall provide four (4) paper copies and one (1) electronic copy to Owner.
  - .11 Operating and Maintenance Manuals shall include the following:
    - (a) details of the mass of all major components of the Work;
    - (b) all pertinent bulletins and instruction manuals prepared by the various manufacturers of component parts of the Work. Manufacturers’ bulletins shall be suitably annotated to clearly indicate those items which form a part of the complete assembly;
    - (c) assembly adjustments and design clearances;
    - (d) lubricating requirements, including a list of recommended lubricants and operating and maintenance bulletins for all components of the Work;
    - (e) a complete index list of all Contractor’s Drawings and a list of all assembly bulletins and Drawings prepared by the manufacturers of components of the Work.
    - (f) assembly drawings of all components
    - (g) circuit diagrams
    - (h) process flow sheets
    - (i) computer software
    - (j) component lists
    - (k) performance data and test certificates
    - (l) assembly, dismantling, maintenance and diagnostic procedures
    - (m) parts and special tools lists
    - (n) operating procedures and instructions
    - (o) recommended preventative maintenance schedules
    - (p) special handling procedures

**SC 15 Construction Power**

**SC 16 Outages and Grid Coordination**

**SC 17 Disposal of Excavated Materials**

**SC 18 Owner-Furnished Materials**

NOT APPLICABLE

**SC 19 Contractor's Tools and Equipment**

**SC 20 Owner's Tools and Equipment at Holyrood Generating Station**

**SC 21 Contractor's Safety Requirements at Holyrood Generating Station**

**SC 22 Asbestos Notification**

**SC 23 Aircraft**

NOT APPLICABLE



**SCHEDULE D  
PAYMENT**

**(This will become  
Schedule D to the  
Contract)**

**CONTRACT TITLE: Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxillary Equipment for the Holyrood Thermal Generating Station**

	<u>Page</u>
P 1 General.....	1
P 2 Payments and Retention of Holdback.....	1
P 3 Submittal of Billings.....	1
P 4 Delayed Payment .....	2
P 5 Payment for Materials .....	2
P 6 Not Used.....	2
P 7 Diary Payments .....	3
Appendix I: Release from All Claims.....	4

## **Terms of Payment**

### **P 1 General**

- .1 Subject always to the provision that Contractor's overall performance of the Work is in accordance with the Contract and Contractor continues to satisfy Owner that all aspects of the Work are being advanced so as to permit completion and delivery of the Work within the times set out in the Contract Documents, including approved extensions thereto, then, in the above event, and subject to Owner's approval, milestone progress payments for the Work shall be due and payable to Contractor for the amounts and at the times set out hereunder.

### **P 2 Payments and Retention of Holdback**

- .1 Owner will make milestones payments to Contractor against progress billings approved by Owner for the value of each milestone, including Material ordered specifically for Change Orders payable on a force account basis. Such progress billings shall be submitted by Contractor and shall be itemized in such form and supported by such evidence as Owner may direct. In the case of Change Orders performed on a force account basis costs shall be substantiated by copies of payrolls and time sheets, original supplier invoices, and any other documents necessary to support such costs.
- .2 Owner shall retain as a mechanics lien holdback ten percent (10%) of the value of all milestone payments due to Contractor. Owner shall retain as a mechanics lien holdback ten percent (10%) of the value of all Change Orders due to Contractor.
- .3 Contractor shall separately bill Owner for the release of holdback and the applicable Harmonized Sales Tax, and Owner shall within thirty (30) days of the date the Gas Turbine and Generator Equipment are set on to the foundations at the Facility Site, and upon receipt of an acceptable billing, pay all such outstanding amounts unless a valid lien has been filed.
- .4 No payment made to Contractor and no partial or entire use of the Work by Owner shall be construed as an acceptance of any Work or Material which is not in accordance with the Contract Documents.
- .5 All costs, damages and expenses for which it is established that Contractor, as reasonably determined by Owner, is liable and all money owing by Contractor to Owner may be set off against any other sum due or becoming due to Contractor under this Contract.
- .6 Contractor shall, following Final Acceptance and prior to Owner's release of holdback retained under the Contract, execute a "Release from all Claims" in the form of Appendix I, to these Terms of Payment.

### **P 3 Submittal of Billings**

- .1 Contractor's progress billings shall be submitted promptly as provided herein and as agreed with Owner and shall be in such form and supported by such documentation as Owner may require to facilitate verification of the amounts billed therein. All billings shall include Contractor's registration number for the Goods and Services Tax / Harmonized Sales Tax (HST) and shall separately identify the amounts of HST, for which Contractor shall be reimbursed. Payments shall be due and payable twenty (20) days following receipt of an acceptable billing by Owner, provided that the amounts so billed are correct and properly payable under the Contract. The parties agree that Contractor may submit to Owner a pro-forma invoice for each of the corresponding milestone progress billings or 10% holdback payment in advance of the applicable scheduled milestone date so that once notice is received by the Owner that the milestone is actually met Owner will take no more than ten (10) Business Days thereafter to review, approve and make payment to Contractor (subject to P 2.2 and P 2.3 above as it relates to the 10% holdback payment).
- .2 Worksheet G - Contract Closeout and Evaluation Form, located in –the TENDER SUBMISSION must be signed off by the Contractor as a requirement for the release of the holdback monies.

**P 4 Delayed Payment**

- .1 Delay by Owner in making a payment when it becomes due and payable, shall not initially be deemed to be a breach of the Contract by Owner, but, except where specifically otherwise provided for, such a delay will, (if the delay continues for more than ten (10) days beyond the date upon which the payment is due and payable), entitle Contractor to interest on the amount overdue pursuant to the terms of GC 23 Compensation plus a day-for-day extension to Contractor's schedule for the completion of the Work. In the event a payment obligation of Owner to Contractor continues to remain unpaid beyond sixty (60) days following the due date, then in addition to interest and schedule relief as mentioned above, Contractor shall be entitled to suspend its Work and/or terminate the Contract for Owner being deemed to be in breach of the Contract except in the case where (a) a dispute between the parties is submitted for resolution pursuant to the terms of GC 38.1 based on Owner's disagreement with Contractor that a particular payment milestone (including the 10% holdback) identified on the payment schedule under the Contract has been met and is owed to Contractor and (b) Owner has escrowed the disputed milestone payment funds according to GC 38.3.

**P 5 Payment for Materials**

- .1 Payment shall not be made in respect of Material delivered to the Site which has not been incorporated in the Work other than payments for Material ordered specifically for Change Orders approved by Owner or unless otherwise provided by Owner in the Contract Documents or included in the milestone payment schedule.

**P 6 Not Used**

**P 7     Diary Payments**

- .1 Payment of the tendered lump sum price shall be made in accordance with the milestone payment schedule located in Appendix II. Where Contractor is a Registrant under the Federal Goods and Services Tax/Harmonized Sale Tax, all invoices shall include Contractor's Registration Number and shall separately identify the amounts of HST, for which Contractor will be reimbursed.

**P 8     Minimum Wage of Staff**

Not Applicable

**Appendix I: Release from All Claims**

RESPECTING THE CONTRACT FOR \_\_\_\_\_ ("**Contract**")

(Description of Contract)

dated \_\_\_\_\_, entered into with \_\_\_\_\_ (hereinafter referred to as "**OWNER**")

By \_\_\_\_\_ (hereinafter referred to as "**CONTRACTOR**")

**CONTRACTOR**, for and in consideration of the sum of

\$

(Amount of money paid to **CONTRACTOR** to date)

of lawful money of Canada to us in hand well and truly paid by **OWNER** such sum being the net amount after the deduction of back charges, at and before the delivery of these presents, the receipt whereof is hereby acknowledged, and of acknowledgement by **OWNER** of the retention of the sum of

\$

(hereinafter referred to as "**Holdback**") being retained in accordance with the Mechanics' Lien Act, RSNL 1990, Chapter M-3, as amended ("**Act**"), and the Contract, to become due and payable to **CONTRACTOR** on expiration of the Holdback period or periods or otherwise disposed of in accordance with the provisions of the Act, or the Contract provisions, has hereby released and forever discharged **OWNER** of and from all actions, suits, debts, forfeitures, damages, claims and demands whatsoever in law or in equity which the **CONTRACTOR** ever had, now has, or hereafter can, shall or might have by reason of or arising out of the said Contract or by reason of or arising out of any breach or breaches thereof, or by reason of or arising out of any work or labour or services performed, material supplied, or plant or machinery used in connection with the Contract, by the **CONTRACTOR** whether under the Contract or otherwise, save as to the release or other lawful disposition of the Holdback.

**AND FURTHER**, that upon the issuance by **OWNER** of instruments of payment for the Holdback or the lawful disposition thereof in accordance with the provisions of the Act or Contract provisions, then and in such event this Release will immediately thereupon become a full, proper and complete release of **OWNER** of all claims, demands and liabilities of any nature whatsoever to **CONTRACTOR** arising under the Contract.

**IN WITNESS WHEREOF**

Dated at \_\_\_\_\_ in the Province of

(City/Town)

this \_\_\_\_\_ day of

in the presence of

\_\_\_\_\_  
WITNESS

\_\_\_\_\_  
CONTRACTOR

Appendix II: Milestone Payment Schedule

Estimated Month		Detailed Description	Milestone Amount
May	Equipment	Hold Fee	\$ 3,000,000.00
May	Equipment	CTG Balance	\$ 28,855,220.00
May	Equipment	GSU Purchase	\$ 2,120,879.00
May	Equipment	Solar FAT/Title Transfer	\$ 2,851,542.86
June	Equipment	Diesel Generator FAT/Title Transfer	\$ 648,077.93
August	Equipment	Water Plant FAT/Title Transfer	\$ 2,410,849.87
July	Equipment	Liquid Fuel Package FAT/Title Transfer	\$ 2,242,868.08
July	Equipment	Water Injection Skid FAT/Title Transfer	\$ 1,009,316.55
June	Equipment	Liquid Fuel Transfer System & Tanks FAT	\$ 1,814,618.17
August	Equipment	Heating Coil FAT/Title Transfer 13.8kV to 4.16kV Station Service	\$ 2,172,616.42
July	Equipment	Transformer FAT/Title Transfer 4.16kV to 480V Station Service	\$ 103,692.47
July	Equipment	Transformer FAT/Title Transfer	\$ 64,807.80
August	Equipment	Control System BOP FAT/Title Transfer Generator Circuit Breaker FAT/Title Transfer	\$ 1,258,048.86
October	Equipment	Operations & Routine Maint Documentation	\$ 220,000.00
October	Equipment	Documentation	\$ 220,000.00
August	Equipment	Inlet Filter House FAT	\$ 2,073,849.35
August	Equipment	Fuel Heating Package FAT	\$ 207,384.93
August	Equipment	Station Air System Compressors FAT	\$ 122,460.80
August	Equipment	Waste Water Treatment System FAT	\$ 343,092.45
		Total	\$ 54,739,757.00

**SCHEDULE E  
SPECIFICATIONS  
(This will become  
Schedule E to the  
Contract)**

**CONTRACT TITLE: Procurement for a 100 MW (Nominal) Combustion Turbine Generator and Auxiliary Equipment for the Holyrood Thermal Generating Station**

	<u>Page</u>
SP 1 Project.....	1
SP 2 Tender Submission.....	1
SP 3 Fit for Use Inspection.....	1
SP 4 Schedule.....	1
SP 5 Warranty.....	1
SP 6 Design Criteria.....	1
SP 7 100 MW Combustion Turbine Plant .....	2
SP 8 Mechanical Balance of Plant .....	2
SP 9 Electrical Balance of Plant.....	3
SP 10 Protection, Instrumentation, Controls and Communications (PICC) Balance of Plant.....	3
SP 11 Not Used.....	4
SP 12 Not Used.....	4
SP 13 Drawings.....	4
SP 14 Standards .....	6
Appendix A – Site Plan	
Appendix B – Scope of Work	
Appendix C – Post Tender Clarification Meeting Minutes	
Appendix D – Copy of Purchase Order for Equipment Security Deposit	

**SP 1 Project**

This is an engineering, procurement and construction project (EPC) whereby the Contractor shall procure and supply a 100MW (nominal at ISO conditions, minus 5%) combustion turbine generation package, transformer, black start, controls, and auxiliary equipment delivered to the Holyrood Thermal Generating Station, located in the Province of Newfoundland and Labrador, Canada. The plant shall include the provision of a single combustion turbine unit to achieve a nominal 100MW output. The plant shall consist of industrial grade gas generator, in stationary configuration. The equipment provided shall be new or unused. Appendix A provides an aerial photograph of the site where the new plant will be located along with an existing site layout drawing.

**Contractor Scope of Work**

Contractor shall provide all of the equipment and transportation to the site as further described in this Exhibit E including Appendix B hereto. The scope of Work shall include, but not be limited to the following:

1. A 100 MW combustion turbine generating (CTG) plant;
2. Generator Step Up Transformer(s) (GSU); and
3. The other auxiliary equipment and components as described in this Exhibit E.

**SP 2 Not Used**

**SP 3 Fit for Use Inspection**

Owner may complete a fit for service and intended use assessment of the CTG proposed by Contractor. Physical testing (i.e., boroscope inspection) may be contemplated as part of this assessment.

**SP 4 Schedule**

The equipment shall be delivered to the site in order that the plant shall be commissioned and ready for service no later than December 7th, 2014.

**SP 5 Warranty**

See GC 20 of the Contract.

**SP 6 Design Criteria**

The following table outlines the site conditions for the performance of the equipment:

Elevation (m)	~4.5 above sea level
---------------	----------------------

Atmospheric pressure (kPa)	98.5 to 104.1
Atmospheric temperature (°C)	-25 to 35
Atmospheric relative humidity (%)	0 to 100
Environment	Sea coast, salt and industrial pollution atmosphere.

**SP 7 100 MW Combustion Turbine Plant**

Contractor shall provide an unused 100MW combustion turbine equipment with all required auxiliaries. The equipment shall include but not be limited to:

1. 100MW of combustion turbine generation fuelled by No 2 distillate fuel oil. Plant shall consist of one (1) combustion turbine generator;
2. CTG shall be winterized and capable of operation at ambient temperature -25°C;
3. 13.8kV, 60Hz, 90/120/150 MVA synchronous generator, PF 0.9, winding configuration wye, ground through neutral ground resistor;
4. Liquid NOx emission control;
5. Exhaust Stack (minimum 50' high) complete with weather/snow doors;
6. Air Inlet complete with filters, (air preheat to be provided if required);
7. Certificate of Approval from the Department of Environment;
8. Fully functional equipment with the ability of remote dispatch;
9. All balance of materials and equipment as described herein; and

**SP 8 Mechanical Balance of Plant**

The mechanical balance of plant includes, but is not limited to the following:

1. Liquid fuel system including:
  - a. Fuel forwarding skid complete with at a minimum:
    - i. Redundant AC pumps;
    - ii. Back up DC pump;
    - iii. Fuel heater;
    - iv. Fuel filter;
    - v. Mass flow meter;
2. Lube oil system including at a minimum;
  - a. Lube oil sump;
  - b. Redundant AC pumps;
  - c. Back up DC pumps;
  - d. Redundant oil filter;
  - e. Oil cooling.
3. FM Global approved fire suppression system for CTG and balance of plant;

4. CTG effluent sump;
5. Supply of speciality tools and equipment for maintenance of CTG and auxiliaries; and
6. Black start capability.

### **SP 9 Electrical Balance of Plant**

The electrical balance of plant shall include, but is not limited to the following:

1. 13.8 kV to 230kV, 90/120/150 MVA GSU transformer(s). A dedicated GSU shall be provided for each generating unit. 1050 BIL bushings and surge arrestors;
2. New Transformer Oil for GSU transformer(s);
3. 13.8 kV Generator Circuit Breakers;
4. Aux feeder breakers;
5. Unit Auxiliary Transformer (13.8 kV / 4160 V);
6. 4160 V MCC;
7. 4160 V Switchboard;
8. Unit Auxiliary Transformer (4160 V / 480 V or 600 V);
9. New Transformer Oil for Aux Transformers;
10. 480/600 V MCC ;
11. 480/600 V Switchboard;
12. Balance of plant (BOP) 480 V/600 V / 120 V/ 208 V Transformer, Distribution
13. Panels, Lighting Panels;
14. Isophase Bus from CTG to Generator Breaker;
15. 15 kV Cabling from Generator Breaker to GSU transformer; and
16. Batteries and Chargers.

### **SP 10 Protection, Instrumentation, Controls and Communications (PICC) Balance of Plant**

The PICC balance of plant shall include, but is not limited to the following:

1. Plant Instrumentation including:
  - a. MW, MVAR, Unit KV, and bus KV metering with synchroscope;
  - b. All applicable pressure, temperature, level monitoring and protection for combustion turbine and generator;
  - c. Vibration monitoring and protection for the combustion turbine and generator;
2. Control System (Governor and sequencing):
  - a. Microprocessor based;
  - b. PLC or DCS platform preferred;
  - c. Sufficient I/O modules for hardwired remote operation;
  - d. I/O modules shall be suitable for 125VDC operation;
  - e. Computer based graphical HMI for local operator preferred, having the following functionality as a minimum;
    - i. Control screens;
    - ii. Real time operating data and trending;
    - iii. Historical trending;
    - iv. Alarm screens;

- f. If hardwired operator interface provision must include sufficient lamp, switches and annunciator for local operation;
- g. Manual and automatic synchronizing control circuits;
- 3. CTG protective relaying including all necessary auxiliaries and lockout switches. Microprocessor based relaying preferred; and
- 4. Fuel control valve: DC powered; position feedback to control system;

**SP 11 Not Used**

**SP 12 Not Used**

**SP 13 Drawings**

- .1 Contractor shall perform the Work in strict accordance with Drawings for the Materials under this Contract.
- .2 Drawings shall be referenced by a Drawing and revision number.
- .3 Contractor's and Manufacturer's Drawings and revisions thereof shall be subject to review by Owner. Such review shall in no respect relieve Contractor of its responsibility and liability under the Contract. Fabrication and shipping of Materials or any parts thereof shall not start prior to Owner's review of such Drawings.
- .4 Drawings bearing reference to the Project or Owner shall not be used by Contractor for any other purpose without prior written approval of Owner.
- .5 Owner, in its sole discretion, may make reasonable use or reuse of Drawings as required in Owner interest.
- .6 Contractor shall supply Drawings as follows:
  - (a) by email in the latest version of AutoCad (.dwg extension).
  - (b) by email – PDF files must be stamped and signed by engineer.
  - (c) Original paper drawings must be stamped and signed by engineer.

Drawings shall be in B1 or A1 size formats with a minimum character height of 2 mm.

- .7 Contractor shall submit Drawings for review by Owner in accordance with the Approved Schedule and, where required, the APEGN Act, RSNL 1990, Chapter E-12, as amended.
- .8 Unless to be furnished by the third party contactor installing the Materials at the site, Drawings shall be provided for, but not be limited to, the following:
  - (a) parts embedded in concrete;
  - (b) parts to be connected to equipment supplied by others;

- (c) piping;
  - (d) P&IDs;
  - (e) Single line diagrams;
  - (f) wiring diagrams;
  - (g) parts in which adjustment has been allowed or which are subject to wear;
  - (h) assemblies showing plans and cross sections of the complete equipment components being supplied;
  - (i) erection and lifting devices;
  - (j) layout and dimensional Drawings;
  - (k) bills of materials;
  - (l) characteristic curves, such as
    - i. curves;
    - ii. current transformer magnetization curves; and
    - iii. similar performance curves for equipment.
- .9 Details on Drawings and Data shall be sufficient to allow Owner to independently assess performance of all parts. Such details shall include, but not be limited to, material designations, welding specifications, part numbers, dimensions, fits, tolerances and surface finishes for all machined parts.
- .10 Subject to GC 16, Contractor shall allow five (5) working days (from date of receipt to date of return dispatch) for Owner to advise Contractor of review results.
- .11 Contractor shall, upon receipt of review comments, promptly modify and resubmit or issue Drawings as required. Modification and resubmission shall continue until such time as Contractor is advised that review is complete.
- .12 Owner's review shall not relieve Contractor of any contractual responsibilities.
- .13 Two weeks prior to shipping, Contractor shall forward one (1) complete set of the latest revisions of related Drawings.
- .14 Contractor's Drawings shall be clearly marked as follows:
- (a) NEWFOUNDLAND AND LABRADOR HYDRO
  - (b) 100MW Combustion Turbine Generating Plant at the Holyrood Thermal Generating Station.
  - (c) The title block of all Drawings shall have the following information clearly indicated:
    - i. description of Drawing content;
    - ii. name of major equipment or system of which Drawing content is part;
    - iii. Contractor's Drawing number;
    - iv. revision number and date of revision;
    - v. date drawn;
    - vi. Owner's Drawing number from list forwarded to Contractor by Owner.

.15 Schematic and wiring diagrams shall use ANSI standard drafting symbols and ANSI device function designation systems.

.16 Drawings shall enable Owner to prepare and organize interfacing with the work of its own, or other contractors', forces.

**PREAMBLE**

The Work shall be carried out in accordance with the Drawings listed below and any additional Drawings issued at a later date by Owner.

All Drawings are marked "For Tender Purposes Only" to identify them as Tender Drawings. The listed Drawings will be issued to Contractor within two (2) weeks of the date of the Contract.

**List of Drawings**

Drawing No.	Title	Revision Number	Date
1403-121-C-003	Holyrood Generating Station Master Site Plan		

**SP 14 Standards**

The scope of Work of this Specification shall be completed in but is not limited to the following specifications:

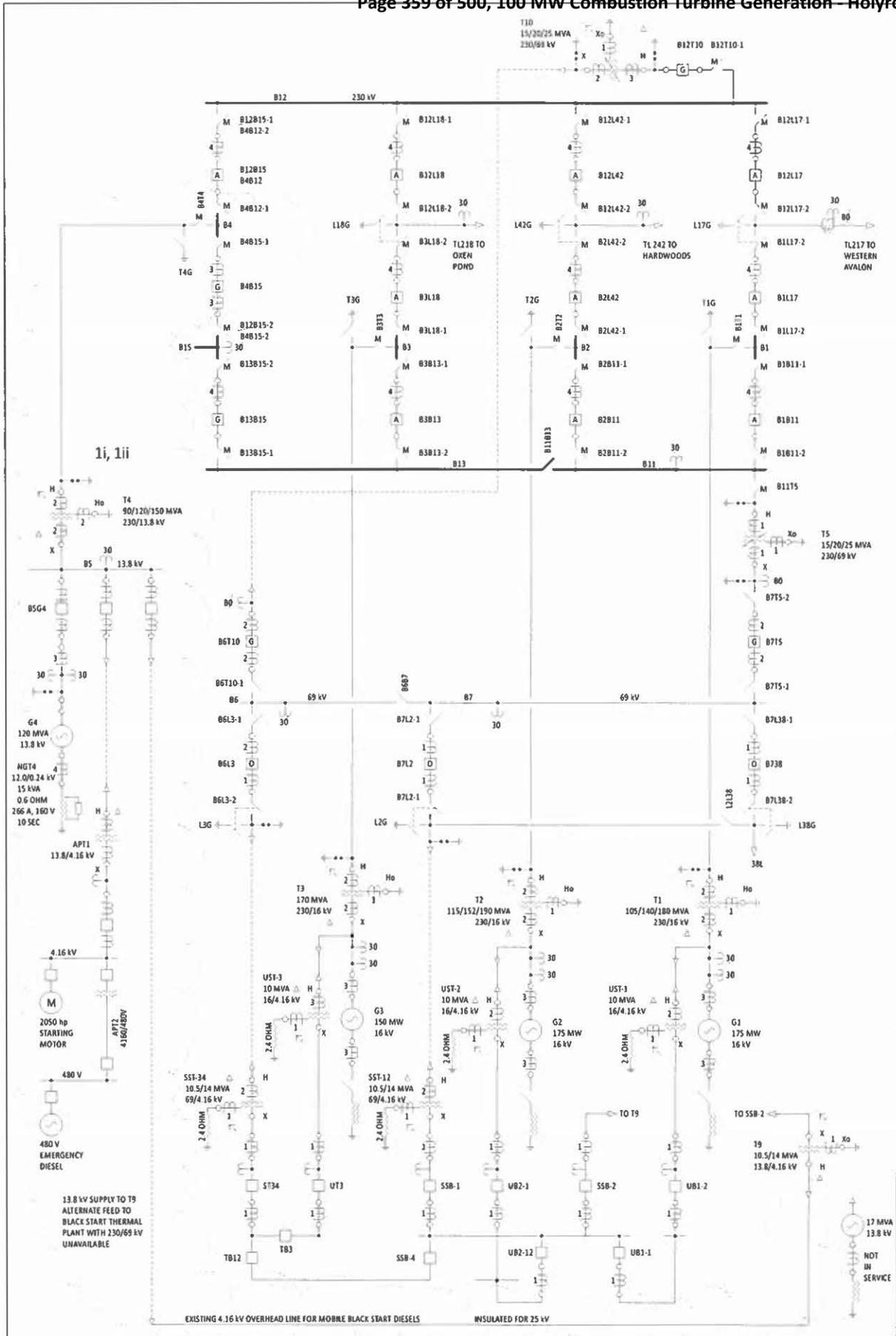
1. ACI - American Concrete Institute – Various Sections
2. CRSI - Concrete Reinforcing Steel Institute – Various Sections
3. AISC - American Institute of Steel Construction – Various sections
4. ASCE - American Society of Civil Engineers – Various Sections
5. AISI - American Iron and Steel Institute – Various Sections
6. IBC - International Building Code – Various Sections
7. SSPC - Steel Structures Painting Council – Various Sections
8. ASME - American Society for Mechanical Engineers – Various Sections
9. ASME B31.1 - Code for Power Piping
10. ASME Section IX - Boiler and Pressure Vessel Code – Welding and Brazing Qualifications
11. ASME Section VIII Div I Boiler and Pressure Vessel Code – Unfired Pressure Vessels
12. ANSI - American National Standards Institute – Various Sections
13. ASHRAE - American Society of Heating, Refrigeration, and Air Conditioning – Various Sections
14. TEMA - Tubular Exchanger Manufactures Association for Shell and Tube Heat Exchangers – Various Sections
15. ASTM American Society for Testing Materials – Various Sections
16. MSS Manufactures Standardization Society Standard Practices – Various Sections

17. AWWA American Water Works Association – Various Sections
18. AGA American Gas Association – Various Sections
19. API American Petroleum Institute – Various Sections
20. AWS American Welding Society – Various Sections
21. AWS A3/0 Definitions of Welding Terminology
22. AWS B2.1-84 Standard for Welding Procedure and Performance Qualification
23. AWS D1.1 Code for Structural Welding
24. IEEE Institute of Electronic and Electrical Engineers – Various Sections
25. NEC National Electrical Code – Various Sections
26. NESC National Electrical Safety Code – Various Sections
27. IES Illuminating Engineering Society
28. NEMA National Electrical Manufacturers Association – Various Sections
29. NEMA AB1 Molded Case Circuit Breakers
30. NEMA ICS1 General Standards for Industrial Control and Systems
31. NEMA ICS2 Industrial Control Devices, Control and Systems
32. NEMA ICS4 Terminal Blocks for Industrial Use
33. NEMA ICS6 Enclosures for Industrial Controls and Systems
34. NEMA MG1 Motors and Generators
35. NEMA PE5 Constant-Potential-Type Electric Utility (Semi-Conductor Static Converter) Battery Chargers
36. NEMA SG2 High Voltage Fuses
37. NEMA WC2 Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
38. ICEA Insulated Cable Engineering Association – Various Sections
39. ISA The Instrumentation, Systems, and Automation Society – Various Sections
40. ISA S5.1 Instrumentation Symbols and Identification
41. NACE The National Association of Corrosion Engineers – Various Sections
42. NACE RP018890 Standard Recommended Practice: Discontinuity (Holiday) Testing of Protective Coatings
43. NFPA National Fire Protection Association – Various Sections
44. NFPA70 National Electric Code
45. NFPA No. 1 Carbon Dioxide Extinguishing Systems
46. NFPA No. 37 Stationary Combustion Engines and Gas Turbines
47. OSHA Occupational Safety and Health Administration – Various Sections
48. OSHA CFR Title 29 Occupational Safety and Health Administration
49. UL/ULC and/or CSA
50. National Building Code of Canada
51. Nation Fire Code of Canada
52. Nation Plumbing Code of Canada
53. Provincial Gasoline and Associated Products (GAP) Regulations
54. Canadian Electrical Code

Appendix A – Site Plan







**HOLYROOD TERMINAL STATION  
PRELIMINARY SINGLE LINE DIAGRAM  
100 MW COMBUSTION TURBINE ADDITION**

SYS PLAN:	SHEET 1 OF 1
SYS OP:	DATE: MAY 13, 2014
ELEC:	DRAWN BY: PWT
P&C:	REVISION: 0
FILE:	HROT5 with 100 MW CT

Appendix B – Scope of Work

Combustion Turbine Generator

Turbine Model	SGT6-3000E (501D5A)
Year	2008
Serial Number	37A7750
Fuel	No 2 Distillate Oil
Generator Model	SGEN6-100A-2P
Year	2009
Serial Number	12009742
Generator Rating	120 MVA, .90 pf (at 40°C)
Voltage	13.8 kV

The CTG is a package commonly known as Siemens “SGT6-3000E PAC”. This package of equipment consists of the combustion turbine, generator and auxiliary equipment as detailed in the Supplemental Information attachments.

The equipment has been in storage since approximately October 2009. Storage and preservation activities have been provided in accordance with the manufacturer’s guidelines.

The SGT6-3000E provides reliable, economical generation for the range of peaking duty, intermediate operation or continuous service. The SGT6-3000E class has a cumulative reliability of over 99%. This figure has been attained by a fleet of around 145 machines which have attained over 6,300,000 cumulative operating hours.

Generator Step-Up Transformer (GSU)

Transformer 1	Combustion Turbine Generator
Rating	90/120/150 MVA
Low Side Voltage	13.8 kV Delta
High Side Voltage	230 kV Wye
Impedance	9% @ 90 MVA

Additional information on this transformer can be found in the Supplemental Information attachments.

Balance of Plant Items

The following items are required to allow the Combustion Turbine to operate as requested by the client:

- Solar Combustion Turbine for Black Start capability
- Emergency Diesel Generator
- Demineralized Water Skid
- Liquid Fuel Package
- Inlet Heating Coil
- 13.8kV Delta / 4.16kV Wye Auxiliary Transformer
- 4160V Delta / 480V Wye Auxiliary Transformer
- Balance of Plant Control System
- 13.8kV Generator Circuit Breaker
- Transfer Operations & Routine Maintenance Documentation
- Inlet Filter House
- Fuel Heating Package
- Station Air System Compressors
- Waste Water Treatment System

Delivery

Freight FOB jobsite for all equipment referenced herein is included in the Contractor's scope and price. Unloading and installation of the equipment would be the responsibility of the EPC contractor hired by Owner to construct the plant.

## Meeting Minutes

Purpose	Post Tender Technical Clarification Meeting (2014-57952-TB)	Date	April 24, 2014
Project	100 MW Combustion Turbine Generator Project	No.	001
Chair	Stephen Parsons	Start time	2:00 PM
Location	Hydro Place – ECC Board Room	End time	4:00 PM
Attendees	Gerard Piercy, Dave Hicks, Nelson Seymour, Rick Leggo, Craig Warren, Todd Collins, Alberta Marche, Bill Mars, Thomas Canon, Jeff Canon (teleconference), Chad Allen (teleconference), Jason White (teleconference)	Minutes Taker	Todd Collins

### 1. Safety Moment:

The use of 9 V batteries and the importance of storing them properly to prevent arcing and fires – conducted by Stephen Parsons.

### 2. Technical Clarification Questions:

The purpose of the meeting was to review the bid package submitted by ProEnergy from a technical standpoint to ensure that the performance requirements listed in tender 2014-57952-TB were met. During the meeting, Hydro representatives asked the following questions and the responses to the questions by representatives from ProEnergy are provided in RED:

1. Man Power estimate needs to be verified as work on the supporting infrastructure needs to be tailored to suit (eg. Parking). Response: ProEnergy will provide a manpower estimate breakdown by week and by trade.
2. Has ProEnergy previously developed a plant with this particular engine and power turbine?  
Response: ProEnergy has installed 10 X 501F units in Venezuela but has not installed any units in North America. ProEnergy will provide additional references for Hydro to check. Will likely be from Hess Corporation in North Dakota.
3. Has ProEnergy previously developed a plant suited for a cold weather, marine environment?  
Response: ProEnergy has completed installations in Tanzania and Venezuelanear oceans. Installations have also been completed in North Dakota in a cold weather environment.
4. What's being described in the EPC proposal specifically identifies many items being provided but does not include all items as described in the tendered document. The following are examples that were included in the scope of work in the EPC tender, but not specifically mentioned in the tender submission.
  - a. Fuel oil system:

- i. Back-up DC pumps
  - ii. Fuel oil heating exchanger
  - iii. Mass flow rate heater
  - iv. Winterization of the fuel oil system
  - v. Delivery truck spill containment
- b. Lube oil system:
- i. Back-up DC oil pumps

Confirm that all items described in the Owner's tender document are being provided as part of ProEnergy's tender submission. Response: Generally, all equipment that was requested in the EPC tender has been included in the proposal. No exceptions to the specifications in the tender document have been taken and the specific equipment details will be finalized during the design phase. For example, a back-up DC power supply system has been included in the proposal for the lube oil system. However, while an allowance for a back-up DC system for the fuel oil system has been included, it isn't felt to be necessary, as the fuel forwarding skid will receive back-up power from the emergency diesel. This is an example of a design decision that would need to be discussed before specifications can be provided. It was noted that one small UPS has been included for the plant control room.

5. What maintenance tools and lifting hardware are being provided for the CTG (i.e. for removal of major components from enclosures when overhaul work is required)? Response: ProEnergy will provide a list of tools for performing maintenance. Tools for performing major component external lifting have been included in the proposal. However, tools for lifting internal components such as blade ring lifting assemblies have not been included, which is typical.
6. Has an overhead crane for performing maintenance on the CTG been included in the bid? Response: The overhead crane for performing maintenance on the CTG was assumed to be covered under the \$8M building allowance.
7. The monthly manpower by trade matrix by trade indicates that 421, 1021, & 631 tradespeople will be required during the months of June, July, & August respectively. Are these numbers accurate? Will all these people be on site? Response: ProEnergy indicated that the numbers provided were the totals for each month (based on weekly manpower requirements). ProEnergy will provide a manpower estimate breakdown by week and by trade. It was indicated that the maximum number of tradespeople that will be onsite is in July and is 263.
8. Has a transformer blast wall been included in the bid? Response: ProEnergy indicated that a blast wall has been included between the GSU and the building.
9. Does the GSU transformer proposed have 1050 BIL bushings as was requested in the tender? Response: ProEnergy indicated that the GSU transformer that is available has 950 BIL bushings. Dave Hicks will review the BIL requirements again with system planning to see if the 950 BIL bushings can be accommodated. If the 1050 BIL rating is a must, new bushings will need to be ordered and fitted at site. However, the 1050 bushings will likely have a long lead time and will not be available for installation in 2014. Bill Mars will check the GSU to see if there are any physical restrictions to installing 1050 BIL bushings on the existing unit. It was noted that the GSU that ProEnergy has available is new and has never been used. The transformer is stored filled with oil, but the oil will need to be replaced to meet Canadian standards. The replacement oil is included in the bid.

10. Has fencing around the CTG site been included in the bid? Response: ProEnergy indicated that fencing has been included for the GSU transformer only.
11. Has final grading and site remediation been included in the bid? No details were provided. Response: ProEnergy indicated that regular traffic areas will be paved, the fuel truck offloading area will have a concrete pad, and all other areas will have gravel.
12. Does the fire suppression system included in the bid meet FM Global standards? Response: ProEnergy indicated that the fire suppression system will be designed as per Canadian and FM Global standards. A single tie-in to the existing Holyrood fire water system will be completed and a ring main will be installed around the new plant. The GSU will not have a deluge system. The CTG has it's own inert gas or CO2 fire protection system. A truck grounding system will be provided at the fuel offloading skid.
13. What is the size of the black start diesel genset being provided? Will it start up the 2050 hp motor with across the line voltage (i.e. no soft start/reduced voltage starter)? Response: ProEnergy indicated that information will be provided along with the other information requested today. An ftp site will be setup to transfer the information by Friday, April 25<sup>th</sup>.
14. Confirm that the truck fuel unloading station has spill containment and provide information on its configuration/what it consists of. Response: ProEnergy indicated that spill containment will be provided for 110% of a delivery truck and the system will use a stand alone tank to capture any spills (i.e. it will not be discharged to the plant effluent system).
15. Confirm that exhaust stack is being supplied with snow doors and indicate how they will be actuated. Confirm that control will be integrated with the CTG controls as a permissive. Response: ProEnergy indicated that the exhaust stack does have snow doors that will be integrated into the CTG controls as a permissive on startup.
16. Information request on the demineralized water skid:
  - a. Size, construction and winterization of storage take and pipes. Response: ProEnergy indicated that the system will be a reverse osmosis type with EDI that will be installed inside the heated building. Technical information will be provided as soon as the design is advanced. ProEnergy indicated that good quality water was assumed to be available for the demin water system that was included in the bid. Hydro indicated that the water that will be provided to the site will not be filtered or treated (ie. It is raw water from the natural source). Hydro will provide water quality information for the raw water source to ProEnergy for review.
  - b. Capacity and brochure on demineralized plant. Will be available after the design advances.
17. Provision of more technical information on the following:
  - a) Lube oil cooling system. Not designed yet.
  - b) Combustion air preheat system. Not yet designed, but ProEnergy provided a verbal description of the proposed system.
  - c) Fire protection/suppression system for CTG enclosures and other enclosures. Will be included in the information that will be uploaded to the ftp site by Friday, April 25<sup>th</sup>.

- Information would include conceptual flow diagrams identifying main components with high level description. Response: ProEnergy confirmed that all systems were included in the bid. Tender submission provides two spare parts lists. Only one list includes itemized prices. Response: ProEnergy indicated that the tender period did not include sufficient time to provide pricing for both lists. In any case, capital spares are not included in the bid price, as this was not a requirement.
18. **Confirm that tender includes the provision of classroom training along with the provision of training binders along with operations and maintenance binders.** Response: ProEnergy indicated that operating and maintenance manuals and training manuals have been included in the bid. Four (4) weeks training have been included in the bid.
19. **Please provide manufacturer and model information for all proposed Protective Relaying and metering. Are the relays new or part of the Seimens existing package.** Response: ProEnergy will follow-up and provide this information with the information transfer via the ftp site on April 25<sup>th</sup>. A protection and control system has been included for the CTG. The control panel for the CTG will be installed in the building and will be accessible by an operator through the HMI. However, a protection and control system has not been included for the GSU.
20. **Please provide manufacturer and model information for Vibration Monitoring and Protection equipment.** Response: ProEnergy will follow-up and provide this information via the ftp site information transfer on April 25<sup>th</sup>.
21. **Please provide manufacturer and model information for DCS, HMI and all associated software. Are these systems new or part of the Seimens existing package.** Response: Separate control systems will be provided for the CTG and the balance of plant: CTG control system – T3000 Siemens; Balance of Plant – Allen Bradley system. A communication protocol will be provided for each control system.
22. **Please provide manufacturer and model information for actuated fuel valve.** Response: ProEnergy will follow-up and provide this information via the ftp site information transfer on April 25<sup>th</sup>. It will likely be a Siemens valve.
23. **Will ProEnergy be developing and testing protective relay settings for the generator and step-up transformer?** Response: ProEnergy indicated that protective relay settings will be provided for the generator only. The GSU was not included in the bid.
24. **Is there more than one control system? If so, by what means do they interact? Provide functional description of control system.** Response: Separate control systems will be provided for the CTG and the balance of plant: CTG control system – T3000 Siemens; Balance of Plant – Allen Bradley system. A communication protocol will be provided for each control system.
25. **Is the main control system provided with processor redundancy?** Response: ProEnergy indicated that processor redundancy was included in the package.
26. **There are no spare parts indicated for any of the PICC equipment, please clarify.** Response: ProEnergy indicated that spare parts have not been listed at this point because the control system design has not been completed. A spare parts list will be provided when the design has been finalized.
27. **Following review of PICC details, is ProEnergy able to consider substitutions of equipment with which Hydro Operations forces have more familiarity and training?** Response: ProEnergy

indicated that substitutions can be contemplated during the engineering phase if they do not have an impact on schedule.

28. Is the governor function done in separate control system, or integrated into the main system.

Response: ProEnergy indicated that the governor controls are included in the Siemens T3000 system for the CTG.

29. What is the make/model of the AVR (Voltage Regulator)? Response: ProEnergy will follow-up and provide this information via the ftp site information transfer on April 25<sup>th</sup>.

30. Provide details on remote operation. Response: ProEnergy indicated that remote operation has been included in the bid and the details will be provided during the engineering phase.

31. Please provide a clear copy of the single line. Response: ProEnergy will follow-up and can provide a single line diagram now for the package, but the detailed SLDs have not yet been developed and will be provided during the engineering phase.

32. Has ProEnergy included Arc Flash protection for MCCs and switchgear as applicable to voltages present? Response: ProEnergy indicated that arc flash protection has been included in the bid and will be covered during the engineering study.

33. Please provide details on the primary motive power (1529kW) for starting - is it intended to be powered from the customer to enable start of the units? Response: ProEnergy indicated that if the grid is available, motive power will come from the grid. If power from the grid is not available, the emergency black start diesel will provide power for start-up.

34. Please provide specifications on the auxiliary transformer (s). Response: ProEnergy indicated that this detail will be provided on the single line diagram.

35. Please provide battery system details such as voltage and ampere hour rating. Response: ProEnergy indicated that this detail will be provided during the engineering phase.

36. Please provide details on the black start system - what type of system? Response: Proenergy provided a description of the system, but indicated that this detail will be provided during the engineering phase.

37. Gerard Piercy provided a description of what Hydro are providing as a level site. Generally, just removal of sods/organics, general leveling only. The geotechnical investigation is complete and results should be available early next week.

38. The proposed location of the fuel tanks was discussed and will need to be explored further in detailed design, as they weren't able to be located within the intended footprint. The location will need to be coordinated with the 230kV transmission line route as well.

39. No fencing included. Shown as owner supply. Confirm that fencing around the GSU is provided in the Tender, as it is a requirement. Response: ProEnergy indicated that fencing has been included for the GSU transformer.

40. Can the 100 MW unit proposed be retrofitted to provide synchronous condensing capability? Response: ProEnergy indicated that the system can be retrofitted to provide synchronous condensing capability, but it can not be done in the timeframe available for this project.

41. Confirm the unit's low load performance capability. Response: ProEnergy indicated that the performance characteristics at a range of loads will be provided. The information will be requested from Seimens right away. Hydro to also indicate the minimum desired operating load, so ProEnergy can check the performance at that load as well. .



<b>Purpose</b>	<b>Post Tender Alignment Meeting</b>	<b>Date</b>	<b>April 30, 2014 (2:30pm – 5:00pm) Continued May 1, 2014 (9:00am-1:00pm)</b>
<b>Chair</b>	Stephen Parsons	<b>Time</b>	See Above
<b>Location</b>	St. John's	<b>Minutes Taker</b>	Stephen Parsons
<b>Attendees</b>	John MacIsaac, Geoff Young, Randal Orr, Jeff Canon, Thomas Canon, Bill Mars, Scott Dieball, Chad Allan, Gerard Piercy (May 1), Craig Warren (May 1), Dave Hicks (May 1), Nelson Seymour (May 1),		
<b>Regrets</b>	Terry Gardiner, Rick Leggo		

Key Points Discussed		
No.	Topic	Highlights/Decisions
1.	Safety Moment (Steve Parsons)	<ul style="list-style-type: none"> <li>- You must intervene if you see an unsafe situation on a construction site.</li> </ul>
2.	EPC Contract and interaction between ProEnergy and NLH team	<ul style="list-style-type: none"> <li>- Reviewed organizational charts for the NLH team and the ProEnergy Team.</li> <li>- NLH team will support the EPC contract requirements (review of submittals, responses to RFIs, oversight of progress, etc), and will participate in the design of the interconnection work (eg. transmission line, terminal station, etc).</li> <li>- ProEnergy team org chart is abbreviated and does not shown all of the support functions.</li> <li>- Engineering subcontractor will be Stantec, based in New Brunswick and supported by Maine office.</li> <li>- Civil, Mech, Elec subcontractor will be Pennecon.</li> </ul>
3.	Project Battery Limits	<ul style="list-style-type: none"> <li>- Had general discussion around interfaces between the EPC contract work and the interconnection work that is to be executed by NLH.</li> <li>- It was agreed that a detailed interface list would be developed and would be included as schedule in the contract.</li> <li>- ProEnergy will provide a deliverables list and NLH will indicate which deliverables require review. These deliverables will be indicated on the schedule.</li> </ul>
4.	Commercial Term Discussion	<ul style="list-style-type: none"> <li>- Geoff Young and Scott Dieball had a break-out meeting to begin contract commercial term discussion. All commercial discussions captured in contract document redlines with tracked changes.</li> </ul>



Key Points Discussed		
No.	Topic	Highlights/Decisions
5.	Project Schedule	<ul style="list-style-type: none"> <li>- ProEnergy will produce a Level 3 schedule which shows all of the entity interactions and interface deliverables. All engineering, procurement, and construction activities to be shown.</li> <li>- Engineering is beginning immediately based on letter of intent that has been issued.</li> <li>- NLH has begun engineering for enabling works, such as pole relocation, initial civil works, terminal station, etc.</li> </ul>
6.	Major Equipment	<ul style="list-style-type: none"> <li>- ProEnergy will begin by completing an inventory of all of the CTG equipment that is stored in Memphis, TN. ProEnergy will supply any equipment that is not with the package. Supplied equipment shall be new, but ProEnergy may propose refurbished equipment for NLH consideration on a case by case basis.</li> <li>- GSU transformer that was included in the bid has bushings with a 900 BIL rating. NLH confirmed that this is acceptable.</li> </ul>
7.	Payment Schedule	<ul style="list-style-type: none"> <li>- Milestone payment schedule to be developed and included in the contract document. Milestone payments will be progress based and not time based.</li> </ul>
8.	Construction Resources and Work Load	<ul style="list-style-type: none"> <li>- ProEnergy have coordinated with their subcontractors and they are not concerned with availability of construction labour to execute the project.</li> <li>- ProEnergy will be bringing superintendents and supervisors to the project and trade workers will be local hires.</li> <li>- ProEnergy recognize the importance of schedule and profile of project and will put best resources on the project. Jeff Canon (ProEnergy CEO) will be providing close oversight of the project.</li> </ul>

Key Points Discussed		
No.	Topic	Highlights/Decisions
9.	Site Layout	<ul style="list-style-type: none"> <li>- Investigated possibility of moving the existing black start diesel generators to make room for the 2.5ML fuel tank. It was concluded that this was not possible and the layout that was included in the ProEnergy bid was accepted.</li> <li>- Additional survey and geotechnical investigation in the proposed tank area will be performed by NLH.</li> <li>- ProEnergy will advise which area in the CTG footprint that needs to be grubbed off and when it will need to be completed.</li> </ul>
10.	Building Enclosure	<ul style="list-style-type: none"> <li>- Building is meant to protect against weather and will be of simple design. Will consist of insulated metal wall and roof panels on steel structure (non-combustible construction).</li> <li>- No O/H crane is required. Provisions for lifting the equipment out of the building with a mobile crane shall be provided (Removable roof panel). Access and layout to suit use of 200 tonne mobile crane.</li> <li>- Bay doors to also be provided for equipment removal.</li> <li>- Building will have concrete floor throughout for safety and housekeeping.</li> <li>- Building to be heated electrically.</li> <li>- A design and cost estimate will need to be advanced by ProEnergy before the milestone payment amounts can be determined for the building. The building allowance (\$8M) will not necessarily be expended.</li> </ul>
11.	Construction Services	<ul style="list-style-type: none"> <li>- NLH to provide source of 600V power for construction power. ProEnergy to confirm requirements.</li> <li>- NLH to provide phone line for communications.</li> <li>- Laydown area and contractor trailer area identified.</li> <li>- Contractor personnel parking will be outside of the Holyrood Generating Station gate.</li> <li>- System for construction personnel access to be worked out to avoid bottlenecks.</li> </ul>

Key Points Discussed		
No.	Topic	Highlights/Decisions
12.	Balance of Plant Equipment Notes	<ul style="list-style-type: none"> <li>- T-3000 CTG control module is nearing the end of its typical lifecycle (although it is unused). NLH agreed that T-3000 may be replaced with a newer Allan Bradley system.</li> <li>- A 13.8kV interconnection line for redundant black start connection to Holyrood Generating Station will be required. This would be a change in scope and will be explored further after contract is established.</li> <li>- GSU protection is not currently in the EPC scope of work. Adding this to the contract will be explored further after contract is established.</li> <li>- A communications architecture drawing needs to be prepared to demarcate the communication interfaces. A meeting between Phil Jeans (NLH) and Jeff Bauer (ProEnergy) to be arranged for early next week to establish interface.</li> <li>- Raw water quality data is required so that ProEnergy can determine what processing is required to produce demineralized water for the plant. NLH to send raw water quality data.</li> <li>- ProEnergy will design the firewater loop around the site. It will be tied into the plant fire water supply loop.</li> <li>- GSU deluge system included in scope.</li> <li>- Plant effluents include reject from reverse osmosis system, unit backwash. Effluents directed to oil/water separator provided by ProEnergy.</li> </ul>
13.	Shipping	<ul style="list-style-type: none"> <li>- NLH will be importer of record for the equipment and materials.</li> <li>- ProEnergy will maintain risk of loss and liability for the equipment and materials until it is incorporated in the work.</li> <li>- ProEnergy is responsible for all shipping and transportation including required permits between source(s) and the Holyrood Generating Station site.</li> </ul>



# BLANKET ORDER



**Invoice To:**

Newfoundland & Labrador Hydro  
 Hydro Place 500 Columbus Drive  
 P O Box 12400  
 St John's NL A1B 4K7

PAGE:	<b>1</b>
ORDER DATE(YY/MM/DD):	<b>14/05/14</b>
PURCHASE ORDER NUMBER:	<b>20962-000 OB</b>

**Vendor:**

ProEnergy Services, LLC  
 2001 ProEnergy Blvd.  
 Sedalia MO 65301

Fax: 713-413-3600

Currency: CAD

SHIPPING TERMS: **FOB: Destination**

Ship To:

Not Applicable

ITEM / HYDRO PART # / DESCRIPTION	QUANTITY	UM	UNIT PRICE	TOTAL	PROMISED ON SITE	REF NUMBER
001 902 DEPOSIT/REFUNDABLE ON COMBUSTION TURBINE GENERATOR, AS PER CONTRACT 2014-59752-TB DATED APRIL 21, 2014 SUBJECT TO INDEPENDENT ENGINEER'S REVIEW OF THE STORED EQUIPMENT IN MEMPHIS, TN, USA IN TERMS OF "FIT FOR PURPOSE" AND SUBJECT TO COMPLETION OF INVESTMENT EVALUATION REVIEW AND DUE DILIGENCE REVIEW		LS	.0000	3,000,000.00	14/05/01	57952 OQ
002 902 PRE-ENGINEERING SERVICES as per "Letter of Intent" dated April 28, 2014.		LS	.0000	830,000.00	14/05/01	
<b>TOTAL</b>				<b>3,830,000.00</b>		
DIRECT INQUIRIES TO: <b>Theresa Barnes - tbarnes@nlh.nl.ca</b> PHONE NUMBER: (709) 737-1490    TERMS: <b>Net 30 Days</b> FAX NUMBER: (709) 737-1795    BRANCH/PLANT: <b>1818</b>				PRICES SHOWN ARE EXCLUSIVE OF HST & GST. HYDRO STANDARD TERMS AND CONDITIONS APPLY AND ARE AVAILABLE ON OUR WEBSITE - WWW.NLH.NL.CA		

**PLEASE CONFIRM RECEIPT OF THIS ORDER AND DELIVERY SCHEDULE TO THE SENDER, VIA FAX OR E-MAIL, WITHIN 24 HOURS.**

THE PURCHASE ORDER NO. MUST APPEAR ON ALL INVOICES, BILLS OF LADING, PACKING SLIPS AND CORRESPONDENCE.

5

*Replace with  
email from S. Dieball  
to TSN P.C-5  
and GC-39+GC-40*

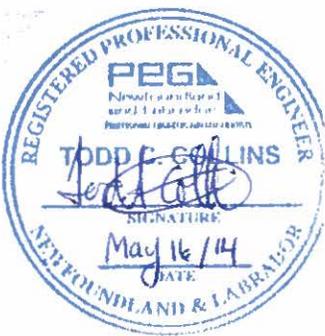
**NEWFOUNDLAND AND LABRADOR HYDRO**

**CONTRACT**

**FOR**

**Engineering On-Site Procurement and Construction Services for a 100 MW (Nominal)  
Combustion Turbine Generator at the Holyrood Thermal Generating Station**

**2014-57952-TB**

	<b>Electrical</b>
	<b>Mechanical</b>
	<b>Civil</b>
	<b>Protection &amp; Control</b>
	<b>Transmission &amp; Distribution</b>
	<b>Telecontrol</b>
	<b>System Planning</b>

*Nelson Symon*

Approved for Release

*May 16, 2014*

Date



S

## CONTRACT AGREEMENT

**PROJECT TITLE: Engineering On-Site Procurement and Construction Services for a 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station**

### CONTRACT

THIS CONTRACT made as of the \_\_\_\_\_ day of May, 2014.

**BETWEEN:** NEWFOUNDLAND AND LABRADOR HYDRO, a corporation constituted by statute and an agent of Her Majesty the Queen in right of the Province of Newfoundland and Labrador and having its head office at Hydro Place, St. John's, in the said Province (hereinafter called "Owner") of the one part;

**AND** PROENERGY GLOBAL SOLUTIONS CANADA LIMITED, a company organized under the laws of the Province of British Columbia, Canada, and having its registered office at 1000-840 Howe Street, Vancouver, BC V6Z 2M1a (hereinafter called "Contractor") of the other part.

### C 1 Contract Documents

.1 The following documents, sometimes referred to the Contract Documents, form part of this Contract:

Schedule A – NOT USED  
Schedule B – GENERAL CONDITIONS  
Schedule C – SPECIAL CONDITIONS  
Schedule D – PAYMENT  
Schedule E – SPECIFICATIONS  
Schedule F – LIST OF INTERFACES AND EXCLUSIONS

.2 Execution by Owner and by Contractor of this Contract shall constitute acceptance and approval by the parties of all the provisions, terms and conditions of all of the Contract Documents as if each had been executed by both parties.

### C 2 Work

.1 The Contractor hereby undertakes to perform and complete the Work as described in this Contract.

.2 Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, agrees to furnish all labour, Material and Plant necessary or required for the performance of the Work, unless specified elsewhere in the Contract.

### C 3 Price and Payment

- .1 Owner, in consideration of the performance of the Contract by Contractor, agrees to pay Contractor in accordance with the rates and prices set forth in the Schedule D – PAYMENT subject to any additions or deductions provided for elsewhere in the Contract Documents. Such payment shall be made in accordance with the procedures set forth in Schedule D - PAYMENT.

#### **C 4 Interpretation**

- .1 The Contract embodies the entire agreement between the parties with respect to the subject matter hereof. Reference should be made to the Definitions set out in Schedule B - GENERAL CONDITIONS.
- .2 The Contract Documents are intended to be correlative and complementary and any Work required by one document and not mentioned in another shall be executed as though required by all documents.
- .3 The Contract is intended to cover all the Work to be done by Contractor; and, unless expressly excluded in the Contract, any and all Material, Plant and labour not indicated herein but which may be necessary or required to complete any part of the Work in a proper, substantial and workmanlike manner shall be furnished by Contractor.
- .4 If Contractor, in the course of the Work, discovers any discrepancy between the Specifications and the physical conditions of the Site or finds any error, omission or ambiguity in the Contract Documents, Contractor shall immediately apply in writing to Owner for clarification. Owner will promptly clarify such matters and so inform Contractor. Any part of the Work affected by any or all such discoveries which is performed by Contractor prior to clarification by Owner shall be done at Contractor's risk and Contractor shall be liable for any loss, damage or expense which Owner may incur, suffer or be put to as a result of Contractor's failure to obtain such clarification.
- .5 In case of conflict between the Contract Documents, the said documents shall be considered in the following order of precedence, unless otherwise provided: the executed CONTRACT, GENERAL CONDITIONS, SPECIAL CONDITIONS, SPECIFICATIONS (drawings of a larger scale shall govern over a smaller scale), PAYMENT, and .
- .6 In the Contract Documents all references to dollar amounts and all references to any other money amounts are, unless specifically otherwise provided, expressed in terms of currency of Canada.
- .7 Words in the Contract Documents importing the singular number shall include the plural and vice versa and words importing the masculine gender shall include the feminine and neuter genders.
- .8 Where a word is defined anywhere in the Contract Documents, other parts of speech and tenses of the same word have a corresponding meaning.

- .9 Wherever in the Contract Documents a number of days is prescribed for any purpose, the days shall be reckoned exclusively of the first and inclusively of the last.
- .10 Whenever the Contract Documents require either a notice to be given or a request to be made, and the time within which any right will lapse or expire shall terminate on a Saturday, Sunday or legal holiday, such time will continue to run until the next succeeding normal business day.
- .11 In the Contract Documents the headings and any tables of contents and indexes attached thereto are inserted for convenience of reference only and shall not affect the construction or interpretation thereof.
- .12 Any reference in any Contract Document to an article, a clause, a subclause, a paragraph or a schedule shall, unless the context otherwise specifically requires, be taken as a reference to an article, a clause, a subclause, a paragraph of or schedule to that Contract Document.
- .13 This Agreement may be executed in two or more counterparts, each of which when so executed shall be deemed to be an original, but all of such counterparts together shall constitute one and the same instrument.
- .14 The rights and recourses of Owner and Contractor contained in the Contract Documents are cumulative and not in the alternative. The exercise of any such rights or recourses shall not constitute a waiver or renunciation of any other rights or recourses.

**C 5 Assignment**

- .1 Neither Owner nor Contractor may assign or otherwise transfer any rights or interests created under the Contract without the prior written consent of the other, provided always that Owner or Contractor may assign its rights and interests under the Contract with the written consent of the other party, not to be unreasonably withheld, to one of its own Affiliate provided the assigning party remains responsible for any obligations under the Contract not fulfilled by its Affiliate.

**C 6 Waiver**

- .1 No act or failure to act or delay in the enforcement of any right by either party hereto constitutes a waiver of any right under the Contract, and any such act, failure to act or delay does not constitute an approval of or acquiescence in any breach or continuing breach under the Contract except as expressly agreed to in writing and no waiver of any breach of any provision of the Contract constitutes a waiver of any preceding or succeeding breach of such provision or of any other provision of the Contract.

**C 7 Severability**

- .1 In the event that any provision of the Contract, or part thereof, is determined to be invalid,

void or otherwise unenforceable, the remaining provisions of the Contract are to be construed (provided the Contract remains capable of completion in all material respects as contemplated hereunder) as if such invalid, void or unenforceable provision, or part thereof, was omitted and the Contract continues in full force and effect without being impaired or invalidated in any way, and the parties hereto agree to be bound by and perform the same as thus modified.

**C 8 Law and Jurisdiction**

- .1 The Contract is governed by and is to be construed in accordance with the local domestic laws of the Province of Newfoundland and Labrador, Canada (including the laws of Canada applicable therein) without reference to its conflict of law rules. With respect to any action or proceeding to which the parties do not consent to mediated negotiation or arbitration as provided for in the Contract, the parties agree to and each of them do hereby exclusively submit to the jurisdiction of the Courts of the Province of Newfoundland and Labrador, Canada.

**C 9 Notices**

- .1 Any written notice provided for herein to be given to one party by the other party shall be deemed properly given and received if:
  - (a) delivered to the receiving party's designated representative at the Site; and
  - (b) either:
    - i. being mailed by prepaid registered mail; or
    - ii. transmitted by electronic methods;

to the receiving party's address as either stated in this Article or as changed through written notice to the other party.
- .2 Any notice which is sent by prepaid registered mail or transmitted by electronic methods shall be deemed to be given and received forty-eight (48) hours after mailing or transmission, as applicable; provided that if such time expires on a Saturday, Sunday or legal holiday, the notice shall be deemed to be given and received on the next normal business day.

- .3 Addresses of parties are:

Owner: NEWFOUNDLAND AND LABRADOR HYDRO  
P.O. Box 12400  
Supply Chain Management  
4th Level, Hydro Place  
St. John's, Newfoundland and Labrador, A1B 4K7

Attention: Stephen Parsons, P.Eng.  
Title: Project Manager

FAX: 709-737-1900

Contractor: PROENERGY GLOBAL SOLUTIONS CANADA LIMITED

c/o ProEnergy Services, LLC 2001 ProEnergy Blvd.

Sedalia, Missouri 65301 USA

Attention: Jeff Canon

Title: President and CEO

FAX: 660-580-1160

#### **C 10 Survival of Covenants**

- .1 All covenants, warranties, obligations, indemnities and provisions of the Contract which expressly or by their nature require observance and/or performance by Contractor after the expiration or other termination of the Contract, howsoever caused or arising, continue in full force and effect subsequent to, and notwithstanding, such expiration or other termination of the Contract until they are satisfied in full or by their nature expire.

#### **C 11 Binding Effect**

- .1 The Contract enures to the benefit of and is binding upon the parties hereto and their respective successors and permitted assigns.

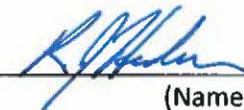
CONTRACT: 2014-57952-TB

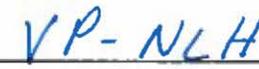
**IN WITNESS WHEREOF**, the parties hereto have executed this Contract by the hands of their duly authorized representatives as of the day and year first above written.

Signed and delivered in the presence of:

NEWFOUNDLAND AND LABRADOR HYDRO  
(Owner)

  
\_\_\_\_\_  
(Witness)  
*Notary Public N.L.*

BY:   
\_\_\_\_\_  
(Name)

  
\_\_\_\_\_  
(Title)

  
\_\_\_\_\_  
(Witness)  
*Notary Public N.L.*

AND:   
\_\_\_\_\_  
(Name)

  
\_\_\_\_\_  
(Title)

Signed and delivered in the presence of:

PROENERGY GLOBAL SOLUTIONS CANADA LIMITED  
(Contractor)

\_\_\_\_\_  
(Witness)

BY:   
\_\_\_\_\_  
(Name)

  
\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Witness)

AND: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

**SCHEDULE B**  
**GENERAL CONDITIONS**

**(This will become  
Schedule B to the  
Contract)**



**CONTRACT TITLE: Engineering On-Site Procurement and Construction Services for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station**

		<u>Page</u>
GC 1	Definitions .....	i
GC 2	Owner's Instructions .....	8
GC 3	Contractor's Representative .....	8
GC 4	Contractor's Investigations .....	9
GC 5	Performance of Work.....	9
GC 6	Prosecution of the Work .....	10
GC 7	Material .....	11
GC 8	Plant.....	11
GC 9	Access to Work.....	12
GC 10	Inspection.....	12
GC 11	Site Conditions.....	13
GC 12	Changes in the Work .....	14
GC 13	Emergency Work .....	18
GC 14	Delays and Extensions of Time .....	18
GC 15	Ownership.....	20
GC 16	Drawings and Manuals .....	20
GC 17	Protection of Work .....	21
GC 18	Owner-Furnished Material and Plant.....	22
GC 19	Payments by Contractor .....	22
GC 20	Guarantees .....	22
GC 21	Determination of Quantities .....	23
GC 22	Records.....	24
GC 23	Compensation.....	24
GC 24	Other Contracts .....	25
GC 25	Lines and Grades .....	25
GC 26	Health, Safety and Environment.....	25
GC 27	Clean Up .....	27
GC 28	Use of Site .....	27
GC 29	Documents at Site .....	28
GC 30	Royalties and Title to Property Found at the Site.....	28
GC 31	Subcontracts and Assignments .....	28
GC 32	Indemnity .....	29
GC 33	Intellectual Property Indemnity and Ownership.....	30

GC 34	Workers' Compensation .....	32
GC 35	Suspension of Work.....	33
GC 36	Taking Over Performance.....	33
GC 37	Termination .....	34
GC 38	Dispute Resolution.....	36
GC 39	Permits, Taxes, Canadian Custom Duties and Shipping Charges.....	39
GC 40	Laws.....	41
GC 41	Confidentiality .....	42
GC 42	Owner's Policies .....	45
GC 43	Insurance .....	45

## **GC 1 Definitions**

- .1 "Affiliate" means a body corporate directly or indirectly controlling, controlled by or under direct or indirect common control with Owner or Contractor, as the context requires.
- .2 "Authority" means any governmental, regulatory or other authority having jurisdiction, or purporting to have jurisdiction, in respect of the parties hereto, the Works and/or the Contract.
- .3 "Business Day" means Monday through Friday inclusive, except any days that are observed other than a day that is observed by the construction industry as a holiday in the Province of Newfoundland and Labrador .
- .4 "Change Order" means a written amendment to the Contract covering a substitution for, addition to or deletion of any Work or other requirement of the Contract, the performance of or compliance with which is contemplated by the Contract Documents and which may result in a change in the method of adjustment or the amount of the adjustment in the Contract Price, if any, or an adjustment in the Contract time, if any.
- .5 "Confidential Information" means all information and knowledge which is the exclusive property of the disclosing Party or of any third party which is being used by, or is in the control or possession of the disclosing Party and/or its Affiliates (whether or not the subject of a separate non-disclosure or confidentiality agreement between the disclosing Party and/or its Affiliates and such third party), including without limiting the generality of the foregoing, technical information, Data, documents, Drawings, reports, analyses, tests, designs, plans, drawings, models, correspondence, communications, data, specifications, formulae, lists, customer names, computer programs, software, technology, techniques, methods, processes, services, routines, systems, procedures, practices, operations, modes of operation, apparatus, equipment, know-how, manuals, business opportunities and trade and/or other secrets, whether verbal, written or existing, stored or communicated in any form or medium, together with all copies thereof, however and whenever made; but excludes (but solely to the extent demonstrably established by the receiving Party) the following:
  - (a) information or knowledge which is part of the public domain or that, through no fault of the receiving Party or their respective personnel, becomes part of the public domain at some future time but only thereafter;
  - (b) information or knowledge which is, legally and as a matter of right, in receiving Party's possession as of the date of the Contract and not the subject of another non-disclosure or confidentiality agreement between Owner and Contractor or the receiving Party and any third party (including any of Owner's Affiliates);
  - (c) information or knowledge which has been or is hereafter furnished or made known to receiving Party, legally and as a matter of right, by third parties (other than any of disclosing Party's Affiliates) without any restriction on use or disclosure; and
  - (d) information or knowledge which is bona fide independently developed by receiving Party, provided that such information or knowledge has been developed entirely without reference to, or consideration of, the information or knowledge hereinbefore

described by the disclosing Party.

- .6 "Consultant" means a person, firm, association or corporation designated by the Owner and may include those licensed to practice as a professional consultant, and includes architects and engineers.
- .7 "Contract" means the agreement between the parties to perform their respective duties, responsibilities and obligations as prescribed in the Contract Documents, together with approved Change Orders, and represents the entire agreement between the parties.
- .8 "Contract Documents" comprise those documents listed in Clause C1 of the Contract and any addenda thereto which are incorporated therein by reference, together with each and every schedule or appendix annexed to or expressly incorporated in any of the foregoing and/or forming a part thereof, each and every document, plan, drawing, specification, instruction and rule referred to therein or in any such schedule or appendix and each and every amendment thereto made in accordance with the Contract.
- .9 "Contract Price" means the aggregate of the amounts applicable to the Work as set forth in Schedule D – Payment, as may be increased or decreased during the performance of the Work in accordance with the provisions of the Contract Documents.
- .10 "Contractor" means the party or parties named in the Contract with Owner for the Work and the successors and permitted assigns of the said party or parties.
- .11 "Contractor's Representative" means Contractor's representative appointed from time to time by Contractor and designated to the Owner in writing to act as Contractor's representative for the purposes of the Contract.
- .12 "Contract Time" means the time from when the Contractor is required to commence the Work until the date stipulated in Schedule C - SPECIAL CONDITIONS, Clause SC 3 for completion of the Work.
- .13 "Data" means all technical and economic knowledge, know-how and other information prepared or developed during the course of the performance of the Work or arising out of the Work and in particular, but without limitation of the generality of the foregoing, includes economic evaluations, plans, maps, drawings, field notes, sketches, photographs, specifications, reports, improvements, inventions, secret processes, licenses, formulas, technology, geological surveys and evaluations, and core samples.
- .14 "Defect" means in respect of Contractor and any Subcontractor:
  - (a) any work done or Materials, designs, services or equipment supplied, provided or furnished by Contractor; or
  - (b) that is of poor workmanship, is damaged, defective or deficient; that causes the Works, or any part thereof, or the work, supply and/or services of any other contractor, or part thereof, to be damaged, defective or deficient; or
  - (c) that is otherwise not in full accordance with, or in full compliance with, the Contract;and

- (d) any Work omitted from being done or Materials, designs, services or equipment omitted from being supplied, provided or furnished.
- .15 "Dispute" means any dispute between the parties to the Contract as to the interpretation, application or administration of the Contract, or any failure to agree where agreement between the parties is called for.
- .16 "Drawings" means the drawings listed in Schedule E - SPECIFICATIONS and all of the following:
- (a) Construction Drawings - all drawings prepared by or on behalf of Owner showing the details of the Work to be performed and issued by Owner to and accepted by Contractor from time to time during the performance of the Work;
  - (b) Drawings of Owner-Furnished Material and Owner-Furnished Plant - all drawings prepared by or on behalf of Owner showing details of Owner-Furnished Material and Owner-Furnished Plant and issued by Owner to and accepted by Contractor from time to time during the performance of the Work;
  - (c) Contractor's Drawings - all drawings prepared by or on behalf of Contractor and accepted by Owner showing details of Plant to be employed on the Work and of temporary works to be constructed in connection with the Work and submitted to Owner by Contractor from time to time during the performance of the Work;
  - (d) Manufacturer's Drawings - all drawings prepared showing details of Material to be incorporated into the Work and submitted to Owner by Contractor from time to time during the performance of the Work;
  - (e) Shop Drawings – all drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which the Contractor provides to illustrate details of portions of the Work;
- and all revisions thereof made in accordance with the Contract.
- .17 "Final Acceptance" has the meaning stated in Schedule C - SPECIAL CONDITIONS, Clause SC 8.
- .18 "Harmonized Sales Tax" or "HST" means all amounts exigible pursuant to Part IX of the Excise Tax Act (Canada), including, for greater certainty, the taxes commonly referred to as the goods and services tax (GST) and the harmonized sales tax (HST).
- .19 "Intellectual Property Rights" means:
- (a) any and all proprietary rights anywhere in Canada and the U.S. provided under:
    - i. patent law;
    - ii. copyright law (including moral rights);
    - iii. trade-mark law;
    - iv. design patent or industrial design law;
    - v. semi-conductor chip or mask work or integrated circuit topography law; or

- vi. any other statutory provision or common law principle applicable to this Contract, including trade secret law, any of above which may provide a right in either Data, Contract Documents and their contents, Drawings, Materials, Plant, Specification, Confidential Information, Work, ideas, formulae, algorithms, concepts, inventions, processes or know-how generally, or the expression or use of such;
  - (b) any and all applications, registrations, licenses, sub-licenses, franchises, agreements or any other evidence of a right in any of the foregoing;
  - (c) all licenses and waivers and benefits of waivers of the intellectual property rights set out in above, all future income and proceeds from the intellectual property rights set out in above, and all rights to damages and profits by reason of the infringement or violation of any of the intellectual property rights set out in above; and
  - (d) all such rights to any such intellectual property rights set out above developed by Contractor, Subcontractors or their servants, agents and employees during and in connection with the performance of the Work.
- .20 "Law" or "Laws" means all statutes, regulations, by-laws, statutory orders, ordinances and decrees, ministerial orders, requisitions, rules, codes or specifications having application to the parties hereto, the Works and the Contract, enacted, issued, promulgated, made or adopted by any Authority, and includes such Laws as amended or varied from time to time.
- .21 "Material" means material, supplies, plant, machinery, equipment, tools and buildings and all other items built into or intended to be built into or form a permanent part of the Work. All Material, except where expressly designated "Owner-Furnished", shall be furnished by Contractor.
- .22 "Major Equipment" means all the major generating equipment and components to be delivered to the Site, including the Gas Turbine and Generator Packages, Transformer, Black Start, Controls and other Major Auxiliary Equipment, Components and Parts, which are purchased by Owner under a separate contract or contracts and free-issued to Contractor to install, commission and test as part of its Work under this Contract.
- .23 "Notice" means any notice, request, demand, document, order, instruction or other communication by the terms of the Contract required or permitted to be given by either party to the other.
- .24 "Owner" is the entity identified in the Contract and includes its successors and assigns.
- .25 "Owner's Representative" means Owner's Representative appointed from time to time by Owner and designated to the Contractor in writing to act as Owner's representative for the purposes of the Contract.
- .26 "Owner-Furnished" as a prefix to the words Material or Plant, means that Material or Plant provided by Owner and delivered by Owner to Contractor in accordance with the terms of the Contract Documents including the Major Equipment.

- .27 "Plant" means material, supplies, plant, machinery, equipment, tools and buildings, including warehouses, offices, batch plants, camps, garages and shops and all other items consumed or used or intended to be consumed or used in the performance of the Work and not built into or forming a permanent part of the Work.
- .28 "Project" means the total of the work and services contemplated of which the Work may be the whole or a part.
- .29 "Province" means the Province of Newfoundland and Labrador.
- .30 "Punchlist Item" means any uncompleted part of the Work that (considered individually or in the aggregate of all Punchlist Items) does not and will not adversely affect the performance of the Facility or the ability to operate the Facility safely and in the ordinary course of business, and remain after Substantial Completion.
- .31 "QST" means all amounts eligible pursuant to An Act Respecting the Québec Sales Tax (Quebec), commonly referred to as the QST or TVQ.
- .32 "Schedule" means the work schedule (including milestone) in respect of the Work as set out in Schedule C - SPECIAL CONDITIONS, Clause SC 3.
- .33 "Substantial Acceptance" has the meaning stated in Schedule C - SPECIAL CONDITIONS, Clause SC 8.
- .34 "Site" means the designated site or location where the Work or part of the Work is to be performed as identified in Schedule C - SPECIAL CONDITIONS, Clause SC 1.
- .35 "Specifications" is that portion of the Contract Documents consisting of the requirements and standards for the performance of the Work and include the technical specification and Drawings.
- .36 "Subcontractor" means any person, firm or corporation employed by or having a direct contract with Contractor for the performance of any portion of the Work including supply of labor and/or the furnishing of goods, materials, equipment and/or services, but excluding employees of Contractor.
- .37 "Tax" or "Taxes" means any tax, fee, levy, rental, duty, (including, for greater certainty, all customs duties, anti dumping and countervailing duties) charge, royalty or similar charge including, for greater certainty, any federal, state, provincial, municipal, local, aboriginal, foreign or any other assessment, governmental charge, imposition or tariff wherever imposed, assessed or collected, and whether based on or measured by gross receipts, income, profits, sales, use and occupation or otherwise, and including, without limitation, any income tax, capital gains tax, payroll tax, fuel tax, capital tax, goods and services tax, harmonized sales tax, value added tax, sales tax, withholding tax, property tax, ad valorem tax, transfer tax, franchise tax or excise tax, together with all interest, penalties, fines or additions imposed, assessed or collected with respect to any such amounts.
- .38 "Work" means all of the work to be performed by Contractor or Subcontractor as described in Clause C2 of the Contract and as contracted herein whether tangible, or intangible and

including Intellectual Property Rights conveyed or licenced to the Owner herein, as the context requires, and any extras or amendments to the Work.

- .39 "Work Day" means any day other than a day that is observed by the construction industry as a holiday in the Province of Newfoundland and Labrador.

## **GC 2 Owner's Instructions**

- .1 All claims of Contractor, all questions concerning interpretation of the Contract Documents or the acceptable fulfilment of the Contract on the part of Contractor, and all questions as to compensation, shall be submitted in writing to Owner, or Consultant (if any), for determination by Owner in writing.
- .2 All determinations and instructions of Owner shall be issued in writing to Contractor no later than five (5) days after minuted or written request by Contractor and shall be final, and shall be conclusively deemed to be accepted by Contractor as being in conformity with the Contract Documents without recourse to any courts of law or other forum, unless Contractor shall, within seven (7) calendar days after Owner notifies Contractor of any such determinations or instructions, files with Owner a minuted or written protest, stating clearly and in detail the basis thereof.
- .3 At all times Contractor shall proceed with the Work in accordance with the determinations and instructions of Owner, subject to (i) any right of action for compensation or extension of time that Contractor may have where a protest is filed within the time prescribed in this Clause GC 2 or (ii) Contractor reasonably determines that to do so would impose safety risks to personnel or property. Contractor shall be solely responsible for requesting instructions or interpretations where expressly required by the Contract Documents and shall be solely liable for all costs and expenses arising from its failure to do so.
- .4 The Owner shall give Notice to the Contractor of the name of the Owner's Representative who shall have authority to act for Owner.

## **GC 3 Contractor's Representative**

- .1 Prior to commencing the Work, Contractor shall give Notice to Owner of the name of Contractor's Representative who must be approved by Owner such approval not to be unreasonably withheld. The Notice shall include the name, address and telephone number (by day and night) of the Contractor's Representative. Contractor's Representative shall have complete charge and authority over the Work unless Owner is otherwise notified by Contractor stating the limits of authority of the Contractor's Representative. Contractor shall give Notice to the Owner prior to any changes being made thereto.
- .2 As determined by the Owner and as communicated to the Contractor, upon the written request of Owner, the Contractor's Representative shall be replaced immediately with a competent person acceptable to Owner.

#### **GC 4 Contractor's Investigations**

- .1 Contractor acknowledges that it has fully informed itself in regard to the conditions of the Site and in regard to the local and other conditions affecting the performance of the Work as a whole, and in particular but without limiting the generality of the foregoing, in regard to meteorological, geological, labour and transport conditions and the character of the terrain.
- .2 Contractor shall have the sole responsibility of satisfying itself concerning all conditions which may affect the cost of or the time required for the performance of the Work. Time lost, damage or cost suffered by Contractor due to conditions differing from those anticipated by Contractor, including without limitation adverse weather shall not entitle Contractor to additional compensation or be a reason for extension of time within which the Contract is to be completed, or both, except as provided in Clause GC 11 - Site Conditions, Clause GC 4.3, Clause GC 6.3 or Clause GC 14, Schedule A, or Schedule F.
- .3 Any and all Drawings and technical data furnished by the Owner and referenced in the Contract and accepted by the Contractor that are a part of the Contract or communicated as being intended to be relied upon may be relied upon by Contractor as accurate. It is expressly understood that Owner shall not be responsible for any increase in the Contract Price or Schedule, deductions, interpretations or conclusions drawn therefrom by Contractor unless such information or Data proves to be inaccurate.

#### **GC 5 Performance of Work**

- .1 Contractor shall have complete control of the Work and shall effectively direct and supervise the Work so as to ensure conformance with the requirements of the Contract Documents. The Contractor shall be solely responsible of all means, methods, techniques, sequences, procedures and safety and for coordinating all parts of the Work.
- .2 Contractor has entered into the Contract and shall perform the Work as an independent contractor and not as an employee or agent of Owner. Contractor shall have exclusive and complete control over its employees, Subcontractors or agents, and shall be solely responsible for their acts and omissions.
- .3 Contractor shall organize and schedule its performance of the Work so as to comply at all times with the Schedule as set forth in the Contract Documents. Contractor shall make all necessary arrangements for and shall furnish and carry out to the reasonable satisfaction of Owner, without additional cost to Owner, all overtime and shift work as may be required from time to time in order to complete the Work in accordance with the requirements of the Contract.
- .4 Contractor shall give Owner full information, including copies of working Drawings, in advance of its plans for carrying on each part of the Work. If at any time before the commencement or during the progress of the Work, any part of Material, Plant, labour force or any of its methods of executing the Work, reasonably appear to Owner to be inadequate to ensure the required quality, safety or rate of progress of the Work, Owner may order Contractor in writing, at Contractor's expense, to change or improve its Material, Plant or methods, or increase its labour force in the event that key milestones are not met, and

Contractor shall take remedial action to recover the schedule through increase in work force or other remedial action; but neither compliance with such orders nor failure of Owner to issue such orders shall relieve Contractor from its obligation to secure the degree of safety, the required quality of Work and the rate of progress required by the Contract Documents. Contractor shall be solely responsible for the safety and adequacy of its Material, Plant, labour force and construction methods.

- .5 Contractor shall employ only competent and skilful persons to do the Work. Owner may give notice to Contractor when an person on the Site or performing the Work is, in Owner's reasonable opinion, incompetent or disorderly, or has refused to carry out the provisions of the Contract Documents, or is otherwise unsatisfactory. Upon Contractor's receipt of such Notice specifying the reasons therefor, such employee shall be discharged immediately from the Work and shall not be employed again on the Work except with the written consent of Owner.
- .6 Contractor shall not hire employees of (i) Owner, (ii) other contractors to Owner, or (iii) Subcontractors, without a written release from such employers. Contractor shall be solely responsible for acts and omissions of employees and agents leaving its and Subcontractors' employ for any reason until such employees and agents have left the Site.
- .7 If Owner hires, directly or indirectly through a third party, any personnel of Contractor in any capacity during or one (1) year after completion of the Work under this Contract, Owner agrees to pay a fee to Contractor equal to thirty-five percent (35%) of such personnel's estimated annualized gross compensation for employment. Estimated gross compensation includes estimates of commissions, bonuses, incentives, equity and salary. This fee is due and payable within thirty (30) calendar days from the date such personnel commences employment with Owner.

#### **GC 6 Prosecution of the Work**

- .1 Time is an important element in the parties performing their respective obligations under the Contract.
- .2 Contractor shall prosecute the Work with due diligence and energy and complete the Work and each phase thereof, including final clean-up of its Work areas at the Site, within the applicable time set forth in the Contract Documents.
- .3 Neither party to the Contract shall be considered in default in performance of its obligations hereunder to the extent that performance of such obligations is delayed, hindered or prevented by Force Majeure. "Force Majeure" means Acts of God including lightning, earthquake, tempest, flooding, fire, cyclone, hurricane, typhoon, tidal waves, whirlwind, storm, drought or lack of water and other unusual or extremely adverse weather or extremely adverse environmental conditions, meteorites, aircraft or objects falling from aircraft or other aerial devices, the occurrence of pressure waves caused by aircraft or other aerial devices traveling at supersonic speeds, acts of public enemies, any strike, work stoppage, slowdown or other industrial action or labor dispute, acts of a competent Authority and includes any other cause or which could not have been avoided by the exercise of reasonable human foresight and skill not within the affected party's reasonable

control. To the extent that the same are caused by events or circumstances that are themselves a Force Majeure, shortage of labor; delay in delivery, loss or damage to materials or Equipment or Plant in transit or on-site; delay in performance of a Subcontractor; and breakdown of Equipment or Plant shall be considered a Force Majeure event. In the event of Force Majeure the affected party's performance shall be excused and extended for such period of time as the Force Majeure exists.

#### **GC 7 Material**

1. Whenever, in the Schedule E - SPECIFICATIONS, Material is specified by patent or proprietary name or by the name of a manufacturer, without the words "or equal" or words conveying the same meaning following the specified name, Contractor shall provide the Material specified. Where the words "or equal" or words conveying the same meaning follow the said specified name, Contractor may offer for Owner's consideration Material which shall be equal in every respect to that specified, provided however that if, in the reasonable opinion of Owner, the Material offered by Contractor is not equal in every respect to that specified, then Contractor shall furnish the Material specified.
2. It is the Contractor's responsibility to ensure that the substituted Material is equivalent to the Material specified with regard to design, function, durability, operation and quality.
  3. In offering Material in place of specified Material or where required by the Schedule E - SPECIFICATIONS or by Owner, Contractor shall submit samples and full information concerning Material for Owner's review and approval at least thirty (30) days, if reasonably possible based on considerations of the fast-track nature of the Schedule, prior to the date Contractor proposes to order the said Material. The information required shall include, but shall not be limited to, records of prior use for similar applications and certified test reports. Approval by Owner of substitution does not relieve the Contractor from its obligation to ensure that the substitute is equivalent to the Schedule E - SPECIFICATIONS.
4. Unless otherwise provided elsewhere in the Contract Documents, all Material shall be new and of the most suitable grade for its intended use.
5. Contractor shall store Material brought to the Site for the Work in locations shown on the Drawings, or to such other area or place as may be specifically authorized by Owner.
6. Contractor shall make available to Owner, if requested, all packing and delivery slips for Material shipped to the Site by Contractor.
7. To control scheduling and completion of the Work, Contractor shall immediately advise Owner in writing of losses or damage to Material and Plant by theft, fire or accident.

#### **GC 8 Plant**

- .1 Before proceeding with the erection of any Plant, Contractor shall furnish Owner with information and Drawings of all Plant and information as to capacities and capabilities of the Plant. Contractor shall furnish additional information as Owner may reasonably request.
- .2 Contractor shall confine its Plant, Material, storage and operations to the Work areas shown on the Drawings or as specifically authorized by Owner.

#### **GC 9 Access to Work**

- .1 Owner, its inspectors, agents and employees and other persons authorized by Owner shall, at all reasonable times and for any purpose, have access to the Work and the premises used by Contractor and Subcontractors for the performance of the Work and Contractor shall provide safe and proper facilities therefor.
- .2 Owner, its inspectors, agents, employees and other persons authorized by Owner shall at all reasonable times have immediate access to all places where Material or Plant is being manufactured, produced, or fabricated for use in the Work, and shall be provided with full facilities for determining that all such Material or Plant is being made strictly in accordance with the Contract Documents. Contractor shall, whenever so requested, give Owner access to all redacted subcontracts, purchase orders, invoices, bills of lading, Specifications, Drawings and similar Documents as are deemed necessary by Owner for proper inspection and expediting.
- .2 All subcontracts and purchase orders for Material or Plant shall contain a provision to the effect that the order is subject to inspection and that it may occur at any time during manufacture and prior to shipment, by Owner, its inspectors, agents and employees and other persons authorized by Owner provided such inspection does not impact or delay the schedule or increase the cost of manufacture.

#### **GC 10 Inspection**

- .1 Contractor shall be responsible for inspection and quality assurance of all Material and Plant to assure compliance with the Schedule E - SPECIFICATIONS and for this purpose Contractor shall appoint qualified inspectors.
- .2 All Material, Plant and Work shall, at Owner's option, be subject to inspection, examination and test by Owner or its authorized representatives at all reasonable times and all places. The parties shall agree on a schedule on which such inspections, examinations and testing by Owner shall be carried out on Owner's behalf. Owner shall have the right to reject defective Material, Plant and Work. Contractor shall, at its expense, correct rejected Work and replace rejected Material or Plant, all to the reasonable satisfaction of Owner, and Contractor shall segregate and promptly remove rejected Material or Plant and dispose of same in accordance with Clause GC 27 - Clean Up.
- .3 Contractor shall furnish promptly all facilities, labour, Material and Plant necessary for any inspections and tests that may be required by Owner. Any additional inspections or tests

over and above those contemplated in the Contract shall be performed in such a manner that the Work will not be delayed unnecessarily or increasing the cost to complete the Work.

- .4 If so designated in the schedule to be agreed between the parties pursuant to Clause GC 10.2 above, Material shall not be shipped from the place of production or manufacture to the Site or be incorporated in the Work prior to inspection by or without the consent of Owner.
- .5 Owner may at any time before Substantial Acceptance examine Work already performed by removing, disassembling or tearing out same. Contractor shall, on request from Owner, promptly furnish all necessary facilities, labour, Material, Work and Plant for such examination. If such Work is found to be defective in any material respect, or if it is found that such Work is not in material conformity with the Contract Documents, or if Contractor has failed to comply with the requirements of Clause GC 10.4, the expense of such examination and of satisfactory reconstruction shall be at the cost to Contractor and no extension of time for performance of Work shall be granted. If, however, such Work is found to meet the requirements of the Contract Documents, and Clause GC 10.4 has been complied with, Contractor shall be entitled to additional compensation in accordance with Clause GC 12 - Changes in the Work for the cost of labour, Plant and Material necessarily involved in the examination and replacement and in addition, if completion of the Work has been delayed thereby, Contractor shall be granted a suitable extension of time in accordance with Clause GC 14 - Delays and Extensions of Time.
- .6 Owner's inspection of Material, Plant and the Work, or lack of such inspection, shall not relieve Contractor of its responsibility to execute the Work in full compliance with all requirements of the Contract Documents.

#### **GC 11 Site Conditions**

- .1 Contractor shall promptly, and before conditions are materially disturbed, notify Owner in writing of:
  - (a) subsurface or latent physical conditions at the Site differing materially from those indicated in the Contract Documents; or
  - (b) previously unknown physical conditions at the Site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work in the Province of Newfoundland and Labrador and of the character provided for in the Contract Documents.
- .2 Upon receipt of written notification from Contractor, Owner shall promptly investigate the said conditions and, if it finds that such conditions do materially differ and cause an increase or decrease in Contractor's cost of, or the time required for, performance of the Contract, an equitable adjustment shall be made by Change Order as defined in Clause GC 12 – Changes in the Work. No claim of Contractor for adjustment hereunder shall be allowed unless Notice has been given as required.

## GC 12 Changes in the Work

- .1 Owner may at any time make changes in the Work or the Contract which may require Contractor to perform extra Work. Before any change in the work is commenced, such change or extra Work shall be authorized by a written Change Order specifying the basis of the compensation to be paid to the Contractor.
- .2 Owner will issue to Contractor written Change Orders which may be accompanied by additional or revised Drawings. Upon receipt of such Change Order, Contractor shall promptly commence the ordered Work so that, subject to Clause GC 12.3, all the dates set forth in the Schedule shall be met.
- .3 Within ten (10) calendar days of receipt of such Change Order, Contractor shall advise Owner in writing of any anticipated change in the Schedule arising from the Change Order. If, such change in the Schedule is justified, an equitable adjustment in the time for completion of such items will be made and the Schedule shall be revised to reflect such adjustment and shall be resubmitted for approval.
- .4 If any change or extra Work causes an increase or decrease in the actual cost to Contractor of completing the Contract in comparison with what Contractor's actual cost would have been had no change or extra Work been made, an equitable adjustment to the Contract Price will be made in accordance with the following provisions and the Contract shall be modified accordingly by a written Change Order.
  - (a) Any claim by Contractor for equitable adjustment to the Contract Price because of a change or extra Work shall be submitted to Owner in writing within thirty (30) calendar days from the date of receipt by Contractor of the notification of change. For changes or extra Work, such adjustment shall be made as follows:
    - i. to the extent set forth in the Contract Documents, applicable unit prices shall apply;
    - ii. to the extent such unit prices alone are not applicable, in the opinion of Owner, adjustment shall be made on the basis of a lump sum or a combination of lump sum and unit prices as agreed upon by Contractor and Owner;
    - iii. to the extent adjustment is not made as provided in subparagraphs (i) and (ii) of Clause GC 12.4 adjustment shall be computed in accordance with Clause GC 12.6.
  - (b) To the extent that the provisions of Clause GC 12.4 (a)(i) are not applicable in the opinion of Owner and the provisions of Clause 12.4 (a)(ii) have not been agreed upon prior to Contractor's commencement of the Work constituting the change, Contractor shall maintain records of its costs in accordance with Clause GC 12.6 below, during the performance of the change or extra Work until such time as the change is completed and payment shall be made on a cost plus basis pursuant to Clause GC 12.6.
- .5 Contractor shall not perform changes or extra Work unless authorized by a written Change Order which specifies the basis of compensation to be paid Contractor for the changes or extra Work. If such changes or extra Work is not to be performed on a lump sum or unit price basis, the Change Order shall specify that the change or extra Work shall be performed on a cost plus basis and payment shall be made pursuant to Clause GC 12.6.

- .6 Where Clause 12.4(a)(iii) is applicable, Contractor shall maintain records of the actual cost to Contractor of completing the extra Work and payment for such extra Work shall be in accordance with the following provisions:

(a) Direct Labour Costs

Charges for all of the labour furnished and used by Contractor in the performance of changes and extra Work which may include working foremen, superintendents, assistant superintendents, general foremen, office personnel, timekeepers and maintenance mechanics but only to the extent such personnel spend time in the performance of the changes or extra Work. Hourly rates charged shall be no higher than that used or employed under work of similar character and location in the performance of the Contract.

The time charged to changes or extra Work shall be subject to the daily or weekly approval of Owner and evidence of such approval shall be submitted by Contractor with its billing. Labour rates used to calculate the costs shall be those rates in effect during the accomplishment of the changes or extra Work. The direct labour costs shall include, in addition to the direct payroll costs, payroll taxes and insurance, vacation allowance, subsistence, travel time and any other payroll additives required to be paid by Contractor, by law or collective bargaining agreements with respect to any labour furnished by Contractor for which compensation is to be paid on an hourly basis.

(b) Premium Time

Premium time costs shall be paid for classifications in (a) above for overtime work for which the Owner has given prior written authorization. The payroll percentage additives stipulated in Clause GC 12.6 (f) shall not apply to premium time costs.

(c) Equipment Costs

For the operation of equipment with a new unit cost of five thousand dollars (\$5,000.00) or more, Contractor shall be reimbursed at the "operated rate", excluding operator, to be determined as follows:

- i. For the operation of equipment, Contractor shall be reimbursed at the "hourly operated rate" in accordance with the Schedule A - TENDER SUBMISSION Schedule of Equipment Rental Rates of, approved by Owner, including additional items of equipment added thereto from time to time with the approval of Owner.
- ii. For equipment for which no hourly rate is provided in the Schedule A - TENDER SUBMISSION Appendix VIII - Schedule of Equipment Rental Rates, Contractor shall be reimbursed at the "hourly operated rate" provided in the edition of the publication of the Government of Newfoundland and Labrador, Department of Transportation and Works, Highway Design Division's Specification Book, Division 10, Form 1000 entitled "Newfoundland Equipment Rental Schedule" current as of

the date of the Contract. For this Contract, references within Form 1000 to Department shall be construed as meaning Owner.

- iii. For equipment for which no hourly rate is provided in the Schedule of Equipment Rental Rates and which is not listed in the Newfoundland Equipment Rental Schedule, as described in Clause GC 12.6 (c) (ii), Contractor shall be reimbursed at an hourly rate, reasonably approved by Owner and Contractor.
- iv. Unless Contractor, within seven (7) days of notification of a change or extra Work, advises Owner otherwise, the hourly rate shall be computed as either:
  - .7 for equipment not owned by Contractor, the standard rate charged to Contractor by an equipment rental company, plus a rate agreed by Owner for the provision of fuel, lubricants and normal maintenance provided by Contractor; or
  - .8 for equipment owned by Contractor, the dollar value obtained by multiplying together the following two components:
    - (a) the purchase cost to Contractor of Contractor-owned equipment; and
    - (b) a percentage hourly rental factor of 0.00066 (equal to 1/1515);

where the percentage hourly rental factor is based on the ownership and operating costs of the equipment used on a single shift basis. Where equipment is operated on a double shift basis, the hourly rate will be reduced to five/sixths of the single shift rate (i.e. using a percentage hourly rental factor of 0.00055 (equal to 1/1818)).

- i. Payment at the operated rate described above shall be the full compensation to Contractor, other than the cost of the operator, for the supply and operation of the equipment. The cost of the operator shall include direct labour costs as provided for in Clause GC 12.6 (a) and premium time as provided for in Clause GC 12.6 (b). No premium shall be paid over and above the rate as set out above for the operation of the equipment on shift work, or for operation on Sundays or holidays.
- ii. The operated rate shall apply only for the period when the equipment is actually operating in respect of the Work.
- iii. Payment at an hourly rate to be termed the "stand-by rate" and equal to fifty percent (50%) of the operated rate, shall apply for the period when the equipment is:
  - not operating, but in an operable condition, and held at the Site with Owner's approval in readiness to perform Work; or
  - being transported to or from the location of the cost plus Work, subject to the limitations following.

- iv. Payment at the stand-by rate shall be made for a normal day shift basis only and shall not exceed ten (10) hours in any twenty-four (24) hour period.
- v. The rates set forth shall apply to all equipment which Contractor uses to perform Work on a cost plus basis. The availability of equipment for such Work shall be subject to an agreement between Owner and Contractor for each occasion.
- vi. When the Work performed on a cost plus basis requires the use of equipment not available at the Site, and Owner so authorizes, Contractor will be reimbursed for the transportation costs of bringing such equipment from and returning it to its point of origin.
- vii. In addition to the transportation costs, Contractor will be paid at the stand-by rate, as established herein, for the time the equipment is in transit up to a maximum of ten (10) hours per day up to a maximum of twenty-four (24) hours for any one shipment.
- viii. Time sheets shall be presented daily to Owner, in a form approved by Owner, for equipment rented during the previous day. The time sheets, approved by Owner without delay, shall be the sole basis from which Contractor shall prepare its invoices for payment of equipment rental.

(d) Material Costs

Charges for materials furnished by Contractor and used in performing changes or extra Work shall be the net actual cost, allowing for discounts and rebates to Contractor, and Contractor's invoice shall accompany the billing along with the verification by Owner of such use. All such furnishing and use of such material shall be specifically authorized in the Change Order. An amount of fifteen percent (15%) on material costs shall also be allowed.

(e) Subcontracted Work and Services Costs

Charges for Work and services subcontracted by Contractor in the performance or completion of changes or extra Work shall be allowed only when both the Subcontractor and the terms of payment to the Subcontractor have been approved in writing by the Owner before the Subcontractor starts such work. Such charges shall be allowed only for the net actual cost to the Contractor. An amount of ten percent (10%) on subcontracted Work and services costs shall also be allowed.

(f) Payroll Additives

Contractor shall be paid twenty-five percent (25%) of direct labour costs in Clause 12.6 (a) above to cover employee fringe benefits. The payroll percentage additives stipulated shall not apply to premium time costs defined in Clause GC 12.6 (b).

(g) Tools, Supplies, Overhead, Supervision and Profit

A charge for tools and equipment with a new cost each of less than five thousand dollars (\$5,000.00) and for supplies, overhead, supervision and profits shall be allowed in the amount of the sum of the following percentages of direct labour costs:

- i. Twenty percent (20%) of the total direct labour costs as defined in (a) above, for the initial ten thousand dollars (\$10,000.00) of the total direct labour costs of the specific cost plus items in a Change Order.
- ii. Fifteen percent (15%) of the total direct labour costs, as defined in (a) above, for the amount exceeding ten thousand dollars (\$10,000.00) up to and including one hundred thousand dollars (\$100,000.00) of the total direct labour costs of the specific cost plus items in a Change Order.
- iii. Ten percent (10%) of the total direct labour costs, as defined in (a) above, for the amount exceeding one hundred thousand dollars (\$100,000.00) of the total direct labour costs of the specific cost plus items in a Change Order.

### **GC 13 Emergency Work**

- .1 The Owner may stop or change the progress of the Work whenever in its opinion such stoppage or change is necessary to ensure the safety of life, or the Work, or property. In addition, the Owner may make changes to the Work in such circumstances. Such Work shall be performed on oral orders of Owner and confirmed by written instruction as soon as practicable. In the event of ordered emergency work, Contractor will keep accurate records of actual cost incurred in accordance with Clause GC 12.6 until such time as agreement on compensation is reached. Keeping of such records shall not be construed as an indication that the Contractor will be compensated for the emergency work on a cost plus basis and shall not preclude the possibility of agreement to pay for the Work on a unit price or lump sum basis.
- .2 Upon agreement between Contractor and Owner as to the compensation due Contractor for the performance of such emergency work, the Contract shall be amended by the issuance of a Change Order reflecting such agreement.

### **GC 14 Delays and Extensions of Time**

- .1 Where a delay to the performance of the Work occurs, other than due to Owner, Owner's agents or other contractors, the cause of which was reasonably beyond the control of and not reasonably ascertainable by Contractor at the time the Contract was entered into or otherwise considered an event of Force Majeure, Contractor's sole remedy for delay shall be an extension of the time in which the Work is to be performed which may only be extended in accordance with Clause GC 14.2. Adverse weather shall not entitle Contractor to an extension of time or additional compensation except as otherwise provided for in Clause GC 6.3.
  - (a) Where a delay is occasioned by the failure of the Owner to provide access or equipment, or other fault of the Owner as stipulated in the Contract Documents, the

Contractor shall notify within one Business Day the Owner of such delay and within five Business Days the Contractor shall compile and provide all supporting documentation including actual cost and primary data to support the delay claim, the Contractor shall be entitled to:

- i. An extension of time in which the Work is to be performed in accordance with Clause GC 14.1 (b) and
  - ii. An equitable adjustment for costs which Contractor has clearly documented and justified, to the Owner's reasonable satisfaction, as having been reasonably incurred by such delay.
  - iii. Contractor shall take all reasonable measures necessary to mitigate the impacts of such delay and show evidence reasonably satisfactory to Owner to such effect.
  - iv. Failure of Contractor to provide timely notice or data sufficient in the reasonable opinion of Owner will disallow the delay claim.
- (b) If an event occurs which, in the opinion of Contractor, will cause a delay to the Work as described in Clause GC 14.1 for which an extension of time may be made, Contractor shall notify the owner as soon as practicable following its discovery of the commencement of the event and shall within ten days, give written Notice to Owner of the cause and of the anticipated outcome of such cause. Owner shall promptly advise Contractor if, in its opinion, the event specified by Contractor does not warrant an extension to the time in which the Work is to be performed. Within ten (10) days after Contractor's discovery that such cause of delay has ceased, Contractor shall file with Owner a written statement of the actual delay, if any, resulting from such cause. If the Owner agrees the cause of delay was such as to warrant an extension of the time in which the Work is to be performed, Owner shall issue a Change Order within ten (10) days of Contractor's written statement setting forth the number of calendar days by which the Work to be performed shall be extended. Failure of Owner to issue a Change Order shall not prejudice Contractor's rights to an extension to the time to perform its Work.
- (c) Failure by Contractor either to give written Notice to Owner of the cause of delay or to give a written statement setting out the actual delay suffered once the cause of delay has ceased, within the time permitted, shall constitute sufficient reason for Owner not extending the time in which the Work is to be performed.
- .2 The Contract Time may be extended for such reasonable time as the Owner and the Contractor agree. An extension of time shall be the sole remedy to Contractor for delays described in Clause GC 14.1 and Contractor shall not be entitled to any damages on account thereof unless such time extends more than thirty (30) days in which event Contractor shall be entitled to reimbursement by Owner for the actual costs incurred.
  - .3 In the event of any delay to the Work occurring, Contractor shall take all necessary measures to mitigate the effect of the delay on the Work and be prompt and diligent in proceeding with the performance of the Contract.
  - .4 In the event of interruption of the Work by any Authority, or use by such Authority of Contractor's personnel and Plant, time for performance under the Contract shall be extended for a period of time equivalent to such interruption and Owner shall pay

Contractor for services performed by Contractor for such Authority. No extension shall be provided where the interruption of the work was the fault of the Contractor.

#### **GC 15 Ownership**

- .1 All Material, Plant and interest of Contractor in real property, licences, powers and privileges acquired, used or provided by Contractor for the exclusive purposes of the Work or Contract shall, from the time of such acquisition, use or provision be vested in and become the property of Owner for the purposes of the Work and shall continue to be the property of Owner until:
  - (a) in the case of Material, Owner informs Contractor that it is satisfied that the Material will not be required for the Work, and
  - (b) in the case of the Plant, real property, licences, powers and privileges, Owner informs Contractor that it is satisfied that the interest vested in the Owner is no longer required for the purposes of the Work and the Contract.
- .2 Contractor shall not remove Plant or Material from the Site or use or dispose of it without the approval of Owner, unless otherwise specifically provided in the Contract Documents or as may be essential for the performance of the Work.
- .3 Contractor shall, unless otherwise provided in the Contract Documents, be solely at risk and be liable for any loss or damage to all such Material and Plant until Substantial Acceptance of the Work notwithstanding that the Material and Plant are the property of Owner.
- .4 Owner may, upon giving written Notice to Contractor, take possession of or use any completed or partially completed portion of the Work. Such possession or use shall not be deemed to be an acceptance of the Work, nor shall it relieve Contractor of any of its responsibilities under the Contract; provided that Owner, and not Contractor, shall be responsible for risk of loss and ordinary wear and tear with respect to any portion so used by Owner and warranty on said portion of Work shall commence at that point.

#### **GC 16 Drawings and Manuals**

- .1 Contractor shall perform the Work in accordance with requirements stipulated in the Contract Documents. Owner and Owner's Engineer will provide a two (2) day turnaround on the review and approval of the Rev. 0, Issued For Construction, Key Engineering Drawings) which are the Process Flow Diagrams, General Arrangements, Electrical One Line Diagrams, and Control Architecture Drawings. All other drawings submitted by Contractor will be for informational purposes only and will not require approval by Owner or Owner's Engineer.
- .2 Construction Drawings may not all be issued by Owner at the commencement of the Work, but may be issued as the Work progresses. To accomplish the timely issuing of Drawings

prepared by or on behalf of Owner, Owner and Contractor shall prepare jointly a mutually satisfactory Drawing schedule showing the list of Drawings and dates on which each Drawing will be required for the Work; provided however that in the absence of such a Drawing schedule, such Drawings shall be prepared by or on behalf of Owner to meet the sequence of the Work shown on the Schedule and Owner shall insofar as Clause GC 14 - Delays and Extensions of Time applies, be responsible for costs and delays to the Work resulting from late delivery of Drawings.

#### **GC 17 Protection of Work**

- .1 Until Substantial Acceptance of the Work under the Contract or as otherwise provided for under Clause 15.4, Contractor shall be responsible for the security of all Material and Plant provided for the Work. Contractor and Subcontractors shall protect all Material, Plant and the Work, whether or not supplied by Owner to Contractor, against loss or damage from any cause whatsoever until the completion and Substantial Acceptance of the Work, and Contractor shall not remove, use or dispose of them without the written approval of Owner or as otherwise provided for in Clause 15.4, except as may be essential for the performance of the Work. Contractor shall immediately advise Owner in writing of losses or damage to Material and Plant by theft, fire or accident.
- .2 The acceptance by Owner of any portion of the Work shall not relieve Contractor of any liability for loss or damage to the Project arising out of its continuing other Work at the Site under the Contract or work under any other contract.
- .3 Contractor acknowledges that all Material and Plant destined for the Site may be subjected to frequent handling, heavy hauling and exposed to harsh weather conditions. Contractor shall be responsible for proper preparation of all articles for shipment from source to the Site and Contractor shall make good at its own expense any damages resulting from improper or inadequate preparation. The type of packaging shall be dictated by the nature of the article and the method of transportation but in each case shall be such as will ensure ease of handling and safety of the article. All items requiring handling by cranes shall be fitted with adequate lifting eyes or marked as to sling positions.
- .4 Contractor shall plainly mark (or cause to be marked when shipment is by others) on the outside of all articles shipped, sufficient information to ensure prompt identification. On all bills of lading, address labels and other shipping documents the Project title as defined in SCHEDULE C - SPECIAL CONDITIONS shall be marked in a conspicuous place.
- .5 Contractor and Subcontractors shall take every precaution against causing any damage, for any reason, to property and Material belonging to Owner and to third parties located in, upon or about the Site.
- .6 All Work, including the work of others, which is disturbed, damaged or destroyed in the course of such remedial work shall be made good at Contractor's expense. If Contractor fails to proceed at once with the replacement or the correction of such disturbed, damaged or destroyed work, Owner may after written notice thereof to Contractor and a reasonable time period to correct, by contract with a third party or otherwise, replace or correct such

work, and charge the cost thereof to Contractor, or may avail itself of the remedies set forth in Clause GC 36 - Taking Over Performance.

**GC 18 Owner-Furnished Material and Plant**

- .1 The Contractor shall take delivery of Material and Plant furnished by the Owner required for the Work and shall be solely responsible for its care, custody and control and, not later than Substantial Acceptance of the Work or as otherwise provided for under Clause 15.4, shall return all property which is not incorporated in the Work to Owner at times and to locations specified by Owner in the same condition as received, ordinary wear and tear excepted. Contractor shall, in addition, be solely responsible for maintenance and operation of Plant furnished by Owner and shall maintain and operate it in accordance with manufacturers' instructions and recommendations and in accordance with good practice.

**GC 19 Payments by Contractor**

- .1 Contractor shall make and cause all Subcontractors to make payments promptly when due for all Material, Plant, labour and services obtained by it or them in the execution of the Work. In the event any Subcontractor fails or neglects to make any such payment when due, Contractor shall immediately pay same. Should Contractor fail to promptly make any payments required to be made by it, Owner may after advance written notice to Contractor make such payments on Contractor's behalf, and Contractor hereby agrees to the immediate repayment to Owner of all such sums so paid, or to the deduction by Owner of all such sums from any money due or to become due to Contractor. Contractor shall expeditiously settle any outstanding amounts owing to Owner. If payment is not forthcoming within a reasonable time, Owner reserves the right to set off these amounts against progress billing payments or other monies owing to Contractor.
- .2 Contractor shall ensure that all Work performed and Material supplied is and remains free of all claims, liens, privileges or encumbrances of any kind. Owner may, at any time, request Contractor to furnish satisfactory evidence that all Work performed and Material supplied are free and clear of encumbrances, claims, liens or privileges of any nature and kind whatsoever. Such request having been made, Owner shall, in addition to any other remedies, be entitled to withhold any payments due Contractor until such evidence is furnished. Notwithstanding this section, this section does not limit the Contractor's right to lien or otherwise enforce remedies available to it in this Contract or at law

**GC 20 Guarantees**

- .1 Contractor warrants and guarantees that it shall provide quality workmanship which is first-class in every respect and that it shall furnish Material and Plant which is in accordance with the Contract Documents, and further warrants that all equipment and systems so furnished shall perform in accordance with the requirements of the Contract Documents.

- .2 Promptly upon receipt of Notice from Owner prior to the expiration of the warranty period as to any Defects in such workmanship or Material, or deficiencies in performance, Contractor shall remedy such Defects or deficiencies at its expense and to the reasonable satisfaction of Owner; provided that such Defects or deficiencies in performance must have appeared within one (1) year after the date of Substantial Acceptance of the Work or as otherwise provided for under Clause 15.4 (or two (2) years after the date of Substantial Acceptance of the Work in the case where Contractor or one of its Affiliates is furnishing the personnel and associated services for the full-time operation and maintenance of the Facility during the course of said two (2) year period). All work done to remedy such Defects or deficiencies in performance shall be guaranteed and warranted to the same extent and for ninety (90) days or the remainder of the initial warranty period, whichever is longer. If the Defects or deficiencies are not promptly remedied by Contractor to the reasonable satisfaction of Owner, Owner may on written notice to Contractor proceed to perform the necessary work at Contractor's risk and expense, and the costs thereof shall be payable forthwith by Contractor to Owner. This section of the Contract Documents sets forth the exclusive remedies for all claims based on failure of or effect in the Contractor's Work provided under the Contract Documents whether the failure arises before, during or after the warranty period and whether said claim is based on contract, indemnity, warranty, tort (including negligence), strict liability or otherwise. The duties, liabilities and obligations of Contractor do not extend to any repairs, adjustments, alterations, replacements or maintenance that may be required as a result of normal wear and tear, normal degradation in the performance of equipment, or as a result of (a) improper repair or alteration by Owner or other persons other than Contractor or its subcontractors, (b) misuse, negligence or damage by Owner or other persons other than Contractor or its subcontractors, (c) excessive operation at peak firing capacity, frequent starting, type of fuel, detrimental air inlet conditions, or erosion, corrosion or material deposit of fluids. The warranty and remedies are further conditioned upon (i) the proper storage, installation, operation and maintenance of the equipment and conformance with the operation and instruction manuals provided by the suppliers and manufacturers and (ii) repair or modification pursuant to the instructions of the suppliers and manufacturers and as otherwise directed by Contractor. **NO IMPLIED, STATUTORY, OR COMMON LAW WARRANTY OF ANY KIND, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY.**
- .3 Any and all manufacturers' warranties shall be in the name of the Owner or otherwise assignable to Owner, and originals shall be provided to the Owner at no cost. The time frame of any warranty shall be in addition to any warranty provided by the Contractor herein or otherwise but recourse in such case shall be limited directly with the manufacturer providing such warranty.

#### **GC 21 Determination of Quantities**

- .1 The quantity of Work to be paid for under any item for which a unit price is fixed in the Contract Documents shall be the amount or number, as determined jointly by Owner and Contractor and approved by Owner, of units of Work satisfactorily completed in accordance with the Contract Documents. Payment shall not be made for Work done outside the limits specified in the Contract Documents.

- .2 Measurements and computations shall be made by such methods as Owner may consider appropriate for the class of Work measured. Surveys for cross sections and field quantity measurements shall be undertaken jointly by Owner and Contractor. In the absence of clear direction in the contract documents or Drawings, it shall be determined by Owner. Field notes and measurements shall be agreed on by Owner and Contractor before computation of quantities. In the event of any dispute in this regard, Owner's decision shall be final except as may be the subject of dispute resolution under Clause GC 38.
- .3 The dividing limits, lines or planes between adjacent items or classes of excavation, concrete, or other types of Work, where not definitely indicated on the Drawings or in the Schedule E - SPECIFICATIONS, shall be mutually determined by Owner and Contractor.
- .4 Owner shall not provide scales for actually determining the mass of material but Owner will determine the mass of the items to be paid for on the basis of mass in the most practical manner as reasonably determined by Owner. Payment shall only be made for net mass. Owner will require Contractor, in the case of counting loads, to keep detailed records verified by Owner or objective third party.
- .5 Payment for quantities, computed as specified herein, shall constitute full compensation for all furnishing, handling, installing and placing of all the various items of Work for which a unit price is fixed in the Contract Documents. Quantities shown in the Schedule A - TENDER SUBMISSION Schedule of Prices are approximations only and Contractor shall not make claims for additional compensation unless specifically provided for in the Contract Documents.

#### **GC 22 Records**

- .1 Contractor and Subcontractors shall maintain full records pertaining to the Contract for two (2) years following the Substantial Acceptance and shall make them available for audit and inspection and shall allow copies thereof and extracts therefrom to be taken by Owner and its authorized representatives.
- .2 Contractor shall require all Subcontractors and all firms, corporations and persons directly or indirectly controlled by or affiliated with Contractor and all firms, corporations and persons directly or indirectly having control of Contractor to comply with this Clause as if they were Contractor.

#### **GC 23 Compensation**

- .1 Contractor agrees to accept the Contract Price as full compensation for performing the Work pursuant to the terms and conditions of the Contract and for all risks, costs and contingent liabilities of every description arising from or connected with the Work.
- .2 For payments owed to Contractor under the Contract Documents not received by Contractor within ten (10) days from the date of Owner's receipt of Contractor's invoice, a late fee of the lesser of one percent (1.0 %) per month or the highest rate allow by applicable law will be assessed and owed by Owner except with respect to any invoice

payment (or portion thereof) that is disputed in good faith by Owner by sending written Notice thereof with the particulars of such dispute to Contractor within the ten (10) day period. Once such dispute Notice is received by Contractor the parties will use reasonable efforts to resolve such dispute in an expeditious manner, and once settled, any payment resulting thereunder owed to Contractor shall be paid within ten (10) days of such settlement.

#### **GC 24 Other Contracts**

- .1 Owner reserves the right to let other contracts in connection with the Project or to do Work with Owner's forces, and Contractor shall properly coordinate the Work with that of such other contractors or Owner's forces with any disagreements to be referred promptly to Owner for settlement and conclusive decision provided such decision does not have a material adverse affect on the time or cost of Contractor to carry out the Work.
- .2 Should any part of the Work depend for its proper execution or result upon the work of others, Contractor shall report promptly to and advise Owner in detail of any Defects or delays in the work of others as may interfere with the proper execution of the Work. Should Contractor fail to so report, it shall have no claim against Owner by reason of the defective or unfinished work of others, except as to latent Defects which would not have been reasonably noticeable by inspection.
- .3 Contractor and Subcontractors shall cooperate in the performance of the Work so as not to hinder, delay or interfere with Owner, other contractors or Owner's forces in the progress of their work.

#### **GC 25 Lines and Grades**

- .1 Contractor shall set out the Work from control points and shall be responsible for the preservation of all control points set, or established by Owner. Contractor shall correct at its cost errors arising from its inaccurate setting out or entering into the Work through failure of Contractor to preserve such control points, and shall be responsible for any and all losses resulting therefrom including costs for replacing lost or damaged control points. Any checking by Owner of Contractor's survey and layout work shall not relieve Contractor of any of its responsibilities to perform the Work in accordance with the Contract.
- .2 The Work shall be done to the lines and grades shown on the Drawings, as specified in the Contract Documents or as reasonably directed by Owner.

#### **GC 26 Health, Safety and Environment**

- .1 Contractor shall comply with all occupational health and safety requirements required by Law, and the Owner's Corporate Safety and Health Program and Contractor Safety Management Program (CSMP).

- .2 Contractor shall provide all safeguards and make available protective equipment necessary for the safety of workers.
- .3 Contractor shall designate a qualified safety site advisor for the duration of the Contract.
- .4 Prior to commencement of Work, all Contractors and sub-contractors' personnel working at Work Site shall attend a site orientation meeting with Owner's Representative regardless of previous attendance related to other specifications or contracts.
- .5 Contractor shall hold tailboard safety talks with its crew prior to commencement of each shift and whenever changes in the scope of work occur. Minutes of these meetings shall be documented, maintained on site and provided to Owner's site safety coordinator.
- .6 Prior to commencement of the Work Contractor shall supply to Owner a safety and health plan specific to the Contract and Work. The safety and health plan shall consider and respond to the site specific safety and health hazards, emergency preparedness, safety issues relevant to the Work and shall document the systems and methods to be implemented for the term of the Contract, including loss prevention. Owner shall review the safety and health plan and formal approval to commence the Work shall be provided subject to acceptance of the safety and health plan. The Risk Assessment Form, Schedule A – TENDER SUBMISSION may be included in the document.
- .7 If during the performance of Work, Owner informs the Contractor that Contractor is not conducting the Work in compliance with the safety and health requirements of the Contract, then the Contractor shall remedy that discrepancy promptly. Owner may direct the Contractor to suspend Work until such time as the Contractor satisfies Owner that the Work will be resumed in conformance with applicable safety and health and environment provisions. If the Contractor fails to rectify any breach of safety and health for which the Work has been suspended, or if the Contractor's performance has involved recurring non-conformance with safety and health requirements, Owner may at its option terminate the Work without further obligation to the Contractor.
- .8 Before commencing Work, Contractor shall at its expense carry out promptly and fully the safety, sanitary and medical requirements as stated herein, or otherwise prescribed by Law, as established in the safety program and as required by Owner. To properly safeguard the safety and health of employees and local communities, Contractor further agrees that failure of personnel to comply with and to enforce the safety rules and fire prevention precautions shall be cause for removal of such personnel.
- .9 Contractor and its subcontractors must report loss incidents and near misses, immediately to the Owner and participate in the Owner's Safe Workplace Observation Program ("SWOP") in the reporting of unsafe work conditions or hazards that may be presented on site. Contractor shall be presented with SWOP Cards and must participate in the program. Contractor's SWOP reports will be presented to Owner's Representative in the form of a commendation, condition, near miss or loss incident.
- .10 Before commencing Work, Contractor shall, without cost to Owner, require Subcontractors to comply with the provisions of this Clause GC 26 and shall take such action as may be required to ensure such compliance.

- .11 Contractor shall promptly report all occurrences resulting in medical treatment, death or property damage or loss to the appropriate Authorities and Owner and shall provide written details of all such occurrences using prescribed forms where applicable.
- .12 Contractor's safety advisor/coordinator shall conduct regular inspections of the Work Site to detect and correct hazardous conditions and practices. Hazardous conditions noted by Owner will be promptly reported to Contractor's safety coordinator for immediate correction.
- .13 Contractor shall expeditiously provide Owner with copies of the following reports:
  - (a) Accident/incident investigation reports;
  - (b) Work site Inspection reports;
  - (c) Minutes of safety meetings; and
  - (d) Monthly HSE Performance for it and its Subcontractors.
  - (e) WHSCC Clearance Letter for subcontractors upon request.
- .14 Contractor shall provide Owner with a written report on corrective actions taken on all hazardous conditions and practices identified during regular inspections.
- .15 Contractors performing work under a Work Protection Permit shall verify system isolations and de-energization with the Owners permit holder prior to commencing work and complete Work group protection training from a qualified Owner's Representative.

#### **GC 27 Clean Up**

- .1 Contractor shall keep all portions of the Work and other areas occupied by it, including access to such areas it occupies, in a neat, clean, sanitary and safe condition at all times.
- .2 On completion of any portion of the Work, Contractor shall promptly remove from such work area all of its Plant and surplus Material to an approved storage area. Upon completion of the Work and before the letter of Substantial Acceptance is issued, Contractor shall leave the Site in a neat and clean condition.
- .3 In the event of Contractor's failure to promptly comply with any of the foregoing, the same may be accomplished by Owner at Contractor's expense and the cost of same may be deducted from any money due or becoming due to Contractor under this Contract.

#### **GC 28 Use of Site**

- .1 Contractor shall confine its operations and temporary facilities to locations and limits dictated by Law, ordinances, permits, the Contract Documents and Owner. Following completion of the Work, Contractor shall restore the Site to a condition acceptable to Owner with normal wear and tear excepted.

- .2 Contractor's forces shall not be permitted access to operating facilities without prior approval of Owner, and Contractor's operations shall be performed with minimum interference with operating plant.
- .3 Contractor shall obtain advance permission in writing from Owner for persons, other than Contractor and Subcontractors, whom Contractor intends to have visit the Site.
- .4 Unless otherwise provided in the Contract Documents, Contractor shall not conduct or participate in or permit any Subcontractors, officers, agents, servants or employees to conduct or participate in any form of private business whatsoever at or near the Site.
- .5 Contractor shall carry out the Work without interference to the rights of citizens living nearby or in any way causing damage, deterioration or discoloration to residences or other buildings.
- .6 Contractor shall report to Owner and expeditiously investigate any complaints caused by its operations and, where a complaint is found to be reasonably justified, take positive steps to minimize or eliminate such cause.
- .7 If Contractor refuses to investigate such complaints, Owner, at its discretion, may make such investigation on Contractor's behalf, and at Contractor's expense. Such direction, or lack of direction, from Owner shall not relieve Contractor from responsibility for any or all damages from any cause as set out in the Contract Documents.
- .8 Contractor and Subcontractors and their employees and agents shall not be permitted to have firearms on the Site.

#### **GC 29 Documents at Site**

- .1 Owner shall furnish Contractor, free of charge, such copies of the Contract Documents as are reasonably required for the execution of the Work.

#### **GC 30 Royalties and Title to Property Found at the Site**

- .1 Unless otherwise provided in the Contract Documents, the use of all water and the title to and the right to the use or the disposal of all soil, stone, gravel, sand, minerals, timber and all other property discovered, developed or obtained in the performance of the Contract are hereby expressly reserved in Owner.
- .2 The Contractor is not to use any water, soil, stone, gravel, timber, situate on any site under the control of the Owner without express written permission from the Owner. The Contractor shall arrange for all permits and shall pay for all royalties, duties and permitting fees associated with such use.

#### **GC 31 Subcontracts and Assignments**

- .1 Contractor shall not, without having obtained the prior written consent of Owner not to be unreasonably withheld or as otherwise disclosed to Owner prior to the execution of the Contract Documents:
  - (a) subcontract or assign the Work or any part thereof; or
  - (b) assign any monies due or to become due under the Contract other than as part of Contractor's normal banking obligations; or
  - (c) permit any subcontract to be assigned or transferred.
- .2 No subcontract nor the granting of consent by Owner pursuant to Clause GC31.1 shall relieve Contractor of any of its liabilities or obligations under the Contract, and Contractor agrees that it is fully responsible to Owner for the acts and omissions of Subcontractors and of persons directly and indirectly employed by them in the performance of the Work.
- .3 Nothing contained in the Contract shall create any contractual relationship between any Subcontractor and Owner.
- .4 Any subcontract entered into by Contractor shall ensure compliance by Subcontractor with the provisions of the Contract which are applicable to the portion of the Work to be performed by Subcontractor.

#### **GC 32 Indemnity**

- .1 Contractor shall indemnify and hold harmless Owner and any of its directors, officers, representatives, agents, affiliates and employees, from and against any and all liability, losses, damages, claims, costs, charges and expenses, including reasonable legal fees, incurred by Owner and any of its directors, officers, representatives, agents, affiliates and employees on account of personal injuries, loss of life, loss of or damage to any personal and real property of any third person or third party, and loss of or damage to property belonging to or in the custody of Contractor and Subcontractors or their employees or agents, to the extent resulting from or arising out of or in any way connected with Contractor's and Subcontractors' performance of the Work, or the use by Contractor and Subcontractors or their employees or agents of Plant, Material, personnel and services provided by Owner.
- .2 Contractor hereby agrees that it will, at its expense, promptly assume the defence of and fully defend against every such claim, suit or other proceeding, on account of such personal injury, loss of life, loss of or damage to any such personal and real property pursuant to Clause GC 32.1, and promptly to pay any and all such costs, charges, reasonable legal fees, and other expenses and any and all such judgments that may be rendered against Owner or any of its directors, officers, representatives, agents, affiliates and employees arising out of or in any way connected with Contractor's and Subcontractors' performance of the Work under the Contract.
- .3 If any judgment, attachment, execution or other lien be placed upon or obtained against the interest of Owner in any property, or against any of its directors, officers, representatives,

agents, affiliates and employees, Contractor shall at once cause the same to be discharged and dissolved and may, at the Owners discretion, require further security in the form of a bond or security.

- .4 Save and except for liens brought against the Owner by the Contractor as a result of disputes that arise between the Contractor and the Owner over payment, Contractor shall indemnify and hold harmless Owner from and against any and all encumbrances, claims, liens or privileges of any nature and kind whatsoever to the extent arising from or in connection with the Work including, without limiting the generality of the foregoing, claims, liens or privileges arising under any Laws and legal provisions relating to liens or privileges in favour of workers, builders, architects or suppliers of Material.
- .5 Owner shall indemnify and hold harmless Contractor and any of its directors, officers, representatives, agents, affiliates and employees, from and against any and all liability, losses, damages, claims, costs, charges and expenses, including reasonable legal fees, incurred by Contractor and any of its directors, officers, representatives, agents, affiliates and employees on account of personal injuries, loss of life, loss of or damage to any personal and real property of any third person or third party, to the extent resulting from or arising out of the acts or omissions of Owner, its agents and their personnel.
- .6 Owner hereby agrees that it will, at its expense, promptly assume the defence of and fully defend against every such claim, suit or other proceeding, on account of such personal injury, loss of life, loss of or damage to any such personal and real property pursuant to Clause GC 32.5, and promptly to pay any and all such costs, charges, reasonable legal fees, and other expenses and any and all such judgments that may be rendered against Contractor or any of its directors, officers, representatives, agents, affiliates and employees arising out of or in any way connected with the acts or omissions of Owner, its agents and their personnel.
- .7 Owner and Contractor when seeking indemnity protection under the provisions of the Contract Documents shall provide the other party with prompt written Notice of any such claim and shall provide all reasonable assistance and cooperation to the other party in connection with the party fulfilling its indemnity obligations hereunder.

### **GC 33 Intellectual Property Indemnity and Ownership**

- .1 Contractor shall indemnify and hold harmless Owner and any of its directors, officers, representatives, agents, affiliates and employees from and against any and all losses, costs, damages and expenses, including legal fees, incurred by Owner or any of its directors, officers, representatives, agents, affiliates or employees, as a result of or in connection with any demand, suit, claim, or proceeding based upon infringement or violation or alleged infringement or violation of any Canadian or U.S. patent, trademark, copyright or industrial design and arising out of the possession or use of any or all of the Material or Plant furnished by Contractor and Subcontractors under the Contract, and out of the processes or actions employed by Contractor and Subcontractors in connection with the performance of the Work. Contractor shall also, at its expense, promptly defend against any and all such demands, suits, claims or proceedings and shall pay any and all awards, judgments, damages, costs and expenses, including reasonable legal fees, assessed against Owner or any of its directors, officers, representatives, agents, affiliates and employees in any and all

such suits or proceedings. Owner shall give to Contractor prompt notice in writing of the institution of any such demand, suit, claim or proceeding and permit Contractor to defend the same and, at Contractor's expense. Owner shall give Contractor information, assistance and authority to enable Contractor to do so. Subject to the approval of Owner, Contractor may, in order to avoid such infringement or violation, substitute, at its own expense, non-infringing Material, Plant or processes or, at its own expense, modify such infringing Material, Plant or processes so they become non-infringing, provided that such substituted and modified Material, Plant and processes shall meet the requirements of the Contract Documents including such testing and demonstration as Owner may require.

- .2 Any royalty, licence, fee or other charge arising from or in connection with the use or incorporation in the Work of any article, device or process, provided by Contractor or Subcontractors to Owner pursuant to the Contract, which is or may become the subject of a patent, trademark, copyright or industrial design shall be for the account of Contractor, and Contractor shall pay any and all royalties, fees and charges. In the event that Owner shall have paid such royalty, fee or charge after notifying Contractor in writing first of such claim and its intent to pay after Contractor's refusal to pay the same, Contractor shall promptly reimburse Owner therefor.
- .3 Contractor hereby assigns to Owner all right, title and interest to all such Intellectual Property Rights including the right to file and obtain registration for such Intellectual Property Rights anywhere in the world, Contractor agrees to waive, or have waived, all moral rights which may subsist in any Intellectual Property Rights Contractor agrees to execute, or cause to be executed, such further documents as Owner may prepare and suggest in order to evidence the foregoing assignment to Owner and waiver of moral rights in favour of Owner. Contractor represents and warrants that it has entered into written agreements with its servants, agents and employee's subcontractors and licensors to give effect to the assignments, waivers and further assurances contemplated herein.
- .4 Owner is and will be the exclusive owner of all of the Intellectual Property Rights. All right, title and interest in the Intellectual Property Rights, will vest in Owner, immediately upon creation and regardless of the state of completion. Save and except for liens brought against the Owner by the Contractor as a result of disputes that arise between the Contractor and the Owner over payment, Contractor will not assert any lien right, or other encumbrance, on the Intellectual Property Rights and will permit Owner to always have full, free and unfettered access to the Intellectual Property Rights.
- .5 To the extent that any Intellectual Property Right does not automatically and immediately vest in Owner, Contractor:
  - (a) hereby assigns and transfers to Owner;
  - (b) agrees to assign and transfer to Owner; and
  - (c) agrees to cause Subcontractors, all Contractor servants, agents and employees, and any other personnel of Contractor or Subcontractors (collectively, the "Contractor Personnel") to assign and transfer to Owner, as and when created, all Intellectual Property Rights, throughout the world. Contractor will cause all Contractor Personnel to waive, for the benefit of Owner and its successors, assigns, licensees and

Subcontractors, their respective moral rights (and any similar rights to the extent that such rights exist and may be waived in each and any jurisdiction throughout the world) in and to the Intellectual Property Rights.

- .6 Contractor agrees to cooperate fully, and to cause all Subcontractors, Contractor servants, agents and employees, and any other personnel of Contractor or Suppliers to cooperate fully, at any and all times with respect to signing such documents and doing such acts and other things reasonably requested by Owner to confirm the assignment of ownership and waiver of moral and similar rights referred to in this Contract and to obtain registrations of Intellectual Property. Without limiting the generality of the foregoing, Contractor represents and warrants that it has entered into written agreements with Subcontractor, all Contractor servants, agents and employees and any other personnel of Contractor or Suppliers to give effect to the assignments, waivers and further assurances contemplated by this Contract.
- .7 Contractor grants to Owner, a perpetual, irrevocable, fully paid-up, royalty-free, worldwide, non-exclusive license to access, use, copy, support, maintain, modify, sublicense, assign, distribute or otherwise exploit any Intellectual Property Right not otherwise conveyed to the Owner under this Contract that is integrated with, embedded in, forms part of, or is otherwise required in order to access, use, copy, support, maintain, modify, sublicense, assign, distribute or otherwise exploit, any other Intellectual Property Rights, Work, Materials or Plant delivered hereunder.
- .8 Contractor agrees that during the term of the Contract and following its termination or expiration, none of Contractor or its Subcontractors, Contractor servants, agents and employees, and any other personnel of Contractor or Suppliers will assert any of their Intellectual Property Rights, that are issued or for which an application for a patent has been made prior to the effective date of the expiration or termination of the Contract, against Owner or any of its directors, officers, representatives, agents and employees in connection with: (1) the use or procurement of the Work, Materials or Plant provided under the Contract; or (2) the exercise of any of the license rights granted to Owner hereunder.
- .9 Contractor's obligations under this Clause GC 33 are subject to: (i) Contractor's right to settle or defend such claim or seek the right of continued use or to modify or replace the infringing Work, (ii) only Work which is provided according to Contractor's design or instructions, (iii) the Work is being used for by the Owner for its intended use, and (iv) any Work not manufactured or developed by Contractor will be limited only to the indemnity and similar obligations, if any, of the manufacturer or vendor of said Work, (v), with respect to the Siemens gas turbine equipment, Owner understands that Contractor is not purchasing said equipment directly from Siemens and that such indemnity may therefore not be commercially available from Siemens or the party selling the equipment to Contractor, but notwithstanding, in advance of the acquisition of the Siemens equipment, the Contractor shall have the duty to take all reasonable steps to obtain full right title and interest or an indemnity from Siemens and if it cannot, to make all reasonable inquiries as to any question or fetter on title to the intellectual property in said equipment and to report them to the Owner as soon as they are known so that the Owner can take steps to clear the title, and Contractor agrees that it shall provide all reasonable assistance to Owner in acquiring such protection to the extent Owner so chooses to pursue the same.

### **GC 34 Workers' Compensation**

- .1 Contractor shall pay all assessments due under the relevant Law with respect to workplace health and safety. Prior to commencing performance of the Work, Contractor shall obtain and deliver to Owner a certificate or certificates establishing that it is in good standing with the Workplace Health, Safety and Compensation Commission of Newfoundland and Labrador and with the comparable board or commission of any other province having jurisdiction in connection with Contractor's performance of the Work.
- .2 Contractor shall produce a satisfactory certificate showing clearance of all indebtedness under the relevant law with respect to workplace health and safety prior to release of the holdback retained under the Contract.
- .3 Contractor and its Subcontractors shall comply with all Laws respecting workplace health, safety and compensation including the provision for Clearance Letter from WHSCC in good standing.

### **GC 35 Suspension of Work**

- .1 Owner may, at its sole discretion from time to time and for such period as it may deem expedient, delay or suspend the Work, in whole or in part, by giving written Notice thereof to Contractor, who shall immediately give Notice to its Subcontractors. In the event such Notice of delay or suspension is given, Contractor's right to an extension of time and to additional compensation shall be governed by Clause GC 12 Changes in the Work and Clause GC 14 Delays and Extension of Time.
- .2 No such delay or suspension initiated by the Owner shall vitiate or void the Contract or any part thereof. Upon Contractor receiving Notice from Owner requiring it to resume the Work, it shall at once resume and diligently carry on operations.

### **GC 36 Taking Over Performance**

- .1 Should Contractor at any time in the reasonable opinion of Owner, refuse or neglect to supply a sufficiency of properly skilled workers, Plant or Material of the proper quality and quantity, or fail in any respect to prosecute the Work or any separable portion thereof with promptness and diligence, or fail in the performance of any of its material obligations hereunder, specifically including, without limiting the generality of the foregoing, its obligations to comply with Clause GC 6.2 Prosecution of the Work, or become insolvent or suffer financial difficulties impairing Contractor's ability to satisfactorily perform the Work, and subject to any rights of Contractor to be excused therefrom pursuant to the terms of the Contract Documents, Owner may after fifteen (15) days written Notice to Contractor and Contractor's failure to rectify within said fifteen (15) day period or, if such default is not capable of being remedied within such fifteen (15) days, to diligently commence to correct such condition within fifteen (15) days of receipt of such written Notice and to rectify the same no later than forty-five (45) days after receipt of such Notice, or without Notice in case of emergencies or to protect the Work, correct any such default, or terminate in whole or in part Contractor's right to proceed with the Work or such part of the Work as to which

defaults have occurred, and Owner may perform any such obligation and deduct the out-of-pocket and reasonable cost thereof from any money due, or thereafter to become due under the Contract.

- .2 In any such event, Owner may enter upon the Site and, for the purpose of completing the Work, take possession of all Material and Plant thereon belonging to, or under the control of, Contractor and may finish the Work or any part thereof by whatever method it may deem expedient, including the hiring of another contractor or contractors under such terms and conditions as Owner may deem reasonably advisable. In such case Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the amount to be paid on the Contract shall exceed the cost of completing the Work, such excess shall be paid to Contractor. If such expense shall exceed such unpaid balance, Contractor shall be liable for and shall pay the difference to Owner.
- .3 Where, in the reasonable opinion of Owner, Contractor has failed to perform its duties and obligations under the Contract, Owner may use the Performance Security to provide for completion of the Work to the limits of the Performance Security as follows:
  - (a) where the Performance Security has been provided in the form of a Performance Bond and a Labour and Materials Bond, the Work shall be completed in accordance with the terms and conditions stipulated in the Performance Security; or
  - (b) where the Performance Security has been provided in the form of certified cheque(s) or a Letter of Credit, Owner shall use sufficient funds obtained from the Performance Security up to the limit of the Performance Security, to complete the Work.
- .4 Any use of the Performance Security in the form of certified cheque(s) or Letter of Credit, as applicable, to secure completion of the Work shall not invalidate any recourse Owner may have under the Contract for damages for failure of the Contractor to perform under the Contract.
- .5 The Performance Security in the form of a Letter of Credit or in an amount equal to negotiated cheque(s) and subject to any adjustments as provided for in this GC 36 will be returned to Contractor following Substantial Acceptance of the Contract.
- .6 Failure of Owner to exercise any of the rights outlined in the Contract shall not excuse Contractor from compliance with the provisions of the Contract nor prejudice rights of Owner to recover damages for such default except as expressly limited or excluded under the terms of the Contract Documents.
- .7 The total liability of Contractor for all claims of any kind, whether based on contract, warranty, tort (including negligence), indemnity, strict liability or otherwise, for any loss or damage arising out of, connected with, or resulting from the Contract Documents or its Work shall in no case exceed the total Contract Price for the Work giving rise to such claim plus any insurance proceeds recovered under the coverages furnished by Contractor under the Contract Documents. Notwithstanding anything in the Contract Documents or at law to the contrary, Contractor shall in no event be liable for exemplary, special, incidental, indirect or consequential damages of any kind including, but not limited to, loss of use, profits or revenue. Contractor shall have no liability for its competent performance of instructions

given by Owner or its personnel or representatives in the event such instructions prove to be defective.

### **GC 37 Termination**

- .1 Owner shall have the right in its sole discretion, upon thirty (30) days written Notice to Contractor, to terminate the Contract for its convenience as to all or any part or parts of the Work not theretofore completed. Such termination shall be effective in the manner specified in the Notice and shall be without prejudice to any claims which Owner may have against Contractor.
- .2 Upon receipt of such Notice, Contractor shall, unless the Notice directs otherwise, immediately discontinue the Work and the placing of orders for Material, Plant and services and shall thereafter do only such work as may be necessary or required to preserve and protect the Work already in progress and to protect Material on the Site or in transit thereto.
- .3 Notwithstanding the provision of Clause GC 37.5, Contractor shall, if requested, make every effort to procure cancellation of all existing orders or subcontracts upon such additional terms as are satisfactory to Owner.
- .4 Upon such termination it is agreed that:
  - (a) the obligations of Contractor shall continue as to the Work already performed and as to bona fide obligations assumed by Contractor prior to date of cancellation or termination; and
  - (b) Owner will pay to Contractor the sum of the following as full compensation under the Contract:
    - i. the value of the Work performed prior to such termination including partially completed Work less payments previously made to Contractor; and
    - ii. any expenses which,
      - (1) were necessitated by the cancellation of such commitments as were not taken over by Owner; or
      - (2) were specifically caused by the termination of the Contract and would not have been incurred had the Contract not been terminated; or
      - (3) were incurred by Contractor in its performance of the Work prior to termination and were not reasonably compensated, provided that in no event shall Owner or any of its directors, officers, representatives, agents or employees be responsible for Contractor's loss of profits or other damages on account of such termination.

- .5 Contractor shall where commercially and reasonably possible provide for termination of subcontracts and supply contracts on terms whereby:
  - (a) termination may be arranged on short notice and at minimum expense; and
  - (b) no allowance shall be made for loss of profits;and no compensation shall be payable to Contractor hereunder for obligations which were incurred by Contractor through failure to obtain such termination provisions.
- .6 Should Owner at any time, in the reasonable opinion of Contractor, fail to fulfill any of its material obligations hereunder, specifically including, without limiting the generality of the foregoing, its obligations to make any payment due and owing to Contractor under the Contract Documents not otherwise disputed in good faith, and subject to any rights of Owner to be excused therefrom pursuant to the terms of the Contract Documents, Contractor may after fifteen (15) days written Notice to Owner and Owner's failure to rectify within said fifteen (15) day period or, if such default is not capable of being remedied within such fifteen (15) days, to diligently commence to correct such condition within fifteen (15) days of receipt of such written Notice and to rectify the same no later than forty-five (45) days after receipt of such Notice, suspend or terminate in whole or in part its performance under the Contract Documents and Owner shall be liable to Contractor for any expenses, costs and damages as may be allowed under the law as a result of Owner's default under the terms of the Contract Documents.
- .7 Failure of Contractor to exercise any of the rights outlined in the Contract shall not excuse Owner from compliance with the provisions of the Contract nor prejudice rights of Contractor to recover damages for such default except as expressly limited or excluded under the terms of the Contract Documents.
- .8 The total liability of Owner for all claims of any kind, whether based on contract, warranty, tort (including negligence), indemnity, strict liability or otherwise, for any loss or damage arising out of, connected with, or resulting from the Contract Documents or its performance thereunder shall in no case exceed the total Contract Price. Notwithstanding anything in the Contract Documents or at law to the contrary, Owner shall in no event be liable for exemplary, special, incidental, indirect or consequential damages of any kind including, but not limited to, loss of use, profits or revenue.

### **GC 38 Dispute Resolution**

- .1 Any Dispute between the parties as to the interpretation, application or administration of the Contract or any failure to agree where agreement between the parties is called for which are not resolved in the first instance by findings of the Owner and the Consultant, if any, shall be settled in accordance with the provisions of this Clause and shall be subject to the provisions of GC 41, Confidentiality.
- .2 The claimant will give written Notice of a Dispute to the other party no later than 30 days after the event giving rise to the Dispute occurs, setting forth the particulars of the Dispute, the probable extent and value of the occurrence giving rise to the Dispute and the relevant

provisions of the Contract. The other party will reply to such Notice no later than 14 days after receipt or deemed receipt thereof, setting out in such reply its position, the grounds for such position and the relevant provisions of the Contract.

- .3 If the dispute is not resolved promptly by the parties, Owner may, at any time, in its absolute discretion, give such instructions to Contractor as it deems necessary for the proper undertaking of the Works and to prevent delays pending attempts to settle the Dispute. The parties will thereupon act immediately according to such instructions and pay any disputed sums to a third party arms length escrow agent in trust with instructions that the sums are to be released upon written direction of both parties or by written arbitration order but by so doing neither party is deemed to have waived any claim it may have. If it is subsequently determined that such instructions were in error or at variance with the Contract, Owner will pay Contractor the direct costs incurred by Contractor in carrying out such instructions beyond that required under the Contract.
- .4 No act by either party will be construed as a renunciation or waiver of any of its rights or recourse in relation to the Dispute, provided such party has given the Notice(s) in accordance with GC 38.2 and complied fully with any instructions given under GC 38.3.
- .5 If the Dispute cannot be settled by negotiation between the parties, then in the event both parties consent in writing, but not otherwise, the Dispute will be determined by mediation, the mediator, location for the mediation, and the time allowed for mediation to be selected by agreement between the parties. The mediated negotiations shall be conducted in accordance with the procedure adopted by the mediator. In such case, the parties agree to make all reasonable efforts to resolve the Dispute by mediation and agreed to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate mediated negotiations. Either party may determine that mediation is at an end at any time absent agreement to the contrary.
- .6 If the Dispute cannot be resolved by mediation within the period agreed by the parties, either party may give Notice within 10 days after the termination of negotiations or mediation to refer the Dispute to be resolved by final and binding arbitration which shall proceed in the following manner:
  - (a) The party desiring such reference will appoint an arbitrator and give written Notice thereof, and of its intention to so refer, to the other party, who will within thirty (30) days after receipt of such Notice appoint on its behalf an arbitrator, and give written notice thereof to the first party.
  - (b) The two arbitrators appointed in accordance with GC 38.6 (a) will select a third arbitrator and the award of the 3 arbitrators or a majority of them, made after (i) due notice to both parties of the time and place of hearing the matter referred, and (ii) hearing the party or parties who may attend, is final and binding on both parties, and Owner and Contractor expressly agrees to abide thereby.
  - (c) In case the two arbitrators first appointed should fail to appoint a third within thirty (30) days after they have both been appointed, then either party may serve the two arbitrators with a written Notice to appoint a third arbitrator within ten (10) days after service of said Notice, failing which, the International Chamber of Commerce (ICC) , on application by the party who gave the Notice, shall appoint a third arbitrator who has the like powers to act and to make an award as if such arbitrator had been appointed by

the two arbitrators first appointed. Each arbitrator must be qualified by having at least ten (10) years' experience in the construction and engineering of power generation facilities or in the electric utility industry.

- (d) In the case of the death or refusal or inability to act of any arbitrator, or if for any cause the office of an arbitrator becomes vacant, such arbitrator's successor will be appointed in the same manner as is provided for such arbitrator's appointment in the first instance, unless the parties otherwise agree.
  - (e) The place of arbitration will be Toronto, Ontario, unless the parties otherwise agree.
  - (f) The costs of any arbitration hereunder will be apportioned against the parties or against any one of them as the arbitrator(s) may decide.
  - (g) The award of the arbitrators shall be based upon principles of law and shall be final and binding upon the parties without the right of appeal to the courts. Judgment on the award may be entered by any court having jurisdiction thereof. In deciding the substance of any such claim, dispute or controversy, the arbitrators shall apply the applicable Laws without reference to any rule thereof that would require the application of the law of another jurisdiction; provided, however, that the arbitrators shall have no authority to award punitive damages under any circumstances (whether it be exemplary damages, treble damages, or any other penalty or punitive type of damages) regardless of whether such damages may be available under applicable Law, the parties hereby waiving their right, if any, to recover punitive damages in connection with any such claims, disputes or disagreements.
- .7 The Rules of Arbitration promulgated by the ICC, except as modified by the provisions of this Clause GC 38, shall apply with respect to such arbitration. The only exception to arbitration being the exclusive forum for resolution of Disputes shall be those Disputes concerning Confidential Information and the parties rights and obligations thereto under Clause GC 41 which, if the parties do not consent in writing to the settlement of such Dispute by arbitration as hereinbefore provided, then each party shall be entitled to exercise all rights and seek all remedies otherwise available to it at Law or in equity in connection with the Dispute in any court having proper jurisdiction to hear such Dispute
- .8 Notwithstanding any disagreement or Dispute relating directly or indirectly to the Work, there shall be no interruption of the Work by Contractor, or fulfilment of Owner's payment obligations to Contractor under the Contract Documents, during the continuance of such disagreement or Dispute unless specifically so agreed by Owner and Contractor in writing.
- .9 All information that is not known to the general public which is produced or communicated in mediation or arbitration proceedings, including the existence of mediation or arbitration proceedings, or the decision or award rendered, whether embodied in documents, things, oral testimony, sworn statements or any other material, shall be confidential and shall not be disclosed to any person not a party to mediation or arbitration proceeding to which such confidential information relates, except as follows:
- (a) with the unanimous written consent of the parties to mediation or arbitration proceeding;

- (b) to an Affiliate provided that the party that disclosed such information to an Affiliate shall be liable to the other parties for any breach by such Affiliate in respect of the obligations contained in this Clause 38.9;
- (c) to the legal representatives, expert witnesses or other such persons appointed by a party to mediation or arbitration for the sole purpose of conducting mediation or arbitration proceeding or enforcing the award, provided that any such person agrees in writing to be bound by the terms of this Clause 38.9;
- (d) as required for the purposes of action to enforce the arbitral award; and
- (e) as may otherwise be required by applicable Law.

### **GC 39 Permits, Taxes, Canadian Custom Duties and Shipping Charges**

- .1 In the absence of any express provision to the contrary,
  - (a) Owner shall be the "importer of record" for the purpose of importing the Goods into Canada and shall pay all GST/HST and Canadian Import Taxes payable upon the importation of the Goods into Canada.
  - (b) Contractor shall supply Owner with a North American Free Trade Agreement (NAFTA) certificate prior to exporting the Goods to Canada.
  - (c) If through further review by the applicable authority, the Goods do not meet NAFTA criteria, Owner and Contractor agree to equally be responsible for any and all duties payable related to the importation of the Goods.
  - (d) Contractor shall pay for all permits and shipping charges, levies, imposts and assessments of whatsoever nature and kind, imposed by federal, provincial and local laws, except that Owner shall provide and pay for all building permits and any other permits and licenses and easements required for right-of-entry and for permanent structures, or changes thereto.
  - (e) Contractor shall indemnify and save harmless Owner, and shall promptly reimburse Owner for payments made by Owner, in connection with any payments made or required to be made under the provisions of paragraph (c) and paragraph (d) above.
- .2 Contractor shall not factor into the Contract Price any amount in respect of a Tax payable by Contractor to the extent that such Tax is recoverable, in any manner whatsoever, by the Contractor.
- .3 If and to the extent that Contractor is entitled to reimbursement from Owner under this Agreement for any expense incurred by the Contractor, Contractor shall not include any Taxes which are recoverable (in any manner whatsoever) by Contractor in any claim for reimbursement of such expense.

.4 In the absence of any express provision to the contrary, the Contract Price shall not be adjusted to reflect a significant change in cost to perform the Work due to changes in rates of all Taxes and duties or the imposition of new Taxes, which occur after receipt of Tender.

.5 Contractor shall forthwith provide all documentation and information requested by Owner or by any governmental authority to substantiate rates of Taxes, and without restricting the generality of the foregoing, copies of all contracts, subcontracts and any other documents relating to the Contract Price paid for the Work.

.6 Contractor shall ensure that the terms of this Agreement applicable to the payment of Taxes shall apply to all agreements with its Subcontractors.

.7 For greater certainty, Contractor and Owner acknowledge that, notwithstanding any other provision of this Contract, amounts payable by Owner to Contractor pursuant to this Contract are exclusive of any HST payable pursuant to the Excise Tax Act (Canada). If Contractor is required to collect from Owner an amount of HST with respect to the provision of any goods or services supplied pursuant to this Contract, then Owner, subject to compliance by Contractor with this Clause, shall pay the amount of such HST to Contractor.

.8 ProEnergy Global Solutions Canada Limited Contractor represents and warrants that it is now, and shall remain, registered for the purposes of the HST in accordance with Part IX of the Excise Tax Act (Canada) for the duration of this Contract and that its HST Registration number is provided in Schedule A Tender Submission.

.9 Contractor shall provide, at all times when any HST is required to be collected, such documents and particulars relating to the supply as may be required by Owner to substantiate a claim for any input tax credits as may be permitted pursuant to the Excise Tax Act (Canada) in respect of such HST. Without limiting the foregoing, Contractor shall include on all invoices issued pursuant to this Clause all of the following particulars:

- (a) HST registration number of Contractor;
- (b) the subtotal of all taxable supplies;
- (c) the applicable HST rate(s) and the amount of HST charged on such taxable supplies; and
- (d) a subtotal of any amounts charged for any "exempt" or "zero-rated" supplies as defined in Part IX of the Excise Tax Act (Canada).

.10 Owner shall be entitled to withhold payment or to deduct from Contractor's compensation to the extent necessary to protect Owner in respect of failure of Contractor to remit or pay any Tax or make any other payment required under applicable laws where Owner, acting reasonably, determines that any such remittance or payment may be assessed against the Owner.

.11 Contractor agrees to prepare and to file in a timely manner all Tax returns or declarations required by any applicable authority or applicable laws having jurisdiction over this Contract or any portion thereof. Contractor shall lawfully discharge its Tax obligations.

.12 Subject to the obligation of the Owner to pay HST pursuant to this Clause, Contractor shall pay all Taxes and shall use its best efforts to ensure payment by subcontractors of all Taxes which may be lawfully assessed upon Contractor or any subcontractor by any authority having jurisdiction over Contractor, subcontractor or this Contract.

.13 ProEnergy Global Solutions Canada Limited Contractor represents and warrants that ProEnergy it is a resident of Canada for the purposes of Canadian income tax legislation. Contractor shall advise Owner, in writing, of any change to the country where Contractor is a resident for Canadian income tax purposes at least sixty (60) days prior to any such change. If Contractor becomes a non-resident of Canada for Canadian income tax purposes, Contractor acknowledges that Owner may withhold Taxes, in accordance with applicable laws, from payments to it of the Contract Price.

.14 Notwithstanding any other provision of this Contract, to the extent that Contractor is otherwise permitted to assign its interest in this Contract to another person, it shall not be permitted to do so where the other person is not resident in Canada for Canadian income tax purposes, except with the prior written consent of the Owner.

.15 If required by the applicable laws of any country having jurisdiction, Owner shall have the right to withhold amounts, at the withholding rate specified by such applicable laws, from any compensation payable for the Work performed by Contractor, and any such amounts paid by Owner to an authority pursuant to such applicable laws shall, to the extent of such payment, be credited against and deducted from amounts otherwise owing to Contractor hereunder. Contractor shall note on each invoice whether any portion of the Work covered by such invoice was performed inside or outside of Canada for the purposes of Canadian income tax legislation or such other information requested or required by Owner to properly assess withholding requirements. At the request of the Contractor, Owner shall deliver to Contractor properly documented evidence of all amounts so withheld which were paid to the proper authority for the account of Contractor.

.16 Contractor shall supply and arrange for all Contractor personnel to supply Owner with all information relating to the activities under this Contract that is necessary to enable Owner or its Affiliates to comply with the lawful demand for information by any authority. In the event Contractor does not supply or take all steps to arrange for any subcontractor to supply such information and, as a result, an Authority imposes a Tax or fine upon Owner or any of its Affiliates, Contractor shall forthwith pay or reimburse Owner for such Tax or fine.

.17 Subject to the obligation of Owner to pay HST and import duties pursuant to clause GC39.1 Contractor shall be responsible for all Taxes which Contractor or Owner is obliged pursuant to applicable laws to pay for the purchase, sale, installation, construction, importation, exportation or for any other matter in respect of the Work, including in respect of all Contractor's property, personnel and subcontractors. Contractor shall obtain for the benefit of Owner all available exemptions from or recoveries of Taxes and shall employ all prudent mitigation strategies to minimize the amounts of Taxes required to be paid in accordance with applicable laws. In the event Contractor obtains any rebate, refund or recovery in respect of any such Taxes, it shall immediately be paid to Owner to the extent that such amounts were paid by Owner or reimbursed to Contractor by Owner.

#### **GC 40 Laws**

- .1 Contractor shall ensure that it and its Subcontractors shall comply with all Laws which regulate the performance of the Work and of all requirements of any Authority over the

same. If any discrepancy or inconsistency should be discovered in the Contract Documents in relation to any such Laws, Contractor shall forthwith report the same in writing to Owner.

- .2 Contractor shall ensure that it and its Subcontractors shall at all times observe and comply with all such applicable Laws in effect or which may become effective before completion of the Contract, and shall protect and indemnify Owner, and any of its directors, officers, representatives, agents and employees from and against any and all liability, losses, damages, claims, costs, charges and any expenses to the extent arising from or based on the violation of any such Laws, whether by it or by Subcontractors or of either of their employees or agents.
- .3 Contractor and Owner each covenants and agrees not to act in violation of the U.S. Foreign Corrupt Practices Act, and in connection therewith, shall not directly or indirectly receive, authorize, make, or promise to make any offer, payment, or gift of anything of value that would violate the laws of the United States of America, or the laws of Canada or countries in which any of the Work is performed, to or for the use or benefit of (a) any official, candidate for political office, or employee of any agency or instrumentality of any government, political party, public international organization, or any other person, or (b) any person, while knowing that all or a portion of such money or thing of value will be directly or indirectly offered, given, or promised to any official, candidate for political office, or employee of any agency or instrumentality of any government, political party, public international organization, or any other Person. Contractor agrees to indemnify, defend and hold harmless Owner from and against any and all fines, penalties, related costs and expenses, including reasonable legal expenses, attributable to any failure of Contractor and its Subcontractors and their officers, directors, agents, representatives and personnel to comply with this Clause GC 40.3. Owner agrees to indemnify, defend and hold harmless Contractor from and against any and all fines, penalties, related costs and expenses, including reasonable legal expenses, attributable to any failure of any of the Owner and its officers, directors, agents, representatives and personnel to comply with this Clause GC 40.3.

#### **GC 41 Confidentiality**

- .1 During the performance of the Contract, Contractor and Owner may have access to Confidential Information of the other Party. The receiving Party acknowledges that Confidential Information is, as between the parties hereto, the sole and exclusive property of the disclosing Party or its Affiliates, as the case may be, and receiving Party will not make, or enable, authorize, permit or acquiesce in any other person making, any copy or abstract of any Confidential Information unless (i) such copying or abstracting is done strictly in accordance with the Contract and for the sole purpose of undertaking the Work in accordance with the Contract, or (ii) with the prior written consent of the disclosing Party.
- .2 Receiving Party will at all times, and both during performance of the Contract and after termination thereof, however caused, hold the Confidential Information in trust for the disclosing Party and in strictest confidence, and will not, either during performance of the Contract or at any time after termination thereof, however caused, disclose or permit or acquiesce in the disclosure to any person, firm, corporation or association whatsoever such Confidential Information, except:

- (a) to an Affiliate provided the party who disclosed such information to an Affiliate shall be liable to the other parties for any breach by such Affiliate in respect of the obligations contained in this Clause GC 41;
  - (b) to the extent such information is required to be furnished in compliance with any disclosure requirements of any Laws, or pursuant to any legal proceedings or because of any order of any court binding upon a party or its Affiliates, provided that the disclosing party shall make all commercially reasonable efforts to give prompt written notice to the other parties before the time of disclosure to allow the other parties an opportunity to seek a protective order or other appropriate remedy;
  - (c) to the Canada Revenue Agency, or any government agency having jurisdiction currently exercised by the Canada Revenue Agency, where such disclosure is undertaken by a party in the course of a tax audit, review or investigation and is in the judgement of that party in its best interest;
  - (d) to prospective or actual professional advisors, contractors or consultants engaged by any party where disclosure of such information is essential to such professional advisors, contractors or consultants work for such party;
  - (e) to a bank, other financial institution or credit rating agency to the extent appropriate to a party arranging for funding, or to provide security;
  - (f) any information which is already in possession of the public or which becomes available to the public other than through the act or omission of a party or of any person to whom such information was disclosed by a party pursuant to this Clause GC41;
  - (g) if received by a party on a non-confidential basis pursuant to applicable Laws or from a source other than a party which disclosure was not a breach or violation of any applicable Laws or other obligation;
  - (h) in respect of information which has been independently acquired or developed by the receiving party without breaching any of its obligations hereunder;
  - (i) in the case of the Owner, as wholly owned corporation and affiliate of the Crown, the Owner has disclosure obligations to the Crown and the Crown has in turn obligations to disclose information to the public surrounding the nature, cost, progress, parties and schedule of the Work. Matters protected by the exclusions set out in the Access to Information and Privacy Act and the Energy Corporation Act of NL will be otherwise exercised and
  - (j) to any mediator or arbitrator in a proceeding pursuant to the Contract.
- .3 Disclosure of confidential information pursuant to Clauses GC41.1(d) or GC41.1(e) shall not be made unless prior to such disclosure the disclosing party has obtained a written undertaking from the recipient person to keep the information strictly confidential upon terms that are no less onerous than the confidentiality provisions of this Agreement and to use the information for the sole purpose described in Clauses 41(d) or 41(e), whichever is applicable, with respect to the disclosing party.

- .4 Forthwith upon demand by the disclosing Party and, in any event, forthwith upon termination of the Contract, however caused, receiving Party will, at the disclosing Party's option, with respect to all Confidential Information that was provided to receiving Party by any person, firm, corporation or association (including the disclosing Party and its Affiliates), or that is in receiving Party's possession or control or in the possession or control of any third party or their respective personnel or any other person, firm, corporation or association in respect of which receiving Party exercises or is entitled to exercise control, either:
  - (a) destroy such Confidential Information in circumstances and in a manner approved of and supervised by the disclosing Party, or
  - (b) return such Confidential Information to the disclosing Party.
- .5 Receiving Party will implement, monitor, control and enforce all measures required or advisable to cause all its personnel, and all Subcontractors in cases where Contractor is the receiving Party, and their respective personnel to fully observe and comply with this Clause GC 41.
- .6 Contractor nor Owner will not at any time during the performance of the Contract or at any time after the termination thereof, however caused, disclose to any other person, firm, corporation or association whatsoever the fact of, or any terms in respect of, the Works or the Contract without the prior written consent of the other Party, which consent may be arbitrarily withheld.
- .7 Receiving Party acknowledges and agrees that any unauthorized use or disclosure of Confidential Information may cause irreparable harm and result in significant damages to the disclosing Party or its Affiliates, which harm and/or damages may be difficult to ascertain. Accordingly, the disclosing Party or any of its Affiliates is entitled to immediately enjoin any breach or reasonably anticipated breach by the receiving Party and enforce the provisions of this Clause GC 41 by means of injunction or otherwise.
- .8 Receiving Party, and the Subcontractors in cases where Contractor is the receiving Party, and its personnel may, at any time and from time to time, prior to commencing or during performance of the Contract and at the disclosing Party's request, be required to sign and deliver to the disclosing Party a separate non-disclosure agreement respecting Confidential Information. Upon request by the disclosing Party, receiving Party and/or its personnel will forthwith sign and deliver the same to the disclosing Party.
- .9 All publicity releases or advertising dealing with the Work shall be submitted for approval of Owner prior to release to the news media. Contractor shall require all Subcontractors and suppliers to adhere to this requirement.
- .10 The Owner and the Contractor agree that neither will disclose this Contract or any term hereof or any information or documents received by it in connection with the preparation or negotiation hereof or pursuant to the provisions hereof without the consent of the other, provided that disclosure of any of the foregoing shall be permissible in each of the following cases:

- (a) in the case of information, if the same is available to the public generally;
- (b) if the disclosing party is required to make such disclosure by Law, in connection with any legal proceedings or it is legally necessary to file, record or register the relevant agreement, term, information or document, in which case the other party shall be notified as soon as possible;
- (c) for the purpose of obtaining advice thereon and provided that the recipient of such information agrees to keep such information confidential in accordance with the terms of this Contract; and
- (d) for the purposes of disclosing to a potential purchaser or assignee provided that such purchaser or assignee agrees to keep such information confidential in accordance with the terms of this Contract.

#### .11 ATIPPA Requests

- (a) Owner and its Affiliates are subject to the provisions of Newfoundland and Labrador legislation, including, but not limited to, the Access to Information and Protection of Privacy Act, S.N.L. 2002, c. A-1.1 (in this Section 17.1, "ATIPPA") and the Energy Corporation Act, S.N.L. 2007, c. E-11.01 (in this Section 17.1, "ECNL Act").
- (b) The parties acknowledge that Owner and its Affiliates may incur disclosure obligations pursuant to the provisions of ATIPPA or other provincial legislation, and disclosure pursuant to such an obligation shall not be a breach of this Contract.
- (c) To the extent that the confidential information meets the third party confidential information tests set out in ATIPPA, or the third party commercially sensitive information tests in the ECNL Act, s. 27 of ATIPPA or s. 5.4 of the ECNL Act, as applicable, will require that disclosure of such information be refused if requested by a third party. Where there is a challenge to such refusal, a review by the Access to Information and Privacy Commissioner, and ultimately the Supreme Court of Newfoundland Trial Division, may occur.

#### **GC 42 Owner's Policies**

- .1 Contractor shall use its best efforts to follow the general policies of Owner as promulgated from time to time. Owner shall timely provide Contractor with a copy of such policies so that Contractor may become fully familiar with all such policies that are relevant to its performance of the Work.

#### **GC 43 Insurance**

- .1 Liability Insurance

Contractor shall, without limiting its obligations or liabilities, put in place and maintain at its expense such insurance as will protect Contractor and Owner and its Consultants from claims and damages for personal injury, including death, and from claims for property damage which may arise from Contractor's or Subcontractor's operations under the Contract.

All insurance shall include the Owner as an additional insured with a cross liability clause and shall insure against liabilities arising out of or in any way connected with the Work, including two years' completed operations after Substantial Acceptance. The coverage shall include all extensions including Personal Injury, Owner's Protective Liability, Property Damage on Occurrence Basis, Broad Form Property Damage, Blasting Liability where specified in Schedule C - SPECIAL CONDITIONS, Contingent Employer's Liability, Blanket Contractual, and Employees as Additional Insured. Such insurance shall state that it is primary insurance and that any other insurance carried by Owner shall be specified excess and not contributing thereto.

Such insurance shall have limits not less than the minimum limits specified in Schedule C - SPECIAL CONDITIONS.

The insurance policy shall contain the following clause or one of the like effect:

"The insurance afforded by this policy shall apply, with respect to any liability, or alleged liability, of any one insured to any other insured, or to any employee of such other insured, as if separate policies had been issued to each insured.

It is hereby further agreed that the act or omission on the part of any insured hereunder shall not prejudice the interest of any other insured under this policy.

It is further understood and agreed that any liability insurance carried by Owner shall be considered excess of that provided by this policy notwithstanding the provision of any other insurance clause to the contrary."

## .2 Builders Risk Insurance

Contractor shall, at its expense, without limiting its obligations or liabilities, insure the Work and all articles, materials and supplies including Contractor's equipment and buildings and Owner-Furnished Material to the full value of such Work, articles, Material and supplies (such insurance to be in the joint names of Contractor and Owner, as their interests may appear, against all loss or damage from whatever cause arising (other than risks which may be uninsurable under the terms of a Builder's All Risk Policy) for which Contractor is responsible under the terms of the Contract and in such manner that Owner and Contractor and all Subcontractors are covered from the commencement of the Contract until Substantial Acceptance of the Work.

All yards that are or may be required for marshalling Material shall be specifically named in the Builder's All Risk Policy.

In addition, Contractor shall provide and pay for and cause Subcontractors to provide and pay for All Risks Insurance on Plant and Material while in transit by any means of

conveyance in an amount at least equal to the value of such Plant and Material. Such insurance shall be made subject to a waiver of subrogation against any other contractor, subcontractor or Owner.

- .3 The insurance specified shall be effected with an insurer licensed to transact business in the Province of Newfoundland and Labrador, and in terms acceptable to Owner.
- .4 Prior to commencement of the Work under the Contract, Contractor shall deposit with Owner a Certificate of Insurance on Owner's form completed and signed by an authorized representative of the Insurer which provides for the coverages specified under this Clause GC 43. By written Notice to Contractor the Owner shall accept or reject such Certificate within ten (10) days of receipt otherwise it shall be deemed accepted after said date.
- .5 All such insurance reflected in the Certificate of Insurance provided by Contractor under Clause GC 43.4 shall be maintained continuously until the date the Owner issues a letter of Substantial Acceptance, including the making good of Work or Material pursuant to Clause GC 20 Guarantees; except that the coverage of completed operations liability shall, in every event, be maintained as provided for in Clause GC 43.1.
- .6 All insurance policies shall contain a term to provide that the insurance shall not be cancelled or materially changed in any way without thirty (30) days notice, except in the event of non-payment when policy conditions dealing with termination will apply. Such Notice shall be sent by prepaid registered mail to the Owner.
- .7 In the event of any such cancellation, reduction, restriction, termination or change or lapse in any insurance, Contractor shall immediately replace such insurance. Failing immediate receipt of evidence of such replacement of insurance, Owner reserves the right to effect such insurance according to the terms of this Clause GC 43 and Contractor shall pay the premium in respect thereof. However, it is expressly provided that any action on the part of Owner in this respect shall in no way change or reduce Contractor's responsibilities and liabilities under the Contract.
- .8 Additional insurance coverages may be required as provided for in Schedule C – SPECIAL CONDITIONS.

**SCHEDULE C  
SPECIAL CONDITIONS**

**(This will become  
Schedule C to the  
Contract)**



**CONTRACT TITLE: Engineering Procurement and Construction for a 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station**

	<u>Page</u>
SC 1 Project Title and Site Location .....	2
SC 2 Scope of Contract .....	2
SC 3 Schedule .....	2
SC 4 Board, Lodgings and Transportation .....	3
SC 5 Construction Meetings .....	4
SC 6 Insurance .....	4
SC 7 Substantial and Final Acceptance .....	5
SC 8 Labour Relations .....	6
SC 9 Metrication .....	6
SC 10 Shipping, Unloading, Handling and Storage of Materials .....	6
SC 11 Protection of Persons and Property .....	7
SC 12 Environmental Protection.....	7
SC 13 Explosives and Blasting.....	19
SC 14 Procedures, Manuals and Other Documentation.....	19
SC 15 Construction Power.....	20
SC 16 Outages <sup>21</sup>	
SC 17 Disposal of Excavated Materials.....	21
SC 18 Owner-Furnished Materials.....	21
SC 19 Contractor's Tools and Equipment .....	21
SC 20 Owner's Tools and Equipment at Holyrood Generating Station .....	22
SC 21 Contractor's Safety Requirements at Holyrood Generating Station .....	22
SC 22 Asbestos Notification.....	23
SC 23 Aircraft <sup>23</sup>	
Appendix I: Asbestos Containing Materials - Contractor Notification & Acknowledgement Form .....	25

**SC 1 Project Title and Site Location**

1. The Project title is: Supply and Install 100 MW's (Nominal) of Combustion Turbine Generation.
2. The Project Site is located at the Holyrood Thermal Generating Station.

**SC 2 Scope of Contract**

1. The scope of the Contract is: Engineering Procurement and Construction for a 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station with the exception of the Owner-Furnished Material.
2. Except for Material specifically stated elsewhere in the Contract Documents as Owner-Furnished Material, the Work covered under the Contract comprises the supply of all labour, Plant and Material necessary to construct the Work identified and described in the Schedule E-SPECIFICATIONS, including but not limited to:

Engineering, Procurement, and Construction Services for:

- Combustion Turbine Generator Building
- Mechanical Balance of Plant
- Electrical Balance of Plant
- Civil/Structural Work; and
- Start-up Commissioning and operator training

3. Material and Plant which are not specifically mentioned in the Contract Documents but which are usual or necessary for the satisfactory completion of the Work shall be deemed to be included in the Contract and shall be provided by Contractor without extra charges unless expressly excluded from Contractor's scope of work under the Contract Documents or expressly required to be furnished by Owner under the Contract Documents.

**SC 3 Schedule**

1. The Work will take approximately 7 months to complete and Substantial Completion shall be completed no later than December 7, 2014. Notwithstanding the forgoing, in the event that the Contract is not executed by May 16, 2014 and the down payment is not made by that same date, the project schedule will extended day for day until the contract is executed and the payment is made.
2. Before commencing mobilization to Work Contractor shall, within ten (10) business days after notice of letter notifying an award of Contract or such other time as mutually agreed by the parties, submit for approval a Schedule showing proposed start and completion dates for the different components of the Work comprising, as a minimum, the requirements in Schedule A - TENDER SUBMISSION, Appendix VI, Construction Data, Work Schedule Bar Chart and the scheduled events listed in SPECIAL CONDITIONS, Appendix I Schedule of Events. Upon approval by Owner not later than ten (10) days following submission of such Schedule (unless expressly rejected no later than

said ten (10) day period), the work schedule shall become the Schedule against which Contractor's progress shall be measured.

3. Unless otherwise agreed by Owner, Contractor shall supply a detailed task based schedule in electronic format for all work. The schedule shall be produced using the following:
  - a. Electronic Format – Primavera (.xer) (preferred by Nalcor) or Microsoft Project (.mmp), latest release or compatible.
  - b. Task Guidelines:
    - i. Each tasks must be clearly defined
    - ii. Tasks shall be linked using predecessors and successors so that any change in schedule can be easily updated.
    - iii. Each task must have a clear start and finish date with resources identified. Establish tasks at a level for which the duration does not exceed frequency of progress meetings. (ex 2 weeks during design, 1 week during fabrication, 1 day during outage)
    - iv. Separate tasks whenever it changes hands. (i.e., prepare shop drawings and review shop drawings are separate tasks).
    - v. Tasks must be limited by working group (4 – 5 individuals)

#### **SC 4 Board, Lodgings and Transportation**

1. Contractor shall make all necessary arrangements to house, feed and transport its forces, at its expense, during execution of the Work unless the Schedule E - SPECIFICATIONS provide otherwise.
2. Where site is Churchill Falls, Owner will make suitable board and lodging available to Contractor's employees at no cost to Contractor. Except that where Contractor personnel do not return room keys upon departure from Site, a fee of \$100.00 per key will be deducted from the Contractor progress payments. Contractor shall advise Owner of its requirements prior to commencing Work so that proper arrangements can be made prior to Contractor's personnel coming to Churchill Falls. Owners' ability to provide lodging is limited and dependent on schedule, Owner may provide lodgings if required outside the approved construction schedule.
3. Contractor shall advise Owner on a weekly basis as to the number of Contractor's personnel at the Site. All living quarters will be provided with reasonable sanitary and washing facilities and failure of any personnel to avail themselves of same may be cause for removal from premises and Site.
4. Contractor shall not establish any camp or catering facilities at the Site.
5. Contractor shall, at its expense, transport all its required personnel to and from the Site. Contractor shall, also at its expense, provide Site transportation for all its required personnel.

#### **SC 5 Construction Meetings**

- .1 Unless otherwise authorized by Owner, Work shall not commence until a pre-construction meeting has been held between Owner and Contractor to discuss the Schedule, Work methods and Site

safety. The time and place for such a meeting shall be stipulated by Owner with reasonable advance written Notice to Contractor.

- .2 Site meetings shall occur unless the Schedule E – SPECIFICATIONS provide otherwise and shall be held at times prescribed by Owner (minimum once a month) with reasonable advance written Notice to Contractor, which will be determined after commencement of the Work. The Contractor shall organize job meetings and send out notices stating time and place to the Owner, to all Subcontractors and to other persons whose presence are required at the meetings. The Contractor shall take note of all persons attending these meetings and shall, within one (1) week after each job meeting, submit to the Owner, Subcontractors and others present, minutes of the meeting which must show any major decisions made and any instructions or information required.

**SC 6 Insurance**

- .1 Contractor shall provide, at its cost, insurances with limits not less than stated in this Clause 6. Upon award, as evidence of insurance, Insurer shall be required to provide a completed Certificate of Insurance, on Owner’s form located in Schedule A – Tender Submission, Appendix XI, Certificate of Insurance.
- .2 Contractor shall provide Commercial General Liability (CGL) Insurance which shall have a limit of not less than \$1 million for any one occurrence to cover property damage or loss, bodily injury and loss of life including Sudden and Accidental Pollution Liability. Owner has no liability and no coverage under its insurance for Contractor's equipment used in carrying out the Work.
- .3 Contractor shall provide Automobile Liability Insurance with a limit of not less than \$1 million combined for any one occurrence including personal injury, loss of life or property damage or loss.
- .4 In addition, Contractor shall provide All Risk Direct Damage Insurance in an amount not less than the sum of:
  - (a) the amount of the Tender based on estimated quantities
- .5 Contractor shall carry professional errors and omissions liability insurance in an amount not less than five million (\$5,000,000) dollars and shall ensure that each consultant who has a professional liability exposure and who is engaged by the Contractor in the performance of the SERVICES is covered against professional errors and omissions in an amount not less than five million (\$5,000,000) dollars. Such insurance shall be in effect for at least twelve (12) months following FINAL ACCEPTANCE. Contractor or its subcontractors shall be licensed to practice engineering in the province of Newfoundland and Labrador.
- .6 Additional insurances where required and minimum limits per accident or occurrence required for Work to be performed under this Specification are:
 

-	Forest Fire Fighting Expense (included under CGL) sublimit	-	\$ 250,000.00.
-	Environmental Impairment Liability	-	\$1,000,000.00.

## SC 7 Substantial and Final Acceptance

### SC 7 Substantial and Final Acceptance

- .1 Substantial Acceptance shall occur at such time as the Work is completed, except for Punchlist Items, so that the Equipment and related operating systems are ready for initial operation, adjustment and testing, in all such cases as may be necessary to permit the Facility to be started up, operated, adjusted and tested safely and without damage to the Facility, the Equipment or any other property and without injury to any person. Contractor shall apply to Owner for a letter of Substantial Acceptance. Upon receipt of such application, Owner will carry out an inspection of the Work within fifteen (15) days.
  - (a) If, upon such inspection, the Work is found to be satisfactory and Contractor has furnished all test reports and Data specified in the Contract Documents to be provided to Owner as a condition of Substantial Acceptance, and Plant is removed from the Site, Owner will within seven (7) days of carrying out the inspection, issue a letter of Substantial Acceptance dated effective as of the date of Contractor's letter of Substantial Acceptance; or
  - (b) If, upon such inspection the Work is not found to be satisfactory or Contractor has not furnished all test reports and Data, Owner will inform Contractor which items remain to be completed before such a letter of Substantial Acceptance can be issued.
- .2 The date of Substantial Acceptance is the date upon which Contractor furnishes to Owner its letter of Substantial Acceptance if the letter is accepted by Owner, or if rejected, then the date Contractor has corrected and completed its Work in the manner such that the conditions for Substantial Completion have been satisfied.
- .3 Final Acceptance shall occur at such time as all conditions for Substantial Acceptance have been satisfied, and all Work, other than related to warranty, is completed, including the commissioning, performance testing, training, Punchlist Items, and site clean up activities. Contractor shall apply to Owner for a letter of Final Acceptance. Upon receipt of such application, Owner will carry out an inspection of the Work within fifteen (15) days.
  - (c) If, upon such inspection, Contractor has satisfied all conditions necessary for Final Acceptance, Owner will within seven (7) days of carrying out the inspection, issue a letter of Final Acceptance dated effective as of the date of Contractor's letter of Final Acceptance; or
  - (d) If, upon such inspection, Contractor has satisfied all conditions necessary for Final Acceptance, Owner will inform Contractor which items remain to be completed before such a letter of Final Acceptance can be issued.
- .4 The date of Final Acceptance is the date upon which Contractor furnishes to Owner its letter of Final Acceptance if the letter is accepted by Owner, or if rejected, then the date Contractor has corrected and completed the items that remain to be completed in the manner such that the conditions for Substantial Completion have been satisfied.

## SC 8 Labour Relations

- .1 Contractor shall keep itself and Subcontractors fully informed of all Laws affecting those employed on the Work and shall pay rates of wages and observe working conditions which are in accordance with applicable Laws and acceptable labour practices for the type of work being performed. Owner shall have the right to review any such considerations before Contractor commences Work under the Contract and at any time during the period of the Work to ensure that Contractor's and Subcontractors' obligations with respect to such labour standards are being met.
- .2 Contractor and Subcontractors, in carrying out the Work, shall be subject to collective agreements with unions recognized as having jurisdiction for the type of Work to be performed. Owner shall, at all times during the life of the Contract, have the right to confirm that Contractor is meeting its obligations.

**SC 9 Metrication**

- .1 The International System of Weights and Measures (SI Metric System) shall be used in measuring the Work. Where manufacturers' products are produced in imperial sizes, substitutions shall be made to the nearest metric size. Contractor's engineer shall manage the interface connections between metric and standard interfaces.
- .2 SI Units shall be those referred to in the National Building Code - latest edition and to publications CAN3-Z234.1-79 and CAN3-Z234.2-76 issued by the Canadian Standards Association, as amended.
- .3 For the purposes of this Contract, the abbreviations and symbols that will apply shall be in accordance with the Metric Bulletin SI-6 published by Public Works Canada.

**SC 10 Shipping, Unloading, Handling and Storage of Materials**

**.1 Shipping**

- (a) Other than Owner-Furnished Plant and Material or the Major Components of the Facility including the Gas Turbine and Generator Packages, Transformer and Auxiliary Equipment, Contractor shall be responsible for all costs associated with shipping Plant and Material, including costs for insurance coverage for such Material in transit until delivered and unloaded at the Site.
- (b) Contractor, on request, shall supply Owner with the following information relating to such shipments:
  - i. estimated date of dispatch;
  - ii. summary of the contents of the shipment;
  - iii. method of transport; and
  - iv. estimated time of arrival at the Site.

**.2 Unloading and Handling**

Except as provided elsewhere, Contractor shall provide all necessary Material handling, transportation, lifting and storage services until incorporation of such Material and the Major

Components of the Facility, including the Gas Turbine and Generator Packages, Transformer and Auxiliary Equipment, in the Work.

**.3 Storage**

Contractor shall coordinate with and receive Owner's prior approval for its storage area requirements and, if required for the Work, provide for erections thereon at its own expense.

**SC 11 Protection of Persons and Property**

- .1 Work to be performed under the Contract may be performed in close proximity to existing energized facilities, which shall be in operation for the duration of the Contract. Contractor prior to commencement of work shall be solely responsible for the pre-investigation and identification of all potential hazards at the Site and shall take all necessary precautions and adequately instruct all its personnel concerning necessary precautions to be observed.
- .2 Contractor and its Subcontractors, agents and employees shall not enter any areas near energized equipment and shall not perform work on energized equipment without prior approval of Owner
- .3 An Owner's Representative shall be available to advise and instruct Contractor regarding the nature of the hazards that may be encountered. Failure of Owner's Representative to inform Contractor of hazards known to Owner at the work site shall not relieve Contractor of its responsibilities and obligations.
- .4 Contractor shall be solely responsible for providing adequate protective barriers, fencing, signs and other means of identifying the hazard and protecting persons at the WORK SITE concerning hazards and ensuring safe execution of WORK. Contractor shall use industry standard plastic barrier tape that is yellow in colour with black stripes when securing the area of the hazard. Barriers shall be identified with a sign which clearly states Contractor's name, date placed and the reason for the barrier.
- .5 Contractor shall take all measures which it deems necessary or which are required by Owner, or by Law, or by the Contract Documents to maintain the Site continuously safe to life, limb and property.
- .6 Contractor shall be solely responsible for any damage caused to structures, services, or property while in the execution of the Work and shall make good any such damage except repair work on energized equipment which may be carried out by Owner, at its option, and at Contractor's expense provided that the Contractor is provided with the first option to complete that repair work.

**SC 12 Environmental Protection**

**.1 Owners Policy:**

It is Owner's policy to protect the environment of the areas where the Work is located. Owner uses an Environmental Management System (EMS) registered to the ISO 14001 Standard. Owner has an environmental policy that commits to compliance with legal and other requirements, prevention of pollution and continual improvement. Contractor must be aware of potential environmental

impacts of the Work provided. Contractor shall protect the environment of the areas where the Work is located. To ensure protection of the environment, the Work at all times shall be subject to inspection by Owner and relevant Authorities. Normally, all inspections other than by Owner shall be arranged in advance through Owner. Any specific matters relating to environmental protection shall be dealt with between Contractor and Owner.

## **.2 Owners Responsibilities**

Except where noted, Owner shall obtain and provide to Contractor copies of all permits and authorizations required for this work. Contractor shall ensure that all its employees and or sub-contractors are aware of the terms and conditions of these permits, and are in compliance with the conditions of all permits and authorizations.

## **.3 Contractors Responsibilities**

- (a) Contractor shall ensure that its employees and agents and Subcontractors and their employees and agents comply with all applicable environmental Laws, Owner's policy, and such other rules and regulations as Owner may establish. The Contractor is required to promptly report all environmental incidents to the Owner.
- (b) Prior to mobilization, all Contractor or Subcontractor personnel shall attend a safety and environmental awareness session at a site and location to be determined by Owner. Owner will provide information regarding its Corporate ISO 14001 Environmental Management System, site environmental sensitivities and conditions of environmental approvals acquired, and site safety requirements

## **.4 Environmental Monitor**

Owner shall monitor the work site on a part time or full time basis to ensure compliance with environmental permits and authorizations, and to ensure work performed by the Contractor in a manner that is environmentally acceptable to Owner. Any concerns or acts of non - compliance shall immediately be reported to Owners on site supervisor. Contractor shall ensure any such concerns are addressed in a timely manner that is acceptable to Owner. Any major acts of non-compliance shall lead to delays in production until such time that issues are rectified by Contractor to the satisfaction of Owner. In the event of such a delay or work stoppage, Contractor shall not resume any work activity until directed by Owner.

## **.5 Contractors and Sub Contractors Personnel**

- (a) All Laws pertaining to fish and wildlife (e.g., feeding harassment of wildlife), forest fires, forest travel, smoking and littering shall be complied with by Contractor and Subcontractors and their employees and agents.
- (b) Any contravention of environmental requirements, by Contractor and Subcontractors and their employees and agents, accidental or otherwise, shall be reported to Owner without delay. Contractor shall be responsible for all or any clean-up, reclamation and restorative measures as may be directed by Owner or such Authority.

## **.6 Storage, Handling and Transfer of Fuels and Other Hazardous Material.**

- (a) Contractor and Subcontractors and their employees and agents shall take all necessary precautions to prevent and minimize the spillage, misplacement, or loss of fuels and other hazardous material.
- (b) All storage tank systems shall be registered under and in compliance with the Storage and Handling of Gasoline and Associated Products Regulations, as amended, before commencing operation. Registration does not apply to storage tank systems of a capacity less than 2500 litres that are connected to a heating appliance. Contractor shall supply verification of storage tank registration to Owner.
- (c) Contractor shall ensure that fuels and other hazardous materials are handled only by persons who are trained and qualified in handling these materials in accordance with manufacturers' instructions and government laws and regulations.
- (d) Oils, greases, gasoline, diesel or other fuels shall be stored at least 100 m from any surface water unless otherwise approved by Owner.
- (e) Handling and fuelling procedures shall be such that contamination of ground or water shall not occur.
- (f) Any above-ground fuel container with the exception of those exempted by Law, shall be positioned over an impervious mat and shall be surrounded by an impervious dyke of sufficient height (minimum height 0.6 m) to contain not less than 110% of the capacity of the tank. When more than one tank is enclosed in the dyke area, the dyke shall be of sufficient height to contain not less than 110% of the capacity of the largest tank or 100% of the capacity of the largest tank plus 10% of the aggregate capacity of all the other tanks, whichever is greater.
- (g) All dykes of earthwork construction shall have a flat top not less than 0.6 m wide, and be constructed and maintained to be liquid-tight to a permeability of 25 litres per square metre per day. The distance between a storage tank shell and the centreline of a dyke shall be at least one-half (0.5) the tank height.
- (h) Fuel storage areas and non-portable transfer lines shall be clearly marked or barricaded to ensure that they are not damaged by moving vehicles. The markers shall be visible under all weather conditions.
- (i) Waste oils and lubricants shall be retained in a tank or closed container, and disposed of, subject to Owner's approval, in a manner which does not cause pollution
- (j) Storage tank systems shall be inspected on a regular basis as required by Law. This involves, but is not limited to, gauging or dipping, reconciliation of records and the proper maintenance of reconciliation records for a period of two years.
- (k) Contractor and Subcontractors shall, before transporting or positioning fuel or oil, present to Owner a copy of the fuel and oil spill contingency plan, as amended, and which is acceptable to Owner.

- i. Contractor and Subcontractors shall, shall abide by the following measures in the event of the detection of a spill or leak of fuel, oil or other hazardous material in excess of 70 litres, a spill or leak, regardless of quantity, that has the potential to contaminate nearby property, enter a body of water or sewer; or a spill or leak of PCB material or potential thereof:
  - (1) make every effort to stop leakage and contain contaminant flow;
  - (2) immediately upon detection, report spill location and size to the Canadian Coast Guard and to Owner; follow up with a full written report containing information on the cause of the spill, remedial action taken, damage or contamination estimate, and any further action to be taken;
  - (3) remove contaminant from spill site by sorbent, pumping, burning, or whatever method is appropriate and acceptable to Owner, and then dispose of contaminated debris at an approved disposal site; and
  - (4) take all necessary action to ensure that the incident does not recur.
- ii. Contractor shall apply the following criteria in reaching decisions on containment and clean-up procedures:
  - (1) minimize danger to persons;
  - (2) minimize pollution to watercourses;
  - (3) minimize the area affected by a spill; and
  - (4) minimize the degree of disturbance to the area and watercourses during clean-up.
- (l) Smoking shall be prohibited within 10 m of a fuel storage area.
- (m) Fuelling or servicing of mobile equipment shall not be allowed within 30 m of a watercourse except within a refuelling site as approved by Owner, i.e., where conditions will allow for containment of accidentally spilled fuels.
- (n) Contractor shall, within thirty (30) days of known abandonment of a storage tank system, empty the system of all products, remove the tank and associated piping from the ground, remove any contaminated soil, clean the area and restore the Site to the satisfaction of Owner.
- (o) Contractor shall dispose of any soil contaminated by leaks of oil or grease from equipment in a manner approved by Owner

#### **.7 Hazardous or Controlled Products**

- (a) Contractor shall not use or deliver a hazardous or controlled product, as defined by the relevant Laws, for the purposes of this Contract without the prior approval of Owner except as

contemplated in carrying out the Work.

- (b) Contractor shall ensure that a hazardous or controlled product is not used, stored or handled for the purposes of the Contract unless all of the requirements of the relevant laws and regulations in respect of labels, identifiers, material safety data sheets and worker education are complied with.
- (c) Contractor shall ensure that all persons who work with a hazardous or controlled product or work in proximity to a hazardous or controlled product are informed about all hazard information received from the supplier of the said product as well as any other hazard information of which Contractor is aware of, or ought to be aware of, concerning the use, storage and handling of the hazardous or controlled product.
- (d) Contractor shall ensure that, prior to delivery of the hazardous or controlled product to the Site, it is labelled with the supplier's label or with a label in accordance with requirements of all applicable Laws. Contractor shall provide Owner with all such information prior to delivery of the hazardous or controlled product to the Site.

#### **.8 Waste Management**

- (a) Contractor shall collect and dispose of all waste produced by its employees and agents and those of Subcontractors in a manner approved by Owner removed from the Site wherever possible and disposed of in a waste disposal site approved by the relevant Authority. The permission of the operator of the waste disposal site shall be obtained for disposal at an existing waste disposal site. No waste material shall be deposited in any watercourse. Specific conditions apply to the disposal of any treated timber or wood products.

#### **.9 Marshalling and Laydown Areas**

- (a) Equipment and material storage yards shall be located at least 100 metres from any water body or wetland, unless there are no fuel concerns then 30 metres is the required buffer from a water body. Equipment and material storage yards shall be located at least 30 m from any watercourse. The location of marshalling yards shall be authorized by Owner.
- (b) A Permit to occupy may be required for marshaling and laydown areas. Owner project supervisors shall make arrangements for use of private pits or other property to be used for marshaling of materials and equipment.
- (c) Concerns relate to the type and level of activity, equipment usage, effluent runoff, waste management, fuel handling and storage of hazardous materials. On site Owners Representative shall authorize the location of marshaling yards. Previously disturbed areas are the preferred location for marshaling yards and lay down areas. Any site must be located as to minimize traffic hazards or barriers.

#### **.10 Municipalities**

Municipalities are considered sensitive areas. Contractor shall acquire approval from the Municipal

Council or designated representative prior to commencing work within a Municipal boundary.

**.11 Work on Private Property**

- (a) The following guidelines are to be followed when crews are required to carry out maintenance or other work on private property. Of particular concern is the replacement or installation of service poles on residential property. The main issues relating to private property are:
  - i. Location of water and sewer lines;
  - ii. Location of sewage distribution systems;
  - iii. Domestic water wells;
  - iv. Private Development;
  - v. \*Phone lines. (*\*Although not an environmental concern, there is potential for interruption in service to the customer*)
  
- (b) The on site representative for the Contractor is responsible for contacting private property owners prior to any intrusion on that property. The following guidelines apply:
  - i. There is no intrusion on private property without permission of the owner;
  - ii. Discuss any concerns such as gardens, fencing, drains, etc. with the owner;
  - iii. Ensure the location of water or sewer lines, or septic distribution system is known;
  - iv. Ensure all industrial or domestic waste is removed and properly disposed of;
  - v. Ensure the property owner is satisfied with all clean-up or rehabilitation.

**.12 Use of Treated Timber on Private Property**

- (a) The following procedures are followed for the installation of treated utility poles and anchors on private property:
  - i. Avoid locating new poles near domestic drinking water wells;
  - ii. Install only untreated poles within 10 metres of any drinking well;
  - iii. Install only CCA poles when 10 to 30 metres from any drinking well;
  - iv. Install Penta poles only when more than 30 metres from any drinking well.
  
- (b) The use of treated wood for use for decks, playground equipment or park benches should be avoided. Issues have been raised about the safety of CCA treated wood for such applications and there are some restrictions to its use in North America. At present, CCA treated poles are accepted as posing minimal environmental and human health risk within Newfoundland and Labrador in freshwater and marine environments. Policies for use of treated wood of the provincial government relate to work in protected watershed areas and near domestic wells. CCA is an accepted wood treatment for industrial uses such as wood poles.

**.13 Protected Water Supply Areas**

Not Applicable

**.14 Use of Treated Utility Poles in a Protected Water Supply Area**

Not Applicable

**.15 Activities in or Near water and Erosion Control**

- (a) Construction activity in or near water is regulated as per Section 48 of the Water Resources Act SNL 2002 c.14-0, Sections 34, 35 and 36 of the Fisheries Act and under the Navigable Waters Protection Act. Permits are required for construction (earthwork) that is located within 15 meters of the high water mark of a water body and any work with the potential to alter, disrupt, or destroy fish habitat or input deleterious substances into fish bearing waters. Owner will provide Contractor with copies of authorizations received for any work within 15 meters of a water body.
- (b) Work shall be performed in such a way as to ensure that deleterious substances including, but not limited to, materials such as sediment, fuel, and oil do not enter water bodies.
- (c) Contractor is responsible for implementing appropriate erosion control measures to mitigate areas where terrain stabilization measures are required to protect aquatic habitat.
- (d) Erosion control measures may include, but are not limited to:
  - i. spreading a thin layer of brush or slash over disturbed areas;
  - ii. the installation of baffles or sediment traps at appropriate intervals within the area of disturbance;
  - iii. the installation of drainage collectors across the disturbed areas to channel drainage into vegetated areas;
  - iv. the re-routing of drainage around the disturbance and redirecting it into its natural course; and
  - v. the stabilization of exposed soils with appropriate rip-rap, filter fabric or any other erosion control technique deemed appropriate.
- (e) Plans for sediment control shall be submitted to Owner for approval five (5) normal working days in advance of the need to proceed.
- (f) Water should be pumped from structure excavations into adjacent vegetated areas allowing it to be filtered prior to entering a water body. If this is not practical, silt-laden water shall be mitigated in a manner approved by Owner.
- (g) A combination of hay bails and filter fabric is often used as mitigation when working near water. Mitigation is determined by the level of activity and level of disturbance anticipated based on ground conditions at the site. Settling pools or basins may also be used to contain runoff or as a holding area for effluent from excavations. The size and design is dependent on ground conditions and volume of effluent to be managed. The use of rock check dams is sometimes used in drainage ditches or channels where there is potential for sediment-laden water to enter a nearby watercourse. Cross ditching is another effective method to control runoff and drainage in work areas. Contractor shall provide Owner with a mitigation plan to address site environmental sensitivities a minimum of 5 normal working days in advance of the need to commence work.

- (h) Contractor shall ensure any installed mitigation is maintained in manner that serves the purpose for which it was installed.

**.16 Stream Crossings**

Not Applicable

**.17 Work on Bogs and Wetlands**

Not Applicable

**.18 Wildlife Protection**

- (a) Wildlife refers to all plant and animal life, introduced or native, aquatic or terrestrial, in Newfoundland and Labrador. Of primary concern are disturbance of critical habitat, recovery habitat and behavioral disturbance during critical life periods (e.g. nesting). Displacement of species due to construction activities (e.g. blasting) or encounters with construction equipment and personnel is also a concern. Special consideration and permits may be required for projects located in areas designated as critical habitats or where species may be designated as endangered, threatened or vulnerable. Examples are limestone barrens habitats, caribou calving and post calving areas, wintering grounds, moose yards, migratory bird nesting and staging areas, and ecological reserves.
- (b) Owner shall be advised immediately of the discovery of any nesting birds other wildlife of concern that may be discovered during this contract. Work plans may be altered if ground-nesting species are discovered in the proposed work area. Any harassment of wildlife during this work shall not be tolerated.
- (c) Additional protection measures apply to work near any SARA listed species or habitat, nesting migratory birds or raptors, beavers or their dams and lodges, or other protected wilderness or ecological reserves. The following procedures must be taken for any work around an active raptor nest found on any transmission or distribution structure or within 800 metres of the right-of-way of structures or proposed structure locations. For the purpose of this document, active nests are defined as those that contain adults, eggs, or chicks during the normal nesting period (June 1 – August 15). ESD shall be notified of any work activity scheduled within 800 metres of an active nest. An inactive or abandoned nest will be determined by ESD based on the physical condition of the nest itself.
- (d) The following restrictions apply for work within near an active raptor nest:
  - i. Only essential vehicular activity, including helicopter flights, shall be permitted in order to minimize disturbance to wildlife;
  - ii. Supervisors shall ensure that all activity within 200 metres of an active Raptor nest is well planned prior to working in the area. Work shall not be undertaken in these areas between June 1 and August 15 without an ESD representative on site or specific guidance from the same;
  - iii. Activity at the work sites shall be monitored by the supervisor or the ESD representative,

- usually the on site Environmental Coordinator. Where work activity creates a disturbance at the nest site for a period of two (2) hours (e.g. adults leave the nest), crews shall cease work and move a minimum of 200 metres from the nest. Work shall not resume until activity at the nest has returned to normal for a period of two (2) hours. If blasting is required in such an area, the Supervisor shall provide ESD with a detailed work plan for activities in the area;
- iv. Ensure only machinery and equipment absolutely required for use is in operation. When not required for use, all equipment and machinery shall be shut down;
  - v. Crews shall not take lunch breaks within 200 metres of an active Raptor nest;
  - vi. Crews shall not establish a permanent or temporary camp within 800 metres of an active raptor nest.
  - vii. Crews shall follow conditions of any specific permits for the activity.

If a crew encounters an active Osprey or Bald Eagle nest, or nest of any other Raptor species within or near the work site or travel route that is not already known, they shall not disturb the nest and shall immediately inform ESD. Work shall not proceed within 800 metres of such a nest without written permission of ESD.

In some cases it is required to remove a nest from a structure due to potential harm to the birds from electrocution or the creation of a hazard to service reliability. Work crews should notify ESD immediately and ESD will arrange to have the nest removed and relocated in a manner that is acceptable to the Provincial Wildlife Division.

#### **.19 Work on Federal Lands**

Not Applicable

#### **.20 Protection of Historic Resources**

Not Applicable

#### **.21 Access and Travel**

- (a) Access and travel routes are required for all aspects of construction and maintenance of power lines and other Nalcor facilities. Use of access trails in the province is regulated under the Motorized Snow Vehicles and All-Terrain Vehicles Act RSNL 1990 cM20. A Permit to Occupy is required to establish an ATV.
- (b) ATV's are permitted in areas underlain with forested mineral soils, on trails that are constructed under the Lands Act, and any other forest access or abandoned road. Access to the work site shall be by existing public roads, approved access roads or approved access trails. Approved access trails shall be used and maintained in accordance with Owner's Policy for such trails and marked in a standard agreed upon manner. Any required mitigation shall be in place prior to use.
- (c) Contractor shall make arrangements for the use of private roads and for provision of any additional access it requires, subject to approval from the Owner and relevant governmental agencies. Details on condition of private roads should be documented prior to and following any usage by Owner and Contractor. The Contractor's site supervisor shall ensure the Owner is satisfied with the condition of the road prior to departure. Any disputes shall be reported to

Owner immediately. To obtain approval for a new travel route, the Contractor shall bring such proposed route to the attention of Owner a minimum of five (5) normal working days, if possible, in advance of any anticipated activity in the area. Owner will ensure that the proposed route is inspected to determine if it is environmentally acceptable. The route will be marked in an agreed upon manner, such as flagging with surveyor's tape, in advance of construction.

- (d) Owner may reject the use of the proposed access route if there is an alternative existing access within a reasonable distance and cost or if there is a potential alternative access route that is less environmentally sensitive within a reasonable distance and cost. Environmental sensitivity in this instance includes water bodies, bogs, areas of potential slope instability, erodible soils and areas of high aesthetic value. Owner retains the right to restrict activity on any access route, if unacceptable terrain disturbance should occur that Contractor cannot rectify in a timely manner after such use. Upgrade work may be required if deemed necessary by Owner.
- (e) If travel along roadside ditches and roadsides is required, prior approval of Owner shall be obtained. The following conditions shall apply to such travel:
  - i. travel shall be restricted to ditches where ever possible;
  - ii. number of passes will be minimized;
  - iii. traffic control shall be required where necessary (flag persons and signage);
  - iv. tracked vehicles shall not be permitted on asphalt surfaces without adequate precautions to protect the surface; and
  - v. overnight parking shall be off the road.

## **.22 Borrow Areas**

- (a) A permit to borrow or quarry is not required when working within an existing transmission or distribution line right of way in the province of Newfoundland and Labrador. It is required when backfill or borrow material is sought outside of this corridor. To avoid unnecessary delays and costs, it is recommended that a blanket quarry permit be obtained for a 100 to 500 metre wide corridor along each side of the right-of-way for any major upgrade or new construction.
  - i. borrow areas shall not be located within 50 metres from any water body or watercourse except with the written permission of Owner;
  - ii. borrow areas shall not be located within 50 metres from any roadway except with the written permission of ESD; and
  - iii. borrow areas shall not be located within 15 metres from private property unless prior written consent of the owner of the private property is obtained.
  - iv. borrow areas shall not be located within 300 metres of any residential development without the permission of the minister in writing.
  - v. borrow areas shall not be located within 90 metres of the centerline of protected road zone areas.
  - vi. permit holder(s) shall leave tree screens where they exist between workings and adjacent roads, highways or other land uses or earthen berms shall be constructed to screen the operation.
- (b) Backfill material required for transmission and distribution line construction shall be obtained in the following priority of sources:

- i. excavated material which can be used as backfill and is excavated solely within the cleared right-of-way and is available within a 25 metre radius of the centre point of excavation for a tower foundation or anchor;
- ii. borrow material obtained from sources solely within the right-of-way but outside a 25 metre radius of the center point of the excavation; and
- iii. quarry or borrow material from approved areas outside the right-of-way. Work crews shall develop quarry and borrow areas in the following sequence:
- iv. remove organic layer and topsoil and preserve separate from mineral soil;
- v. excavate pit;
- vi. replace unused excavated material;
- vii. replace topsoil and organic layer; and
- viii. grade area to even grades.

### **.23 Equipment Repairs and Maintenance**

Repairs and maintenance of equipment is the responsibility of Contractor. Any field operations shall conduct repairs a minimum of 100 meters from any water course or wetlands, unless otherwise approved or in the event of an emergency repair. All debris, waste oils, filters, grease cartridges and replaced parts shall be collected and disposed of in a manner that is acceptable to the Minister of Environment. Equipment must be in state of good repair for any fording activities, work near water or wetlands, or within any protected water supply area.

### **.24 Species at Risk (SARA Listed Species)**

- (a) Habitats and individual plants of rare or endangered plants species are protected under provincial and federal legislation. Work in these areas usually requires an assessment of all travel routes and structure locations for the presence of species that have rare or endangered status. Hydro has undertaken a number of surveys of limestone barrens habitat on the Great Northern peninsula and these reports are available on the corporate documents database.
- (b) Timing of construction activity in relation to the life cycle of these species is critical. Considerable planning is required for work in sensitive areas as stated above. There are specific assessments or studies to be undertaken prior to approval being given. Hydro has produced these reports as to the work involved, locations and type of species affected, especially on the Northern Peninsula. This can be a time consuming process for some projects and therefore details of work proposed in these areas should be forwarded to ESD early in the planning process to avoid unnecessary delays. Specific details on legislation, regulations, procedures and mitigation for work in such areas are identified in the next two sections of this EPP and other associated documents.

### **.25 Provincial and Private Parks**

Areas of high aesthetic and recreational value to the public are often contained within the boundary of provincial and private parks. This includes the Newfoundland Trailway Provincial Park (Trailway) along the abandoned Canadian National railbed. Permission is required from the Parks and Natural Areas Division of the Department of Environment and Conservation for work activities in provincial parks and the use of the Trailway for access to transmission and distribution lines. Permission of private park owners is required for work in such areas (see Section 2.1 Private

Property).

#### **.26 Forest Fire Protection**

- (a) Contractor and Subcontractors shall obtain necessary permits and shall comply with the all relevant laws for the protection of forests. Debris shall not be burned at Site without the Owner's written approval.
- (b) Contractor and Subcontractors shall take all precautions necessary to prevent fire hazards when working at the Site and shall keep the Site free of all flammable waste. Contractor and Subcontractors shall have available, in proper operating condition, sufficient fire fighting equipment, as recommended by the relevant Authority, to suit its labour force and Plant. Such equipment shall comply with the standards of, and have approvals of, Underwriters Laboratories of Canada Limited and shall be maintained in accordance with National Fire Protection Association Codes.
- (c) Contractor and Subcontractors shall ensure their personnel are trained in the use of fire protection equipment and shall employ Plant and personnel to fight fires are directed by the Owner.

#### **.27 Blasting Near Water**

Not Applicable

#### **.28 Brush Clearing and the Migratory Birds Convention Act**

Contractor shall comply with the *Migratory Birds Convention Act, 1994*, and *Migratory Birds Regulations*, which prohibit the disturbance or destruction of nests and eggs of migratory birds, during the course of the work. Throughout the migratory bird breeding season, May 1 - July 31, the HYDRO ENV-SO P-51 - Vegetation Control Activities and Active Bird Nest Management, shall be followed. Contractor shall assess the work area for the presence of active nests containing birds and/or eggs prior to commencing work. All work sites must be assessed. If an active nest is discovered, a minimum 5m buffer shall be applied and adhered to. Work in the vicinity of the nest is to be minimized and the area is to be vacated directly upon completion of work. The Nalcor Bird Nest Assessment Form shall be completed for each pre-work assessment to document the findings. The completed forms shall be submitted to Owner on a regular basis. Contractor must have direction from Owner prior to removing a bird nest buffer and commencing work.

#### **.29 Rehabilitation**

Contractor shall be responsible for rehabilitation work identified in areas; where environmental disturbance or damage was determined to be excessive for the required work activities, not identified in Contract Documents or reasonably required for use to complete the Contract requirements and where work was undertaken without prior approval of Owner. Rehabilitation items shall be listed with any other deficiency, engineering or mechanical and Final Acceptance will not be complete until all deficiencies are addressed to the satisfaction of the Owner.

Rehabilitation on private property shall be as agreed between Contractor and property owner and is the responsibility of the Contractor to complete to property owners and Owner's satisfaction.

**SC 13 Explosives and Blasting**

NOT APPLICABLE

**SC 14 Procedures, Manuals and Other Documentation**

- .1 In accordance with the dates indicated on the Schedule, Contractor shall submit to Owner for review detailed Procedures, Manuals and other documentation.
- .2 All such documentation shall include erection, commissioning and testing procedures (factory and Site), software, operation and maintenance manuals and all other documentation required for the safe and efficient operation, maintenance and repair of all equipment and systems supplied under the Contract.
- .3 Contractor shall clearly mark documentation submitted to Owner for review as follows:
  - (a) Name of Owner
  - (b) Name of Project
  - (c) Title clearly indicating the content
  - (d) revision number and date of revision
- .4 Contractor shall not change documentation after issuance or acceptance by Owner without the revision number being changed. Documentation that does not have the same revision number shall be considered different.
- .5 Contractor shall not use any documentation bearing reference to the Project or Owner for any other purpose without the prior written consent of Owner.
- .6 Documentation prepared by or on behalf of Contractor for use in the Work shall be subject to acceptance by Owner.
- .7 The process for the review of documentation shall be as outlined in Clause SP 8 – Drawings.
- .8 Unless otherwise agreed by Owner, Contractor and Owner shall supply documentation in electronic format. Documentation shall be produced using the following formats:
  - (a) Manuals and other written text – Microsoft Word, latest release, or compatible
  - (b) Spreadsheets – Microsoft Excel, latest release, or compatible
  - (c) Manufacturer’s catalogue information – Microsoft Word, or Adobe Acrobat, latest release, or compatible
- .9 Documentation shall become the exclusive property of Owner, who shall be free to make any use in connection with the construction, operation and/or maintenance and repair of the Facility which in the opinion of Owner is reasonable and required in Owner’s interest.
- .10 During installation Contractor shall maintain a complete set of the latest revision of all reviewed

documentation at Site which shall be continuously updated during the execution of the Work.

- .11 Operating and Maintenance manuals shall be fully detailed and directly relate to equipment supplied by Contractor. Generalized manuals shall not be acceptable. Following review by Owner, Contractor shall provide four (4) paper copies and one (1) electronic copy to Owner.
- .12 Operating and Maintenance Manuals shall include the following:
  - (a) details of the mass of all major components of the Work;
  - (b) all pertinent bulletins and instruction manuals prepared by the various manufacturers of component parts of the Work. Manufacturers' bulletins shall be suitably annotated to clearly indicate those items which form a part of the complete assembly;
  - (c) assembly adjustments and design clearances;
  - (d) lubricating requirements, including a list of recommended lubricants and operating and maintenance bulletins for all components of the Work;
  - (e) a complete index list of all Contractor's Drawings and a list of all assembly bulletins and Drawings prepared by the manufacturers of components of the Work.
  - (f) assembly drawings of all components
  - (g) circuit diagrams
  - (h) process flow sheets
  - (i) computer software
  - (j) component lists
  - (k) performance data and test certificates
  - (l) assembly, dismantling, maintenance and diagnostic procedures
  - (m) parts and special tools lists
  - (n) operating procedures and instructions
  - (o) recommended preventative maintenance schedules
  - (p) special handling procedures

#### **SC 15 Construction Power**

- .1 Contractor is responsible to determine what power is available to the Contractor on the Site.
- .2 Contractor shall obtain Owner's approval of, and shall provide and maintain, at its cost, all necessary distribution facilities from the point of supply where power is available on the Site.
- .3 Owner shall be responsible for any failure to maintain continuity of service if such service is to be provided by or on behalf of Owner. Contractor will install its own panels and Owner shall back-feed and connect electrical supply to the panels.
- .4 Owner has existing energized facilities at the Site, and construction power at 115V single phase 60 Hz 20 amp shall be made available to Contractor from a point of supply within or adjacent to those facilities with energy provide in connection with provision of the Work at no cost to Contractor.

#### **SC 16 Outages and Grid Coordination**

- .1 Contractor shall give Owner seven (7) days notice, if possible under the constraints of the Schedule,

of all requirements for power outages required for performance of the Work. Such power outages shall be subject to the approval of Owner. Contractor shall keep outage time to a minimum. Coordination will be required between the Contractor and the Energy Control Centre of Hydro.

- .2 Owner shall be responsible at all times for all matters related to and shall arrange for the grid access, dispatch and export of electrical energy from the Facility.

#### **SC 17 Disposal of Excavated Materials**

- .1 Owner reserves the right to order the utilization of any suitable materials from the excavation for structures for use or re-use on any portion of the Work or for use on Owner's private property at no extra cost.
- .2 Excess excavated materials and all other unsuitable material shall be disposed of outside Owner's private property. Contractor shall locate disposal sites, obtain necessary permits and approvals for their use and for transportation and dumping such materials, and pay all fees involved.
- .3 Contractor shall ensure that transportation and disposal of any material is undertaken in full compliance with all laws pertaining to environment, hazardous waste, and waste disposal. Contractor shall provide Owner with copies of all documentation related to compliance with applicable waste handling legislation including, but not limited to, a copy of a Certificate of Approval from the authorities authorizing the Contractor to operate a waste management system within Newfoundland and Labrador.
- .4 Where appropriate, Owner will provide Contractor with a manifest form as described in the Interprovincial Movement of Hazardous Waste Regulations. Part A of the manifest form will be completed and signed by Owner for each consignment of waste and the manifest form will then be provided to Contractor, who shall:
  - (a) Complete and sign Part B of the manifest form;
  - (b) Ensure that Part C of the manifest form is completed and signed by the owner of the waste disposal facility upon receipt of the waste and;
  - (c) Provide a copy of the completed and signed manifest form to Owner within two (2) days after depositing the waste with the waste disposal facility.

#### **SC 18 Owner-Furnished Materials**

NOT APPLICABLE

#### **SC 19 Contractor's Tools and Equipment**

- .1 All Contractors Plant, including tools, scaffolding, ladders, fire extinguishers and safety equipment may be inspected by Owner's representative prior to or during performance of the Work. Equipment which is not up to standard shall be immediately removed or replaced.

- .2 Owner's inspections shall not release Contractor from its duty to ensure safety at the Site.
- .3 All Contractor's tools and electrical equipment will be inspected by Owner's electricians and tagged by Owner's security forces when approved for use at the Site. Electrical tools and equipment shall be inspected every time they are brought on Site. Tags shall be surrendered to Owner's security forces each time the tools and equipment to which they are attached are removed from Site.

**SC 20 Owner's Tools and Equipment at Holyrood Generating Station**

- .1 Contractor's tools and portable equipment are labelled with the permanent and indelible "ION-II" security labelling and detection system. Owner's tools and portable equipment shall not be lent to Contractor.

**SC 21 Contractor's Safety Requirements at Holyrood Generating Station**

**.1 Orientation Meeting**

Prior to commencement of Work, all Contractor's personnel working at Work Site shall attend an orientation meeting with Owner's representative regardless of previous attendance related to other specifications or contracts. Meeting duration is approximately four hours. Attendance at orientation is mandatory for access to Work Site. Personnel found not obeying safety rules will be barred from the Work Site. Owner will be provided with a copy of Contractor's safety documentation at the orientation meeting.

**.2 Isolation and Permits**

Work may be carried out by Contractor under a Work Permit held by Owner's designate. Contractor shall verify system isolations with the Permit Holder prior to commencing Work.

**.3 Traffic**

- (a) Contractor shall be limited to one (1) vehicle at the Work Site at any given time.
- (b) All other Contractor's vehicles, whether private vehicles or owned by Contractor, shall be parked outside the inner security gate at the guardhouse. Contractor may transport material and equipment to WORK SITE using its vehicles, but material and equipment shall be off-loaded as soon as possible and vehicles removed to parking area immediately, except for one (1) vehicle as noted above.

**.4 Smoking Precautions**

Smoking is not permitted inside any of the plant buildings. Care shall be exercised in the use of smoking materials in non-restricted areas.

## **.5 Flammable Materials**

### **(a) Handling**

- i. Extreme care is required where it is necessary to store oily waste in work areas to ensure maximum possible cleanliness and safety.
- ii. Greasy or oily rags or materials subject to spontaneous combustion shall be deposited and kept in an approved receptacle and removed daily.
- iii. The handling, storage and use of flammable liquids shall be governed by the current National Fire Code of Canada.
- iv. Flammable liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable liquids exceeding 45 litres for work purposes, requires the permission of Contractor's Plant Fire Chief.

### **(b) Transfer**

- i. Transfer of flammable liquids is prohibited within buildings.
- ii. Transfer of flammable liquids shall not be carried out in the vicinity of open flames or any type of heat-producing devices.

## **SC 22 Asbestos Notification**

- .1 The Holyrood Thermal Generating Station has been the subject of a survey and has been identified as containing friable asbestos. Owner has established a program to manage all asbestos in a safe and prudent manner.
- .2 Recommendations by a consultant for removal or repair of asbestos, where necessary, have been completed with appropriate inspection and supervision. All asbestos remaining is subject to the Facility's Asbestos Management Program, as required by Federal and Provincial Regulations and Owner's due diligence. A copy of the survey and Asbestos Management Program are available for review in the General Office at the Facility.
- .3 The continuing presence of remaining asbestos does not pose a risk of exposure for Contractor's employees as long as it remains undisturbed and under this Asbestos Management Program. Owner's Facility's staff who may disturb the materials have been given appropriate training and are aware of its presence.
- .4 Prior to mobilization, Contractor must acknowledge awareness of the presence of asbestos at the Facility and its agreement to comply with Owner's procedures relating to the Asbestos Management Program and complete Appendix I, Asbestos Containing Materials - Contractor Notification and Acknowledgement Form.

## **SC 23 Aircraft**

NOT APPLICABLE



**Appendix I: Asbestos Containing Materials - Contractor Notification & Acknowledgement Form**

Re: Facility/Location: Holyrood Thermal Generating Station

Contract/Work Package: Engineering Procurement and Construction for a 100 MW (Nominal)  
Combustion Turbine Generator

Facility's Asbestos Coordinator: Mike Manuel

**WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBRES CAN CAUSE VARIOUS TYPES OF LUNG DISEASE INCLUDING CANCER. SMOKING INCREASES THE RISK OF LUNG CANCER FROM ASBESTOS EXPOSURE.**

The presence of various friable and non-friable asbestos materials has been identified at the above-referenced Facility location. An asbestos inventory report showing the locations and amounts of these materials is available for viewing from the **Asbestos Coordinator or Designate**.

Newfoundland Regulation 111/98 applies to all maintenance and renovation work that may disturb asbestos materials. The disturbance of asbestos building materials shall only be undertaken by contractors who have received training in asbestos-related precautions. The following activities may disturb friable asbestos materials (All classifications of work). The **Asbestos Coordinator or Designate** must be notified prior to performing the following:

- Removal or repair of asbestos mechanical insulation (various locations);
- Equipment Modifications or Additions;
- Any other operation which may generate airborne asbestos.

There are also non-friable asbestos materials in the buildings, including exterior Galbestos siding, transite sheeting, gaskets and packings, etc.

As a condition of our contract to provide services and materials at the referenced Facility, we will not disturb asbestos-containing materials without prior notification to the **Asbestos Coordinator or Designate**. This firm and its workers will follow all procedures specified by the referenced Facility and/or the applicable provincial regulation. All asbestos waste will be packaged and disposed of in accordance with Ministry of the Environment requirements.

COMPANY NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME AND TITLE: \_\_\_\_\_

**SCHEDULE D  
PAYMENT**

**(This will become  
Schedule D to the  
Contract)**

**CONTRACT TITLE: Engineering On-Site Procurement and Construction Services for a 100 MW  
(Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station**

	<u>Page</u>
P 1 General.....	1
P 2 Payments and Retention of Holdback.....	1
P 3 Submittal of Billings.....	2
P 4 Delayed Payment .....	2
P 5 Payment for Materials .....	3
P 6 Not Used.....	<b>Error! Bookmark not defined.</b>
P 7 Diary Payments .....	<b>Error! Bookmark not defined.</b>
P 8 Minimum Wage of Staff .....	<b>Error! Bookmark not defined.</b>
Appendix I: Release from All Claims.....	4
Appendix II: Milestone Payment Schedule.....	6

## Terms of Payment

### P 1 General

- .1 Subject always to the provision that Contractor's overall performance of the Work is in accordance with the Contract and Contractor continues to satisfy Owner that all aspects of the Work are being advanced so as to permit completion of the Work within the times set out in the Contract Documents, including approved extensions thereto, then, in the above event, and subject to Owner's approval, milestone progress payments for the Work shall be due and payable to Contractor for the amounts and at the times set out hereunder.
- .2 Material, in the context of this Schedule D - PAYMENT, refers to the supply of materials and equipment for which tendered supply and delivery prices are identified in the TENDER SUBMISSION, Appendix X -Schedule of Prices, included in the Contract Documents. Unless otherwise provided for in the Contract Documents, it does not include materials such as the following, and comparable items, which the Contractor has included in composite prices for the other items tendered in the said Schedule of Prices:
  - (a) concrete ingredients and related concrete placement materials such as reinforcing steel, aggregates and additives;
  - (b) rock treatment materials and stockpiled earth and rock embankment materials;
  - (c) minor miscellaneous structure related materials such as insulation, hardware fastenings and trims, paint, sealants and finishes;
  - (d) minor miscellaneous electrical supplies, cables and conduit less than 75 mm (3") in diameter and related accessories and fittings;
  - (e) minor miscellaneous piping less than 150 mm (6") in diameter and mechanical fittings, connections and accessories; and
  - (f) Plant as defined in the Contract Documents.

### P 2 Payments and Retention of Holdback

- .1 Owner will make milestones payments to Contractor against progress billings approved by Owner for the value of completed portions of the Work inspected by Owner at the Site, including Material ordered specifically for Change Orders payable on a force account basis. Such progress billings shall be submitted by Contractor and shall be itemized in such form and supported by such evidence as Owner may direct. In the case of Change Orders performed on a force account basis costs shall be substantiated by copies of payrolls and time sheets, original supplier invoices, and any other documents necessary to support such costs.

- .2 Owner shall retain as a mechanics lien holdback ten percent (10%) of the value of all payments due to Contractor, including payments for Change Orders, until Final Acceptance or abandonment of the Contract.
- .3 Upon completion of the Work and issuance of the letter of Final Acceptance, as detailed in SC 7 – Substantial and Final Acceptance Contractor shall separately bill Owner for the release of holdback and the applicable Harmonized Sales Tax, and Owner shall within thirty (30) days of the date of such letter, and upon receipt of an acceptable billing, pay all outstanding amounts due and payable in connection with the Work.
- .4 No payment made to Contractor and no partial or entire use or occupancy of the Work by Owner shall be construed as an acceptance of any Work or Material which is not in accordance with the Contract Documents.
- .5 All costs, damages and expenses for which it is established that Contractor, as reasonably determined by Owner, is liable and all money owing by Contractor to Owner may be set off against any other sum due or becoming due to Contractor under this Contract.
- .6 Contractor shall, following Final Acceptance and prior to Owner's release of holdback retained under the Contract, execute a "Release from all Claims" in the form of Appendix I, to these Terms of Payment.

**P 3 Submittal of Billings**

- .1 Contractor's progress billings shall be submitted promptly as provided herein and as agreed with Owner and shall be in such form and supported by such documentation as Owner may require to facilitate verification of the amounts billed therein. All billings shall include Contractor's registration number for the Goods and Services Tax / Harmonized Sales Tax (HST) and shall separately identify the amounts of HST, for which Contractor shall be reimbursed. Payments shall be due and payable twenty (20) days following receipt of an acceptable billing by Owner, provided that the amounts so billed are correct and properly payable under the Contract. The parties agree that Contractor may submit to Owner a pro-forma invoice for each of the corresponding milestone progress billings in advance of the applicable scheduled milestone date so that once notice is received by the Owner that the milestone is actually met Owner will take no more than ten (10) Business Days thereafter to review, approve and make payment to Contractor.
- .2 Prior to receiving each milestone payment, Contractor shall be required to submit Worksheet L – Contractor Safety Statistics – Monthly Report, a sample of which is located in –the TENDER SUBMISSION in the Contract Documents.
- .3 Worksheet G - Contract Closeout and Evaluation Form, located in –the TENDER SUBMISSION must be signed off by the Contractor as a requirement for the release of the holdback monies.

**P 4 Delayed Payment**

- .1 Delay by Owner in making a payment when it becomes due and payable, shall not initially be deemed to be a breach of the Contract by Owner, but, except where specifically otherwise provided for, such a delay will, (if the delay continues for more than ten (10) days beyond the date upon which the payment is due and payable), entitle Contractor to interest on the amount overdue pursuant to the terms of GC 23 Compensation plus a day-for-day extension to Contractor's schedule for the completion of the Work. In the event a payment obligation of Owner to Contractor continues to remain unpaid beyond sixty (60) days following the due date, then in addition to interest and schedule relief as mentioned above, Contractor shall be entitled to suspend its Work and/or terminate the Contract for Owner being deemed to be in breach of the Contract except in the case where (a) a dispute between the parties is submitted for resolution pursuant to the terms of GC 38.1 based on Owner's disagreement with Contractor that a particular payment milestone identified on the payment schedule under the Contract has been met and is owed to Contractor and (b) Owner has escrowed the disputed milestone payment funds according to GC 38.3.

**P 5 Payment for Materials**

- .1 Payment shall not be made in respect of Material delivered to the Site which has not been incorporated in the Work other than payments for Material ordered specifically for Change Orders approved by Owner or unless otherwise provided by Owner in the Contract Documents or included in the milestone payment schedule.

**P 6 Not Used**

**P 7 Diary Payments**

- .1 Payment of the tendered lump sum price shall be made in accordance with the milestone payment schedule located in Appendix II. Where Contractor is a Registrant under the Federal Goods and Services Tax/Harmonized Sale Tax, all invoices shall include Contractor's Registration Number and shall separately identify the amounts of HST, for which Contractor will be reimbursed.

**P 8 Minimum Wage of Staff**

Contractor shall pay all cleaning staff \$0.75 above the Newfoundland and Labrador statutory minimum hourly wage. Contractor shall, upon the request of Owner, provide satisfactory proof to establish that all employees are being paid accordingly. Failure to pay this minimum wage will be cause by Owner for immediate termination of this Contract.

Any legislated increases in the Newfoundland and Labrador statutory minimum hourly wage rate during the term of this Contract are recognized by Owner as legitimate increases to the rates billed under this Contract.

**Appendix I: Release from All Claims**

**RESPECTING THE CONTRACT FOR** \_\_\_\_\_ **("Contract")**  
(Description of Contract)  
dated \_\_\_\_\_, entered into with \_\_\_\_\_  
"OWNER") (hereinafter referred to as

By \_\_\_\_\_ (hereinafter referred to as "**CONTRACTOR**")

**CONTRACTOR**, for and in consideration of the sum of

\$ \_\_\_\_\_  
(Amount of money paid to **CONTRACTOR** to date)  
of lawful money of Canada to us in hand well and truly paid by **OWNER** such sum being the net amount after the deduction of back charges, at and before the delivery of these presents, the receipt whereof is hereby acknowledged, and of acknowledgement by **OWNER** of the retention of the sum of

\$ \_\_\_\_\_  
(hereinafter referred to as "Holdback") being retained in accordance with the Mechanics' Lien Act, RSNL 1990, Chapter M-3, as amended ("Act"), and the Contract, to become due and payable to **CONTRACTOR** on expiration of the Holdback period or periods or otherwise disposed of in accordance with the provisions of the Act, or the Contract provisions, has hereby released and forever discharged **OWNER** of and from all actions, suits, debts, forfeitures, damages, claims and demands whatsoever in law or in equity which the **CONTRACTOR** ever had, now has, or hereafter can, shall or might have by reason of or arising out of the said Contract or by reason of or arising out of any breach or breaches thereof, or by reason of or arising out of any work or labour or services performed, material supplied, or plant or machinery used in connection with the Contract, by the **CONTRACTOR** whether under the Contract or otherwise, save as to the release or other lawful disposition of the Holdback.

**AND FURTHER**, that upon the issuance by **OWNER** of instruments of payment for the Holdback or the lawful disposition thereof in accordance with the provisions of the Act or Contract provisions, then and in such event this Release will immediately thereupon become a full, proper and complete release of **OWNER** of all claims, demands and liabilities of any nature whatsoever to **CONTRACTOR** arising under the Contract.

**IN WITNESS WHEREOF**

Dated at \_\_\_\_\_ in the Province of \_\_\_\_\_  
(City/Town)  
this \_\_\_\_\_ day of \_\_\_\_\_

in the presence of

\_\_\_\_\_  
WITNESS

\_\_\_\_\_  
CONTRACTOR

Appendix II: Milestone Payment Schedule

Estimated Month	Detailed Description	EPC Milestone Percentage	EPC Amount Canadian
May	LNTF Payment		\$ 500,000.00
May	EPC Down Payment	20.0%	\$ 5,917,582.40
	<b>EPC Milestone 1 - Engineering Deliverables</b>		
May	Initial IFC Rev 0 Drawings - Major Foundations	2.0%	\$ 641,758.24
May	Initial IFC Rev 0 Drawings - Electrical One Lines	2.0%	\$ 641,758.24
June	Initial IFC Rev 0 Drawings - P&IDs	2.0%	\$ 641,758.24
May	Initial IFC Rev 0 Drawings - Engineering List (Equipment, Instrumentation, etc)	2.0%	\$ 641,758.24
June	Initial IFC Rev 0 Drawings - Controls	2.0%	\$ 641,758.24
	<b>Milestone 2 - Civil Work - Foundations Poured for Major Equipment</b>		\$ -
July	CTG	10.0%	\$ 3,208,791.20
July	GSU	2.5%	\$ 802,197.80
	<b>Milestone 3 - Major Equipment Rough Set on Foundation</b>		\$ -
July	CTG	10.0%	\$ 3,208,791.20
July	GSU	2.5%	\$ 802,197.80
	<b>Milestone 4 - Assembly of Major Equipment</b>		\$ -
September	CTG	10.0%	\$ 3,208,791.20
August	GSU	2.5%	\$ 802,197.80
	<b>Milestone 5 - Mechanical Completion</b>		\$ -
September	CTG	10.0%	\$ 3,208,791.20
August	GSU	2.5%	\$ 802,197.80
	<b>Milestone 6 - Commissioning &amp; Testing Complete</b>		\$ -
November	CTG First Fire	10.0%	\$ 3,208,791.20
November	Performance Test	8.0%	\$ 2,567,032.96
December	Complete Documentation Turnover	2.0%	\$ 641,758.24
	<b>Total</b>		<b>\$ 32,087,912.00</b>

Contract unscheduled Allowance: \$ 5,000,000  
 Building Allowance: \$ 8,000,000  
 Total: \$ 45,087,912.00

**SCHEDULE E  
SPECIFICATIONS  
(This will become  
Schedule E to the  
Contract)**

**CONTRACT TITLE: Engineering On-Site Procurement and Construction Services for a 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station**

		<u>Page</u>
SP 1	Project.....	1
SP 2	Not Used.....	1
SP 3	Not Used.....	2
SP 4	Schedule.....	2
SP 5	Warranty.....	2
SP 6	Design Criteria.....	2
SP 7	Not Used.....	2
SP 8	Mechanical Balance of Plant.....	2
SP 9	Electrical Balance of Plant.....	3
SP 10	Protection, Instrumentation, Controls and Communications (PICC) Balance of Plant.....	3
SP 11	Civil/Structural Works.....	3
SP 12	Building.....	4
SP 13	Drawings.....	4
SP 14	Standards.....	6

- Appendix A – Site Plan
- Appendix B – Scope of Work
- Appendix C – Post Tender Clarification Meeting Minutes
- Appendix D – Copy of Purchase Order for Limited Notice to Proceed

## **SP 1 Project**

This is a Contract whereby Contractor shall provide engineering, on-site procurement and construction services for the 100MW (nominal at ISO conditions, minus 5%) combustion turbine generation plant (Plant) at the Holyrood Thermal Generating Station, located in the Province of Newfoundland and Labrador, Canada. The plant shall include the provision of a single combustion turbine unit to achieve a nominal 100MW output. The plant shall consist of an industrial grade gas generator, in stationary configuration. Any equipment provided under this Contract shall be new or unused. Appendix A provides an aerial photograph of the site where the new plant will be located along with an existing site layout drawing.

### **Contractor Scope of Work**

Other than the Owner-Furnished Materials or the Major Equipment, as such terms are further defined in GC 1 of the Contract, Contractor shall provide all engineering design, supervision, materials, tools, equipment, unloading, construction labor and plant to construct and commission a fully operational gas turbine plant and as more fully described in Appendix B.

The scope of Work shall include, but not be limited to the following:

1. Building to house CTG and auxiliaries;
2. Mechanical balance of plant;
3. Electrical balance of plant;
4. Provision of classroom training and operation and maintenance manuals;
5. Civil and structural balance of plant; and
6. All required construction and regulatory permitting;

### **Owner's Scope of Work**

Owner's scope of work shall be limited to the following:

1. Provision of a level area of ground of sufficient size to accommodate the new gas turbine plant in the area generally indicated on the site drawing in Appendix A;
2. Provision of a raw water supply line to supply the Contractor supplied demineralized water system;
3. Electrical connection to the grid from the high voltage side of the Contractor supplied GSU;
4. Provision of general service electrical power supply to the gas turbine plant from the existing thermal generating station for when it is not in operation. Terminations at the new gas turbine electrical panel shall be performed by Contractor;
5. Provision of geotechnical survey results to successful bidder. For tender purposes, minimum bearing capacity of 140 kPa to be assumed; and
6. Provision of exterior lighting.

## **SP 2 Not Used**

**SP 3 Not Used**

**SP 4 Schedule**

Subject to SC 3 of the Contract, the plant shall be commissioned and ready for service no later than December 7th, 2014. However, building construction may be completed following the CTG in service date

**SP 5 Warranty**

See GC 20 of the Contract.

**SP 6 Design Criteria**

The following table outlines the site conditions for the performance of the equipment:

Elevation (m)	~4.5 above sea level
Atmospheric pressure (kPa)	98.5 to 104.1
Atmospheric temperature (°C)	-25 to 35
Atmospheric relative humidity (%)	0 to 100
Environment	Sea coast, salt and industrial pollution atmosphere.

**SP 7 Not Used**

**SP 8 Mechanical Balance of Plant**

The mechanical balance of plant includes, but is not limited to the following:

1. Liquid fuel system including:
  - a. 2,500,000L fuel storage tank complete with spill containment;
  - b. Liquid fuel pipeline with flanged connection to equipment. Fuel pipelines shall be above ground and winter operable;
  - c. Fuel truck offloading system with spill containment at a minimum;
    - i. Off loading pumps (redundant AC and back-up DC);
    - ii. Fuel filters;
    - iii. Mass flow meter;

2. Owner to supply raw water feed at site boundary for contractor designed, supplied, and installed demineralized water system. System and storage tank(s) suitable for 2 X four hour operations (between 7:00 AM and 11:00 AM / 4:00 PM to 8:00 PM). Size of the storage tank to be optimized to suit demineralized water system;
3. Redundant compressed air/instrument air;
4. Means of lifting, dismantling and removal of CTG and auxiliaries for maintenance; and
5. Pipe interconnections (i.e., fuel, lube, air, and water systems). Fuel and lube piping to be above ground.

### **SP 9 Electrical Balance of Plant**

The electrical balance of plant shall include, but is not limited to the following:

1. Transformer spill containment w/drainage directed to oil/water separator;
2. Transformer blast wall as required to protect any adjacent infrastructure/equipment;
3. Site grounding system and generator ground connection; and
4. Cabling within site boundary. Exterior cabling to be ran in underground buried conduit or all traffic rated cable trench.

### **SP 10 Protection, Instrumentation, Controls and Communications (PICC) Balance of Plant**

The PICC balance of plant shall include, but is not limited to the following:

1. Control room/module for local operation of the CTG and auxiliaries;
2. Wiring termination interface to be provided for remote operations and monitoring capability by Owner at existing thermal generating station control room and at Nalcor's provincial energy control center (ECC) via SCADA in St. John's;
3. As an alternative to hardwired remote operation, DNP3 protocol can be used over Serial or Ethernet connection if available; and
4. Telephone and Ethernet wiring terminal interface for Owner's connection to existing services.

### **SP 11 Civil/Structural Works**

Contractor shall provide all civil works associated with this project. The civil/structural scope of work includes but is not limited to:

1. Site layout and traffic flow modifications;
2. Concrete foundations and slabs for CTG and building;
3. Concrete foundations and slabs for all Contractor furnished ancillary equipment including piping, tanks, and electrical services;
4. Site water supply and drainage including piping to Owner furnished hook-ups located at boundary of CTG site;
5. Provision of all stairs, platforms, ladders for access and maintenance of equipment;
6. All exterior steel shall be hot dipped galvanized;

7. Fencing surrounding GSU(s);
8. Final grading and site remediation;
9. All traffic rated cable trench; and
10. Dyking and environmental protection for fuel oil storage and handling equipment.

### **SP 12 Building**

Contractor shall carry an \$8,000,000 allowance to provide a weather tight, winter suitable building envelope to house the CTG set and balance of plant. The building shall be of sufficient size to allow the safe and ergonomic operation and maintenance of the CTG and auxiliary equipment. The building shall be designed in accordance with:

1. National Building Code of Canada;
2. National Fire Code of Canada;
3. National Plumbing Code of Canada;
4. National (Canadian) and provincial (Newfoundland and Labrador) occupational health and safety regulations.

Building design will take into account ambient and energy efficient lighting.

### **SP 13 Drawings**

- .1 Contractor shall perform the Work in strict accordance with Drawings.
- .2 Drawings shall be referenced by a Drawing and revision number.
- .3 Contractor's and Manufacturer's Drawings and revisions thereof shall be subject to review by Owner. Such review shall in no respect relieve Contractor of its responsibility and liability under the Contract. Fabrication, shipping or erection of Material and Construction Plant or any parts thereof shall not start prior to Owner's review of such Drawings.
- .4 Drawings bearing reference to the Project or Owner shall not be used by Contractor for any other purpose without prior written approval of Owner.
- .5 Owner, in its sole discretion, may make reasonable use or reuse of Drawings as required in Owner interest.
- .6 Contractor shall supply Drawings as follows:
  - (a) by email in the latest version of AutoCad (.dwg extension).
  - (b) by email – PDF files must be stamped and signed by engineer.
  - (c) Original paper drawings must be stamped and signed by engineer.

Drawings shall be in B1 or A1 size formats with a minimum character height of 2 mm.

- .7 Contractor shall submit Drawings for review by Owner in accordance with the Approved Construction Schedule and, where required, the APEGN Act, RSNL 1990, Chapter E-12, as amended.
- .8 Drawings shall be provided for, but not be limited to, the following:
  - (a) parts embedded in concrete;
  - (b) parts to be connected to equipment supplied by others;
  - (c) piping;
  - (d) P&IDs;
  - (e) Single line diagrams;
  - (f) wiring diagrams;
  - (g) parts in which adjustment has been allowed or which are subject to wear;
  - (h) assemblies showing plans and cross sections of the complete equipment components being supplied;
  - (i) erection and lifting devices;
  - (j) layout and dimensional Drawings;
  - (k) bills of materials;
  - (l) characteristic curves, such as
    - i. curves;
    - ii. current transformer magnetization curves; and
    - iii. similar performance curves for equipment.
- .9 Details on Drawings and Data shall be sufficient to allow Owner to independently assess performance of all parts. Such details shall include, but not be limited to, material designations, welding specifications, part numbers, dimensions, fits, tolerances and surface finishes for all machined parts.
- .10 Subject to GC 16, Contractor shall allow five (5) working days (from date of receipt to date of return dispatch) for Owner to advise Contractor of review results.
- .11 Contractor shall, upon receipt of review comments, promptly modify and resubmit or issue Drawings as required. Modification and resubmission shall continue until such time as Contractor is advised that review is complete.
- .12 Owner's review shall not relieve Contractor of any contractual responsibilities.
- .13 After Commissioning Acceptance, Contractor shall forward one (1) complete set of Drawings, stamped "Final - As Built", which incorporate modifications made during erection, commissioning and testing.
- .14 Contractor's Drawings shall be clearly marked as follows:
  - (a) NEWFOUNDLAND AND LABRADOR HYDRO
  - (b) 100MW Combustion Turbine Generating Plant at the Holyrood Thermal Generating Station.
  - (c) The title block of all Drawings shall have the following information clearly indicated:

- i. description of Drawing content;
- ii. name of major equipment or system of which Drawing content is part;
- iii. Contractor's Drawing number;
- iv. revision number and date of revision;
- v. date drawn;
- vi. Owner's Drawing number from list forwarded to Contractor by Owner.

.15 Schematic and wiring diagrams shall use ANSI standard drafting symbols and ANSI device function designation systems.

.16 Drawings shall enable Owner to prepare and organize interfacing with the work of its own, or other contractors', forces.

**PREAMBLE**

The Work shall be carried out in accordance with the Drawings listed below and any additional Drawings issued at a later date by Owner.

All Drawings are marked "For Tender Purposes Only" to identify them as Tender Drawings. The listed Drawings will be "Approved for Construction" and issued to Contractor within two (2) weeks of the date of Contract.

"Approved for Construction" Drawings may be revised by Owner during the progress of the Work to incorporate changes to design detail.

**List of Drawings**

Drawing No.	Title	Revision Number	Date
1403-121-C-003	Holyrood Generating Station Master Site Plan		

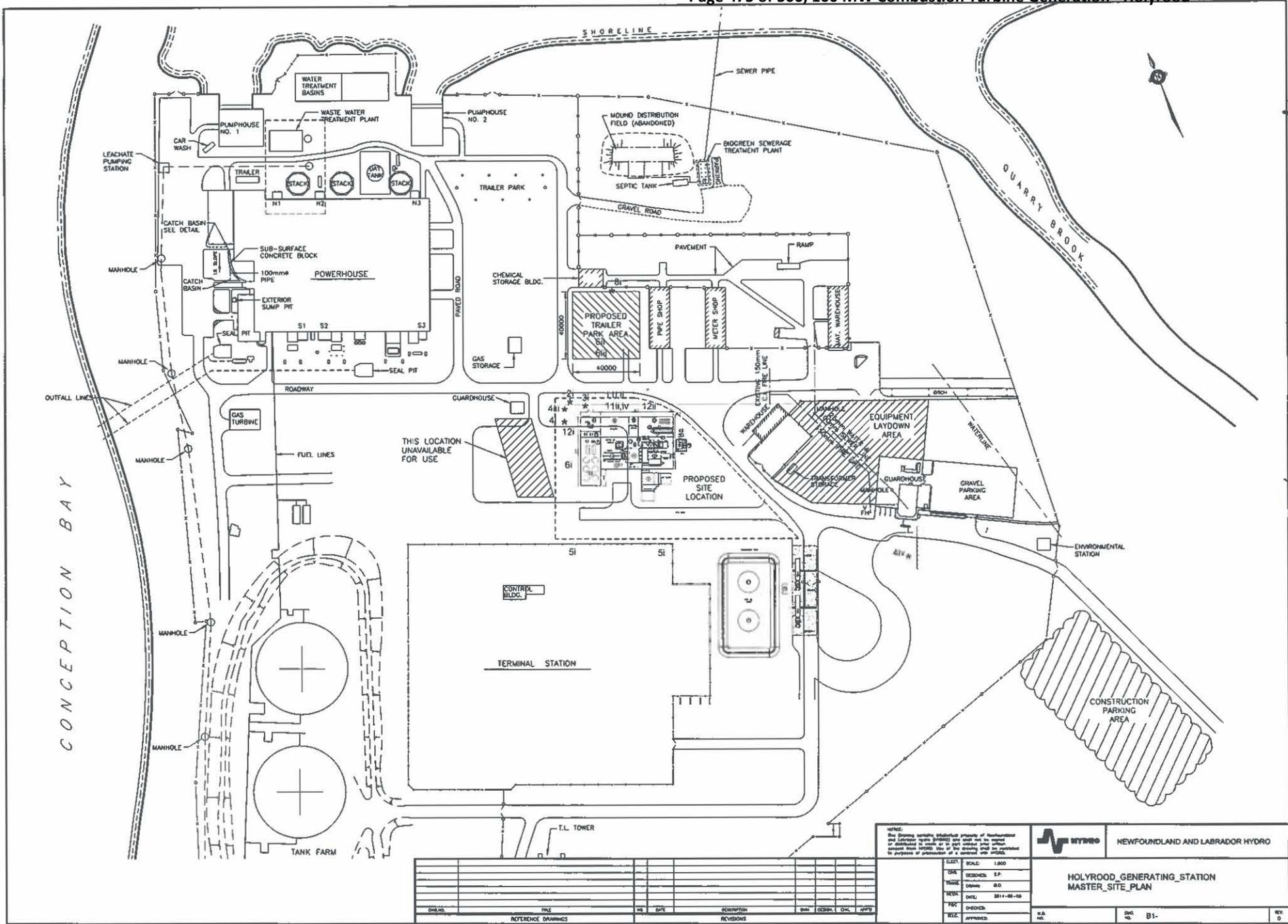
**SP 14 Standards**

The scope of Work of this Specification shall be completed in but is not limited to the following specifications:

- 1. ACI - American Concrete Institute – Various Sections
- 2. CRSI - Concrete Reinforcing Steel Institute – Various Sections
- 3. AISC - American Institute of Steel Construction – Various sections
- 4. ASCE - American Society of Civil Engineers – Various Sections
- 5. AISI - American Iron and Steel Institute – Various Sections

6. IBC - International Building Code – Various Sections
7. SSPC - Steel Structures Painting Council – Various Sections
8. ASME - American Society for Mechanical Engineers – Various Sections
9. ASME B31.1 - Code for Power Piping
10. ASME Section IX - Boiler and Pressure Vessel Code – Welding and Brazing Qualifications
11. ASME Section VIII Div I Boiler and Pressure Vessel Code – Unfired Pressure Vessels
12. ANSI - American National Standards Institute – Various Sections
13. ASHRAE - American Society of Heating, Refrigeration, and Air Conditioning – Various Sections
14. TEMA - Tubular Exchanger Manufacturers Association for Shell and Tube Heat Exchangers – Various Sections
15. ASTM American Society for Testing Materials – Various Sections
16. MSS Manufactures Standardization Society Standard Practices – Various Sections
17. AWWA American Water Works Association – Various Sections
18. AGA American Gas Association – Various Sections
19. API American Petroleum Institute – Various Sections
20. AWS American Welding Society – Various Sections
21. AWS A3/0 Definitions of Welding Terminology
22. AWS B2.1-84 Standard for Welding Procedure and Performance Qualification
23. AWS D1.1 Code for Structural Welding
24. IEEE Institute of Electronic and Electrical Engineers – Various Sections
25. NEC National Electrical Code – Various Sections
26. NESC National Electrical Safety Code – Various Sections
27. IES Illuminating Engineering Society
28. NEMA National Electrical Manufacturers Association – Various Sections
29. NEMA AB1 Molded Case Circuit Breakers
30. NEMA ICS1 General Standards for Industrial Control and Systems
31. NEMA ICS2 Industrial Control Devices, Control and Systems
32. NEMA ICS4 Terminal Blocks for Industrial Use
33. NEMA ICS6 Enclosures for Industrial Controls and Systems
34. NEMA MG1 Motors and Generators
35. NEMA PE5 Constant-Potential-Type Electric Utility (Semi-Conductor Static Converter) Battery Chargers
36. NEMA SG2 High Voltage Fuses
37. NEMA WC2 Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
38. ICEA Insulated Cable Engineering Association – Various Sections
39. ISA The Instrumentation, Systems, and Automation Society – Various Sections
40. ISA S5.1 Instrumentation Symbols and Identification
41. NACE The National Association of Corrosion Engineers – Various Sections
42. NACE RP018890 Standard Recommended Practice: Discontinuity (Holiday) Testing of Protective Coatings
43. NFPA National Fire Protection Association – Various Sections
44. NFPA70 National Electric Code
45. NFPA No. 1 Carbon Dioxide Extinguishing Systems
46. NFPA No. 37 Stationary Combustion Engines and Gas Turbines
47. OSHA Occupational Safety and Health Administration – Various Sections
48. OSHA CFR Title 29 Occupational Safety and Health Administration
49. UL/ULC and/or CSA

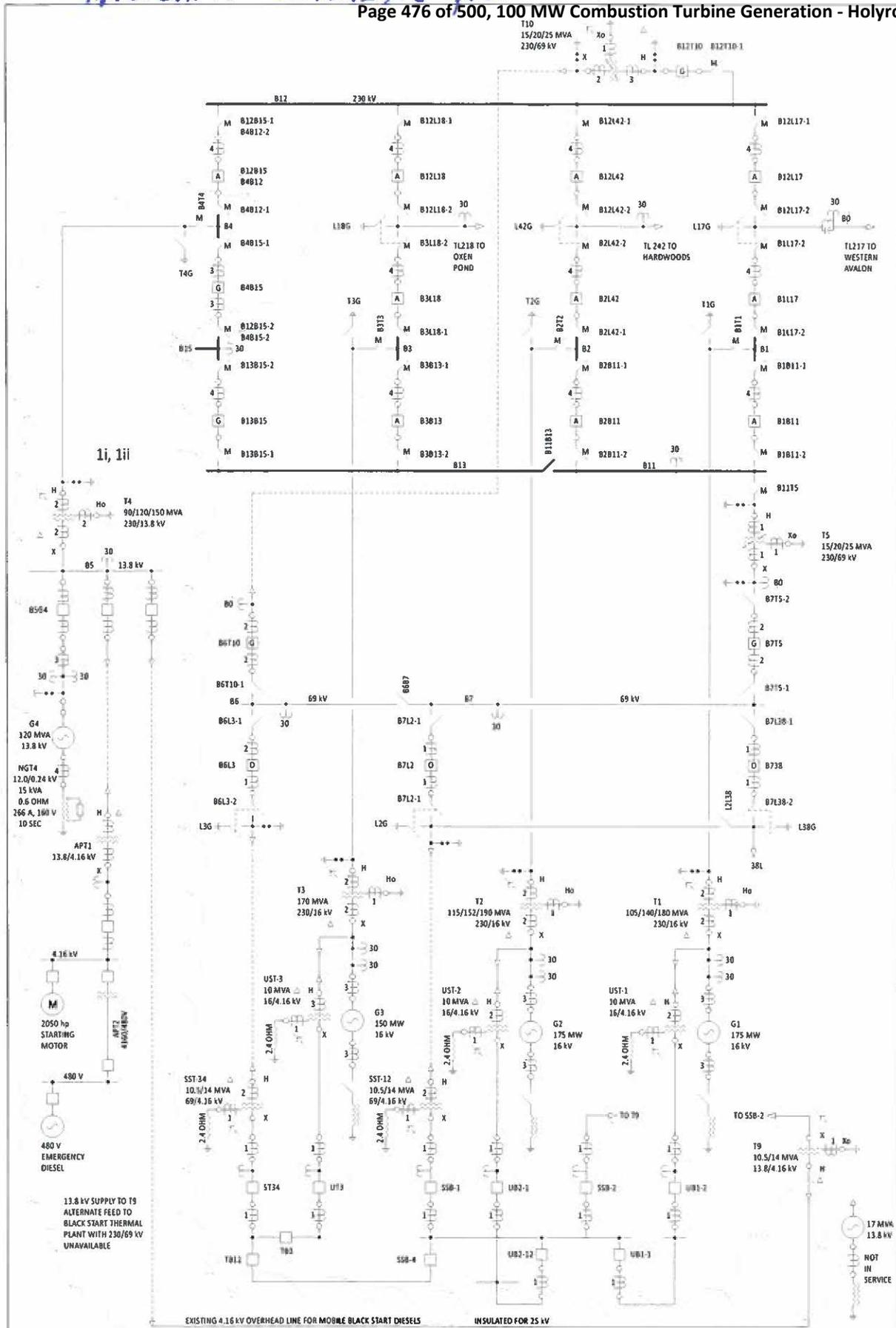
- 50. National Building Code of Canada
- 51. Nation Fire Code of Canada
- 52. Nation Plumbing Code of Canada
- 53. Provincial Gasoline and Associated Products (GAP) Regulations
- 54. Canadian Electrical Code



HYPERION 11 - S1/E PLAN P1

<p>NOTE: This drawing contains confidential property of Newfoundland and Labrador Hydro (NLH) and shall not be copied, reproduced, or disseminated without the written consent of NLH. NLH is not responsible for any errors or omissions in this drawing and shall not be held liable for any consequences arising therefrom.</p>		<p>NEWFOUNDLAND AND LABRADOR HYDRO</p>
<p>PROJECT: 1000                  TASK: E.P.                  DRAWING: B.D.                  DATE: 01-11-00-00</p>		
<p>HOLYROOD GENERATING STATION                  MASTER SITE PLAN</p>		<p>REV. NO. B1-                  DATE</p>

NO.	DATE	DESCRIPTION	BY	CHKD.	APPD.



**HOLYROOD TERMINAL STATION  
PRELIMINARY SINGLE LINE DIAGRAM  
100 MW COMBUSTION TURBINE ADDITION**

SYS PLAN:	SHEET 1 OF 1
SYS OP:	DATE: MAY 13, 2014
ELEC:	DRAWN BY: PWT
P&C:	REVISION: 0
FILE:	HRDTS with 100 MW CT

~~Appendix A – Site Plan~~

## Appendix B – Scope of Work

The plant will utilize one (1) unused SGT6-3000E CTG operating in simple cycle mode to produce approximately 123 MW of power at ISO conditions.

The Contractor will design and install the Balance of Plant (BOP) systems to support the reliable operation of the primary mover. This proposal provides for the turnkey supply of all engineering, construction, construction tools, equipment rental, project management, commissioning, start-up, and performance testing as described throughout. Any modifications to the major equipment associated with this scope of work could have consequential impact on the overall design and construction of the project.

The proposed scope of work and supply is comprised of installing the following Major Generation Equipment items, and the design and installation of the BOP required for proper operation at the Holyrood Generation Facility. No Owner Supplied equipment is included in this scope of supply.

### Major Generation Equipment

This scope of work will include the complete installation of the following equipment:

- One (1) Unused SGT6-3000E CTG
- One (1) New 90/120/150 MVA 230 kV GSU Transformer

### Balance of Plant (BOP)

The contractor will design and install a dedicated BOP system to support the primary generation equipment as described in the following sections of this document. The design will include the necessary structural, mechanical, electrical, instrumentation, and control systems to support the major equipment.

The Balance of Plant scope of supply will include the following:

- Complete design of the facility including civil, structural, mechanical, electrical, instrumentation and controls.
- Concrete foundations and plant gravel as necessary within the site.
- Installation of the complete power plant with the associated interconnections as necessary, which may include:
  - Electrical installation of the plant limited to the high voltage terminals of the GSU, BOP equipment, grounding, lightning protection, and cathodic protection.
  - Installation of Instrumentation and combustion turbine generator Control System .

### BOP Major Mechanical Systems

#### **Plant Liquid Fuel System**

The Contractor will design and install the plant liquid fuel system as described below:

- Install a liquid fuel handling system to manage the liquid fuel from truck offloading to delivery to the flanged connection on the CTG.
- Fuel truck offloading system
- Liquid fuel storage capacity of approximately 2.5 million liters.
- Install Duplex liquid fuel filters
- Install 2 x 100% distillate forwarding pumps
- Install all plant liquid fuel carbon steel piping, valves and fittings from the plant liquid fuel pipeline to the CTG.

**Demineralized Water Treatment System**

The Contractor will install a demineralized water treatment system to allow for water injection into the CTG for NOx abatement while operating on liquid fuel and for compressor water wash. The water treatment system and associated storage tank(s) will be designed and optimized for two (2) four (4) hour runs of the plant per day.

Demineralized water for the plant will meet the specifications outlined in the following table.

Parameters	Limit	Test Method
Total Matter, PPM, Max	5	ASTM D1888
Dissolved Matter, PPM, Max	3	ASTM D1888
PH*	6.0-8.0	ASTM D1293
Conductivity*, Micromhos/CM 25°C, Max	0.5-1.0	ASTM D1125
Sodium + Potassium	0.1	ASTM D1428
Silicon Dioxide, PPM, Max	0.1	ASTM D859
Chlorides, PPM, Max	0.5	ASTM D512
Sulfates, PPM, Max	0.5	ASTM D516

\*Measured when water is free of carbon dioxide

**Lube Oil Heat Exchanger and Cooling Water System**

The Contractor will install the following:

- A lube oil heat exchanger for the CTG and generator on a separate skid.
- The generator air gap control volume will be cooled by four separate heat exchangers provided by the generator OEM.

**Oily Water Drain System**

The Contractor will install the oily water drain system as follows:

- Install an Oily Water Separator System sized for this application
- Install PVC or HDPE below ground piping and fittings from concrete oil containment units located at all transformers and CTG auxiliary skids

Piping will be routed to the oily water separator and then to the waste oil storage tank. The oily water separator effluent will be pumped out to the Owner’s waste oil system.

**Fire Detection & Protection**

Fire protection for the CTG unit is included with the CTG package. The Contractor will interconnect with the existing Owner’s fire protection loop at the project site boundary.

**Instrument and Service Air Systems**

The instrument and service air systems will be as follows:

- Install two (2) sets of two (2) x 100% instrument and service air screw compressors with associated dryer and air storage tanks

- Install stainless steel tubing, valves, fittings and instruments for instrument and service air systems from the air compressors to various required areas throughout plant.

**Exhaust Stack**

The Contractor will install the Exhaust Stack provided with the CTG complete with snow doors. This includes but is not limited to:

- Inlet Expansion Joint
- Inlet Transition Ducts

Typical design characteristics of the Exhaust Stack to be provided are as follows:

Approximate Stack Height	50 feet
Silencer	85 dB(A) Sound Pressure @ 1 m
Exterior Casing Material	ASTM A36 carbon steel
Interior Liner Material	409 stainless steel
Insulation Material	High temperature ceramic fiber

**Inlet Air Heating System**

The Contractor will design and install an inlet air heating system to allow for operation of the CTGs in icing conditions.

**BOP Electrical Systems**

**230 kV System**

The Contractor will install one (1) New 13.8 kV delta / 230 kV wye 90/120/150 MVA GSU with new transformer oil, suitable to Canadian standards.

**13.8 kV System**

The Contractor will:

- Install one (1) Generator Circuit Breaker.
- Install 13.8 kV interconnections from the generator terminals to the GSU.
- Install 13.8 kV interconnections from the generator breaker to the Contractor supplied Auxiliary Transformer.
- Install cable from connections on the Aux Transformers to the 4160 V and 480 V distribution systems.

**4160 V System**

A 4160 V system will be installed to support the CTG Motor Starter and fuel injection pump.

The Contractor will install the 4160 V system as follows:

- Install 4160 V CTG MCC
- Install 4160 V BOP Distribution Panel as required
- Install 4160 V BOP MCC as required

- Install cable tray / conduit with cabling from transformers to MCCs and from MCCs to plant 4160 V equipment and motors
- Install conduit, duct banks, or cable trays mounted on utility racks

#### **480 V System**

The Contractor will install the 480 V system as follows:

- Install 480 V CTG MCC
- Install 480 V BOP Distribution Panel as required
- Install 480 V BOP MCC as required
- Install feeder breakers to the 120/208 V system as required
- Install cable tray / conduit with cabling from transformers to MCCs and from MCCs to plant 480 V equipment and motors
- Install conduit, duct banks, or cable trays mounted on utility racks

#### **120/208 V System**

Contractor will install transformers and distribution panels as required with associated conduits, fittings and wire.

#### **Plant Area Lighting**

The Owner will be responsible for plant exterior area lighting.

#### **Ground Grid**

The Contractor will install the ground grid for the plant as follows:

- Install plant ground grid with associated ground rods and connections to plant equipment, buildings and fence in accordance with applicable codes.

#### **Plant Electrical Cable Tray**

The Contractor will install the plant electrical cable tray work as follows:

- Install cable tray throughout plant. Cable tray will be mounted on utility racks, cable trenches or within buildings for routing plant cabling. A separate cable tray will be installed for each of the medium voltage, low voltage, and instrumentation systems.

#### **Conduit and Cable Systems**

The Contractor will provide the plant conduit and cable system as follows:

- Install rigid galvanized conduit or PVC (encased in concrete if required) for all underground power, control and instrumentation systems.

#### **Lightning Protection**

The Contractor will install lightning protection as follows:

- Install lightning protection on the CTG exhaust stack

#### **Batteries / Chargers / UPS Systems**

The Contractor will install CTG battery charging system and associated components.

**BOP Control System**

The Contractor will install a BOP control system that interfaces with the CTG control system.

**Electronic Wiring and Pneumatic Piping**

Contractor will install necessary instrument wiring and pneumatic piping with associated Swagelok fittings, etc.

**Remote Operating Capability**

Contractor will install the hardware and software required to allow remote operations diagnostics both at the plant and an off-site location. Features of this equipment include, but are not limited to, the following:

- Remote plant operations (e.g., start/stop)
- Diagnostics
  - Identification/assistance in all fault identification and diagnosis
  - ISO corrected performance degradation indication
  - Improvement in CTG availability and reliability
  - Twenty-four hour continuous CTG monitoring
  - Compressor wash cycle indication
  - Combustion and Hot Gas Path planned maintenance indication
  - Unit history
  - Remote support available
  - Assistance with commissioning

**Cathodic Protection**

Contractor will install Cathodic Protection for all steel underground piping as necessary.

**Plant Communication System**

The Contractor will install the following:

- Owner will supply Contractor with temporary telephone and internet capability for construction communication purposes.
- Permanent telephone lines for operation of the plant will be the responsibility of the Owner.

**Plant Equipment Installation and Erection**

The Contractor will:

- Unload all plant equipment delivered to site.
- Provide all support equipment and manpower as required to install all of the major equipment.
- Provide for erection of the BOP equipment associated with this proposal.

**Site Work**

Owner shall provide level site free and clear of above and below ground obstructions. Existing soil is assumed to be adequate for design and construction with minimum 3000 psf bearing capacity.

Contractor will prepare the site with minimal work for the construction of the project.

**Plant Civil and Structural**

Contractor will install the following:

- All plant reinforced concrete foundations.
- Plant gravel as required.
- Structural steel utility racks to support overhead piping and cable trays or bus.
- Finished grading.

### **Plant Buildings**

Contractor has included a building allowance per the Tender specifications in this proposal. The requirements will be finalized in discussions with the Owner.

### **Cranes, Equipment and Tools**

Contractor to supply all plant construction required cranes, forklifts, back-hoes, hydraulic lifts, welding machines, air compressors, generators, temporary lights, trucks, pick-ups, etc.

### **Lubricants and Chemicals**

Contractor will supply and install all lubricants, lube oils and chemicals for supplied equipment.

### **Black Start Capability**

The Contractor will install Black Start capability for the plant.

### **Construction Offices and Storage Facilities**

- Contractor to provide construction offices for Contractor.
- Owner is providing the site with sufficient square footage to provide a lay-down area along with construction offices, and construction utilities (electrical and water)
- Contractor to provide sanitation facilities for Contractor personnel during construction.

### **Engineering and Project Management**

- Contractor will provide detailed engineering and specifications for all disciplines involved for the power plant including civil and concrete foundations.
- Contractor will provide project management complete with construction management, quality control / quality assurance, scheduling, administration, warehousing, and expediting including regular monthly reporting of all disciplines.
- Contractor will arrange for and provide fully qualified technical representatives during erection, testing, start-up and commissioning of the CTG.
- Contractor will provide start-up and commissioning and testing of BOP associated systems.
- Contractor will provide operator and maintenance training for the CTG and BOP.
- Contractor will provide one (1) hard copy in English of the O&M manuals, training manuals, engineering calculations, commissioning and start-up manuals, test manuals, as-built drawings, design specifications and warranty manuals for plant equipment.

**Design Basis**

**Design Conditions**

Site Elevation	4.5 m ASL
Design Air Temperature	-25 to 35 C
Maximum Wind Velocity	TBD
Relative Humidity	60 %
Seismic Zone	TBD

**Project Design Codes and Standards**

The following organization's standards and codes are applicable to design and construction practices for the project. Required Canadian standards can be discussed and priced prior to contract signing.

ACI	American Concrete Institute – Various Sections
CRSI	Concrete Reinforcing Steel Institute – Various Sections
AISC	American Institute of Steel Construction – Various sections
ASCE	American Society of Civil Engineers – Various Sections
AISI	American Iron and Steel Institute – Various Sections
IBC	International Building Code – Various Sections
SSPC	Steel Structures Painting Council – Various Sections
ASME	American Society for Mechanical Engineers – Various Sections
ASME B31.1	Code for Power Piping
ASME Section IX	Boiler and Pressure Vessel Code – Welding and Brazing Qualifications
ASME Section VIII Div I	Boiler and Pressure Vessel Code – Unfired Pressure Vessels
ANSI	American National Standards Institute – Various Sections
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning – Various Sections
TEMA	Tubular Exchanger Manufacturers Association for Shell and Tube Heat Exchangers – Various Sections
ASTM	American Society for Testing Materials – Various Sections
MSS	Manufactures Standardization Society Standard Practices – Various Sections
AWWA	American Water Works Association – Various Sections
AGA	American Gas Association – Various Sections
API	American Petroleum Institute – Various Sections
AWS	American Welding Society – Various Sections
AWS A3/0	Definitions of Welding Terminology
AWS B2.1-84	Standard for Welding Procedure and Performance Qualification
AWS D1.1	Code for Structural Welding
IEEE	Institute of Electronic and Electrical Engineers – Various Sections
NEC	National Electrical Code – Various Sections
NESC	National Electrical Safety Code – Various Sections
IES	Illuminating Engineering Society
NEMA	National Electrical Manufactures Association – Various Sections

NEMA AB1	Molded Case Circuit Breakers
NEMA ICS1	General Standards for Industrial Control and Systems
NEMA ICS2	Industrial Control Devices, Control and Systems
NEMA ICS4	Terminal Blocks for Industrial Use
NEMA ICS6	Enclosures for Industrial Controls and Systems
NEMA MG1	Motors and Generators
NEMA PE5	Constant-Potential-Type Electric Utility (Semi-Conductor Static Converter) Battery Chargers
NEMA SG2	High Voltage Fuses
NEMA WC2	Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
ICEA	Insulated Cable Engineering Association – Various Sections
ISA	The Instrumentation, Systems, and Automation Society – Various Sections
ISA S5.1	Instrumentation Symbols and Identification
NACE	The National Association of Corrosion Engineers – Various Sections
NACE RP018890	Standard Recommended Practice: Discontinuity (Holiday) Testing of Protective Coatings
NFPA	National Fire Protection Association – Various Sections
NFPA70	National Electric Code
NFPA No. 1	Carbon Dioxide Extinguishing Systems
NFPA No. 37	Stationary Combustion Engines and Gas Turbines
OSHA	Occupational Safety and Health Administration – Various Sections
OSHA CFR Title 29	Occupational Safety and Health Administration

## Meeting Minutes

Purpose	Post Tender Technical Clarification Meeting (2014-57952-TB)	Date	April 24, 2014
Project	100 MW Combustion Turbine Generator Project	No.	001
Chair	Stephen Parsons	Start time	2:00 PM
Location	Hydro Place – ECC Board Room	End time	4:00 PM
Attendees	Gerard Piercy, Dave Hicks, Nelson Seymour, Rick Leggo, Craig Warren, Todd Collins, Alberta Marche, Bill Mars, Thomas Canon, Jeff Canon (teleconference), Chad Allen (teleconference), Jason White (teleconference)	Minutes Taker	Todd Collins

### 1. Safety Moment:

The use of 9 V batteries and the importance of storing them properly to prevent arcing and fires – conducted by Stephen Parsons.

### 2. Technical Clarification Questions:

The purpose of the meeting was to review the bid package submitted by ProEnergy from a technical standpoint to ensure that the performance requirements listed in tender 2014-57952-TB were met. During the meeting, Hydro representatives asked the following questions and the responses to the questions by representatives from ProEnergy are provided in RED:

1. Man Power estimate needs to be verified as work on the supporting infrastructure needs to be tailored to suit (eg. Parking). Response: ProEnergy will provide a manpower estimate breakdown by week and by trade.
2. Has ProEnergy previously developed a plant with this particular engine and power turbine?  
Response: ProEnergy has installed 10 X 501F units in Venezuela but has not installed any units in North America. ProEnergy will provide additional references for Hydro to check. Will likely be from Hess Corporation in North Dakota.
3. Has ProEnergy previously developed a plant suited for a cold weather, marine environment?  
Response: ProEnergy has completed installations in Tanzania and Venezuelanear oceans. Installations have also been completed in North Dakota in a cold weather environment.
4. What's being described in the EPC proposal specifically identifies many items being provided but does not include all items as described in the tendered document. The following are examples that were included in the scope of work in the EPC tender, but not specifically mentioned in the tender submission.
  - a. Fuel oil system:

- i. Back-up DC pumps
  - ii. Fuel oil heating exchanger
  - iii. Mass flow rate heater
  - iv. Winterization of the fuel oil system
  - v. Delivery truck spill containment
- b. Lube oil system:
- i. Back-up DC oil pumps

Confirm that all items described in the Owner's tender document are being provided as part of ProEnergy's tender submission. Response: Generally, all equipment that was requested in the EPC tender has been included in the proposal. No exceptions to the specifications in the tender document have been taken and the specific equipment details will be finalized during the design phase. For example, a back-up DC power supply system has been included in the proposal for the lube oil system. However, while an allowance for a back-up DC system for the fuel oil system has been included, it isn't felt to be necessary, as the fuel forwarding skid will receive back-up power from the emergency diesel. This is an example of a design decision that would need to be discussed before specifications can be provided. It was noted that one small UPS has been included for the plant control room.

5. **What maintenance tools and lifting hardware are being provided for the CTG (i.e. for removal of major components from enclosures when overhaul work is required)?** Response: ProEnergy will provide a list of tools for performing maintenance. Tools for performing major component external lifting have been included in the proposal. However, tools for lifting internal components such as blade ring lifting assemblies have not been included, which is typical.
6. **Has an overhead crane for performing maintenance on the CTG been included in the bid?** Response: The overhead crane for performing maintenance on the CTG was assumed to be covered under the \$8M building allowance.
7. **The monthly manpower by trade matrix by trade indicates that 421, 1021, & 631 tradespeople will be required during the months of June, July, & August respectively. Are these numbers accurate? Will all these people be on site?** Response: ProEnergy indicated that the numbers provided were the totals for each month (based on weekly manpower requirements). ProEnergy will provide a manpower estimate breakdown by week and by trade. It was indicated that the maximum number of tradespeople that will be onsite is in July and is 263.
8. **Has a transformer blast wall been included in the bid?** Response: ProEnergy indicated that a blast wall has been included between the GSU and the building.
9. **Does the GSU transformer proposed have 1050 BIL bushings as was requested in the tender?** Response: ProEnergy indicated that the GSU transformer that is available has 950 BIL bushings. Dave Hicks will review the BIL requirements again with system planning to see if the 950 BIL bushings can be accommodated. If the 1050 BIL rating is a must, new bushings will need to be ordered and fitted at site. However, the 1050 bushings will likely have a long lead time and will not be available for installation in 2014. Bill Mars will check the GSU to see if there are any physical restrictions to installing 1050 BIL bushings on the existing unit. It was noted that the GSU that ProEnergy has available is new and has never been used. The transformer is stored filled with oil, but the oil will need to be replaced to meet Canadian standards. The replacement oil is included in the bid.

10. Has fencing around the CTG site been included in the bid? Response: ProEnergy indicated that fencing has been included for the GSU transformer only.
11. Has final grading and site remediation been included in the bid? No details were provided. Response: ProEnergy indicated that regular traffic areas will be paved, the fuel truck offloading area will have a concrete pad, and all other areas will have gravel.
12. Does the fire suppression system included in the bid meet FM Global standards? Response: ProEnergy indicated that the fire suppression system will be designed as per Canadian and FM Global standards. A single tie-in to the existing Holyrood fire water system will be completed and a ring main will be installed around the new plant. The GSU will not have a deluge system. The CTG has it's own inert gas or CO2 fire protection system. A truck grounding system will be provided at the fuel offloading skid.
13. What is the size of the black start diesel genset being provided? Will it start up the 2050 hp motor with across the line voltage (i.e. no soft start/reduced voltage starter)? Response: ProEnergy indicated that information will be provided along with the other information requested today. An ftp site will be setup to transfer the information by Friday, April 25<sup>th</sup>.
14. Confirm that the truck fuel unloading station has spill containment and provide information on its configuration/what it consists of. Response: ProEnergy indicated that spill containment will be provided for 110% of a delivery truck and the system will use a stand alone tank to capture any spills (i.e. it will not be discharged to the plant effluent system).
15. Confirm that exhaust stack is being supplied with snow doors and indicate how they will be actuated. Confirm that control will be integrated with the CTG controls as a permissive. Response: ProEnergy indicated that the exhaust stack does have snow doors that will be integrated into the CTG controls as a permissive on startup.
16. Information request on the demineralized water skid:
  - a. Size, construction and winterization of storage take and pipes. Response: ProEnergy indicated that the system will be a reverse osmosis type with EDI that will be installed inside the heated building. Technical information will be provided as soon as the design is advanced. ProEnergy indicated that good quality water was assumed to be available for the demin water system that was included in the bid. Hydro indicated that the water that will be provided to the site will not be filtered or treated (ie. It is raw water from the natural source). Hydro will provide water quality information for the raw water source to ProEnergy for review.
  - b. Capacity and brochure on demineralized plant. Will be available after the design advances.
17. Provision of more technical information on the following:
  - a) Lube oil cooling system. Not designed yet.
  - b) Combustion air preheat system. Not yet designed, but ProEnergy provided a verbal description of the proposed system.
  - c) Fire protection/suppression system for CTG enclosures and other enclosures. Will be included in the information that will be uploaded to the ftp site by Friday, April 25<sup>th</sup>.

- Information would include conceptual flow diagrams identifying main components with high level description. Response: ProEnergy confirmed that all systems were included in the bid. Tender submission provides two spare parts lists. Only one list includes itemized prices. Response: ProEnergy indicated that the tender period did not include sufficient time to provide pricing for both lists. In any case, capital spares are not included in the bid price, as this was not a requirement.
18. **Confirm that tender includes the provision of classroom training along with the provision of training binders along with operations and maintenance binders.** Response: ProEnergy indicated that operating and maintenance manuals and training manuals have been included in the bid. Four (4) weeks training have been included in the bid.
  19. **Please provide manufacturer and model information for all proposed Protective Relaying and metering. Are the relays new or part of the Seimens existing package.** Response: ProEnergy will follow-up and provide this information with the information transfer via the ftp site on April 25<sup>th</sup>. A protection and control system has been included for the CTG. The control panel for the CTG will be installed in the building and will be accessible by an operator through the HMI. However, a protection and control system has not been included for the GSU.
  20. **Please provide manufacturer and model information for Vibration Monitoring and Protection equipment.** Response: ProEnergy will follow-up and provide this information via the ftp site information transfer on April 25<sup>th</sup>.
  21. **Please provide manufacturer and model information for DCS, HMI and all associated software. Are these systems new or part of the Seimens existing package.** Response: Separate control systems will be provided for the CTG and the balance of plant: CTG control system – T3000 Siemens; Balance of Plant – Allen Bradley system. A communication protocol will be provided for each control system.
  22. **Please provide manufacturer and model information for actuated fuel valve.** Response: ProEnergy will follow-up and provide this information via the ftp site information transfer on April 25<sup>th</sup>. It will likely be a Siemens valve.
  23. **Will ProEnergy be developing and testing protective relay settings for the generator and step-up transformer?** Response: ProEnergy indicated that protective relay settings will be provided for the generator only. The GSU was not included in the bid.
  24. **Is there more than one control system? If so, by what means do they interact? Provide functional description of control system.** Response: Separate control systems will be provided for the CTG and the balance of plant: CTG control system – T3000 Siemens; Balance of Plant – Allen Bradley system. A communication protocol will be provided for each control system.
  25. **Is the main control system provided with processor redundancy?** Response: ProEnergy indicated that processor redundancy was included in the package.
  26. **There are no spare parts indicated for any of the PICC equipment, please clarify.** Response: ProEnergy indicated that spare parts have not been listed at this point because the control system design has not been completed. A spare parts list will be provided when the design has been finalized.
  27. **Following review of PICC details, is ProEnergy able to consider substitutions of equipment with which Hydro Operations forces have more familiarity and training?** Response: ProEnergy

indicated that substitutions can be contemplated during the engineering phase if they do not have an impact on schedule.

28. **Is the governor function done in separate control system, or integrated into the main system.**  
Response: ProEnergy indicated that the governor controls are included in the Siemens T3000 system for the CTG.
29. **What is the make/model of the AVR (Voltage Regulator)?** Response: ProEnergy will follow-up and provide this information via the ftp site information transfer on April 25<sup>th</sup>.
30. **Provide details on remote operation.** Response: ProEnergy indicated that remote operation has been included in the bid and the details will be provided during the engineering phase.
31. **Please provide a clear copy of the single line.** Response: ProEnergy will follow-up and can provide a single line diagram now for the package, but the detailed SLDs have not yet been developed and will be provided during the engineering phase.
32. **Has ProEnergy included Arc Flash protection for MCCs and switchgear as applicable to voltages present?** Response: ProEnergy indicated that arc flash protection has been included in the bid and will be covered during the engineering study.
33. **Please provide details on the primary motive power (1529kW) for starting - is it intended to be powered from the customer to enable start of the units?** Response: ProEnergy indicated that if the grid is available, motive power will come from the grid. If power from the grid is not available, the emergency black start diesel will provide power for start-up.
34. **Please provide specifications on the auxiliary transformer (s).** Response: ProEnergy indicated that this detail will be provided on the single line diagram.
35. **Please provide battery system details such as voltage and ampere hour rating.** Response: ProEnergy indicated that this detail will be provided during the engineering phase.
36. **Please provide details on the black start system - what type of system?** Response: Proenergy provided a description of the system, but indicated that this detail will be provided during the engineering phase.
37. **Gerard Piercy provided a description of what Hydro are providing as a level site. Generally, just removal of sods/organics, general leveling only. The geotechnical investigation is complete and results should be available early next week.**
38. **The proposed location of the fuel tanks was discussed and will need to be explored further in detailed design, as they weren't able to be located within the intended footprint. The location will need to be coordinated with the 230kV transmission line route as well.**
39. **No fencing included. Shown as owner supply. Confirm that fencing around the GSU is provided in the Tender, as it is a requirement.** Response: ProEnergy indicated that fencing has been included for the GSU transformer.
40. **Can the 100 MW unit proposed be retrofitted to provide synchronous condensing capability?**  
Response: ProEnergy indicated that the system can be retrofitted to provide synchronous condensing capability, but it can not be done in the timeframe available for this project.
41. **Confirm the unit's low load performance capability.** Response: ProEnergy indicated that the performance characteristics at a range of loads will be provided. The information will be requested from Seimens right away. Hydro to also indicate the minimum desired operating load, so ProEnergy can check the performance at that load as well. .

[Faint, illegible text covering the majority of the page, likely bleed-through from the reverse side.]

100 MW Combustion Turbine Generation - Holyrood



## Meeting Minutes

<b>Purpose</b>	<b>Post Tender Alignment Meeting</b>	<b>Date</b>	<b>April 30, 2014 (2:30pm – 5:00pm) Continued May 1, 2014 (9:00am-1:00pm)</b>
<b>Chair</b>	Stephen Parsons	<b>Time</b>	See Above
<b>Location</b>	St. John's	<b>Minutes Taker</b>	Stephen Parsons
<b>Attendees</b>	John MacIsaac, Geoff Young, Randal Orr, Jeff Canon, Thomas Canon, Bill Mars, Scott Dieball, Chad Allan, Gerard Piercy (May 1), Craig Warren (May 1), Dave Hicks (May 1), Nelson Seymour (May 1),		
<b>Regrets</b>	Terry Gardiner, Rick Leggo		

Key Points Discussed		
No.	Topic	Highlights/Decisions
1.	Safety Moment (Steve Parsons)	<ul style="list-style-type: none"> <li>- You must intervene if you see an unsafe situation on a construction site.</li> </ul>
2.	EPC Contract and interaction between ProEnergy and NLH team	<ul style="list-style-type: none"> <li>- Reviewed organizational charts for the NLH team and the ProEnergy Team.</li> <li>- NLH team will support the EPC contract requirements (review of submittals, responses to RFIs, oversight of progress, etc), and will participate in the design of the interconnection work (eg. transmission line, terminal station, etc).</li> <li>- ProEnergy team org chart is abbreviated and does not shown all of the support functions.</li> <li>- Engineering subcontractor will be Stantec, based in New Brunswick and supported by Maine office.</li> <li>- Civil, Mech, Elec subcontractor will be Pennecon.</li> </ul>
3.	Project Battery Limits	<ul style="list-style-type: none"> <li>- Had general discussion around interfaces between the EPC contract work and the interconnection work that is to be executed by NLH.</li> <li>- It was agreed that a detailed interface list would be developed and would be included as schedule in the contract.</li> <li>- ProEnergy will provide a deliverables list and NLH will indicate which deliverables require review. These deliverables will be indicated on the schedule.</li> </ul>
4.	Commercial Term Discussion	<ul style="list-style-type: none"> <li>- Geoff Young and Scott Dieball had a break-out meeting to begin contract commercial term discussion. All commercial discussions captured in contract document redlines with tracked changes.</li> </ul>

Key Points Discussed		
No.	Topic	Highlights/Decisions
5.	Project Schedule	<ul style="list-style-type: none"> <li>- ProEnergy will produce a Level 3 schedule which shows all of the entity interactions and interface deliverables. All engineering, procurement, and construction activities to be shown.</li> <li>- Engineering is beginning immediately based on letter of intent that has been issued.</li> <li>- NLH has begun engineering for enabling works, such as pole relocation, initial civil works, terminal station, etc.</li> </ul>
6.	Major Equipment	<ul style="list-style-type: none"> <li>- ProEnergy will begin by completing an inventory of all of the CTG equipment that is stored in Memphis, TN. ProEnergy will supply any equipment that is not with the package. Supplied equipment shall be new, but ProEnergy may propose refurbished equipment for NLH consideration on a case by case basis.</li> <li>- GSU transformer that was included in the bid has bushings with a 900 BIL rating. NLH confirmed that this is acceptable.</li> </ul>
7.	Payment Schedule	<ul style="list-style-type: none"> <li>- Milestone payment schedule to be developed and included in the contract document. Milestone payments will be progress based and not time based.</li> </ul>
8.	Construction Resources and Work Load	<ul style="list-style-type: none"> <li>- ProEnergy have coordinated with their subcontractors and they are not concerned with availability of construction labour to execute the project.</li> <li>- ProEnergy will be bringing superintendents and supervisors to the project and trade workers will be local hires.</li> <li>- ProEnergy recognize the importance of schedule and profile of project and will put best resources on the project. Jeff Canon (ProEnergy CEO) will be providing close oversight of the project.</li> </ul>

Key Points Discussed		
No.	Topic	Highlights/Decisions
9.	Site Layout	<ul style="list-style-type: none"> <li>- Investigated possibility of moving the existing black start diesel generators to make room for the 2.5ML fuel tank. It was concluded that this was not possible and the layout that was included in the ProEnergy bid was accepted.</li> <li>- Additional survey and geotechnical investigation in the proposed tank area will be performed by NLH.</li> <li>- ProEnergy will advise which area in the CTG footprint that needs to be grubbed off and when it will need to be completed.</li> </ul>
10.	Building Enclosure	<ul style="list-style-type: none"> <li>- Building is meant to protect against weather and will be of simple design. Will consist of insulated metal wall and roof panels on steel structure (non-combustible construction).</li> <li>- No O/H crane is required. Provisions for lifting the equipment out of the building with a mobile crane shall be provided (Removable roof panel). Access and layout to suit use of 200 tonne mobile crane.</li> <li>- Bay doors to also be provided for equipment removal.</li> <li>- Building will have concrete floor throughout for safety and housekeeping.</li> <li>- Building to be heated electrically.</li> <li>- A design and cost estimate will need to be advanced by ProEnergy before the milestone payment amounts can be determined for the building. The building allowance (\$8M) will not necessarily be expended.</li> </ul>
11.	Construction Services	<ul style="list-style-type: none"> <li>- NLH to provide source of 600V power for construction power. ProEnergy to confirm requirements.</li> <li>- NLH to provide phone line for communications.</li> <li>- Laydown area and contractor trailer area identified.</li> <li>- Contractor personnel parking will be outside of the Holyrood Generating Station gate.</li> <li>- System for construction personnel access to be worked out to avoid bottlenecks.</li> </ul>

Key Points Discussed		
No.	Topic	Highlights/Decisions
12.	Balance of Plant Equipment Notes	<ul style="list-style-type: none"> <li>- T-3000 CTG control module is nearing the end of its typical lifecycle (although it is unused). NLH agreed that T-3000 may be replaced with a newer Allan Bradley system.</li> <li>- A 13.8kV interconnection line for redundant black start connection to Holyrood Generating Station will be required. This would be a change in scope and will be explored further after contract is established.</li> <li>- GSU protection is not currently in the EPC scope of work. Adding this to the contract will be explored further after contract is established.</li> <li>- A communications architecture drawing needs to be prepared to demarcate the communication interfaces. A meeting between Phil Jeans (NLH) and Jeff Bauer (ProEnergy) to be arranged for early next week to establish interface.</li> <li>- Raw water quality data is required so that ProEnergy can determine what processing is required to produce demineralized water for the plant. NLH to send raw water quality data.</li> <li>- ProEnergy will design the firewater loop around the site. It will be tied into the plant fire water supply loop.</li> <li>- GSU deluge system included in scope.</li> <li>- Plant effluents include reject from reverse osmosis system, unit backwash. Effluents directed to oil/water separator provided by ProEnergy.</li> </ul>
13.	Shipping	<ul style="list-style-type: none"> <li>- NLH will be importer of record for the equipment and materials.</li> <li>- ProEnergy will maintain risk of loss and liability for the equipment and materials until it is incorporated in the work.</li> <li>- ProEnergy is responsible for all shipping and transportation including required permits between source(s) and the Holyrood Generating Station site.</li> </ul>



**Invoice To:**

Newfoundland & Labrador Hydro  
 Hydro Place 500 Columbus Drive  
 P O Box 12400  
 St John's NL A1B 4K7

PAGE:	1
ORDER DATE(YY/MM/DD):	14/05/14
PURCHASE ORDER NUMBER:	20962-000 OB

**Vendor:**

ProEnergy Services, LLC  
 2001 ProEnergy Blvd.  
 Sedalia MO 65301

SHIPPING TERMS: **FOB: Destination**

Ship To:

Not Applicable

Fax: 713-413-3600

Currency: CAD

ITEM / HYDRO PART # / DESCRIPTION	QUANTITY	UM	UNIT PRICE	TOTAL	PROMISED ON SITE	REF NUMBER
001 902 DEPOSIT/REFUNDABLE ON COMBUSTION TURBINE GENERATOR, AS PER CONTRACT 2014-59752-TB DATED APRIL 21, 2014 SUBJECT TO INDEPENDENT ENGINEER'S REVIEW OF THE STORED EQUIPMENT IN MEMPHIS, TN, USA IN TERMS OF "FIT FOR PURPOSE" AND SUBJECT TO COMPLETION OF INVESTMENT EVALUATION REVIEW AND DUE DILIGENCE REVIEW		LS	.0000	3,000,000.00	14/05/01	57952 OQ
002 902 PRE-ENGINEERING SERVICES as per "Letter of Intent" dated April 28, 2014.		LS	.0000	830,000.00	14/05/01	

**TOTAL 3,830,000.00**

DIRECT INQUIRIES TO: **Theresa Barnes - tbarnes@nlh.nl.ca**

PHONE NUMBER: (709) 737-1490    TERMS: **Net 30 Days**  
 FAX NUMBER: (709) 737-1795    BRANCH/PLANT: **1818**

PRICES SHOWN ARE EXCLUSIVE OF HST & GST. HYDRO STANDARD TERMS AND CONDITIONS APPLY AND ARE AVAILABLE ON OUR WEBSITE - WWW.NLH.NL.CA

**PLEASE CONFIRM RECEIPT OF THIS ORDER AND DELIVERY SCHEDULE TO THE SENDER, VIA FAX OR E-MAIL, WITHIN 24 HOURS.**

THE PURCHASE ORDER NO. MUST APPEAR ON ALL INVOICES, BILLS OF LADING, PACKING SLIPS AND CORRESPONDENCE.

**Schedule F**

**List of Interfaces and Exclusions**

**I. Interfaces**

1. 230kV Transmission line:
  - A. Interface at high side of GSU transformer bushings, Contractor to supply a four hole pad on the top of the High Voltage Bushings for Owner to connect to. Owner will supply and install the take off structure.
  - B. O/H ground wire will be brought down the take off structure and a pig tail left at ground level for contractor to connect to the CTG site ground grid.
2. Fire Water:
  - A. Contractor's designed/supplied/installed u/g fire protection ring main to connect to existing u/g fire pipeline at nearest suitable location at the site boundary.
3. Raw Water Supply:
  - A. Interface is u/g blind flange connection at the site boundary (approximate location shown on shown on drawing B1-1403-121-C-003). Any required pumps and water treatment to suit the combustion turbine plant requirements are in the Contractor's scope of work.
4. Effluent:
  - A. Clean discharge from Oil/Water Separator: Interface is u/g blind flange connection to be located at the site boundary at a point nearest to existing drainage infrastructure (approximate location shown on shown on drawing B1-1403-121-C-003).
  - B. Contaminated discharge from Oil/Water Separator: Interface is pipe connection at the oil water separator that is suitable for connection with vacuum truck.
  - C. Sewage from washrooms in the CTG building: interface is u/g blind flange to be located at the site boundary at a point nearest to existing sewage infrastructure (approximate location shown on shown on drawing B1-1403-121-C-003).
  - D. Fuel loading area drainage: Interface is u/g blind flange connection to be located at the site boundary at a point nearest to existing drainage infrastructure (approximate location shown on shown on drawing B1-1403-121-C-003).
  - E. GSU containment area drainage: to be directed to Contractor supplied/installed oil/water separator.
5. Grounding:
  - A. Contractor designed/supplied/installed ground grid to be interconnected to terminal station ground grid at two locations (approximate locations shown on shown on drawing B1-1403-121-C-003). Contractor to design/supply/install the

interconnection. Ground wire to be 4/0 MHD. All buried connections to be exothermic, Cadweld or equivalent.

6. Construction Power and Communications:
  - A. Owner is to provide Contractor with a single 500 Amp 600 Volt service.
  - B. Owner to provide Contractor with a single phone line.
  - C. Owner to provide Contractor with a suitable internet connection.
7. Construction Trailers/Lunch Rooms/Wash Cars/etc.
  - A. All construction trailers/lunch rooms/wash cars/etc. to be provided by Contractor to suit their purpose. Trailers to be located in the designated areas shown on drawing B1-1403-121-C-003).
8. Construction water for construction trailers (non-potable):
  - A. Contractor to tie into existing water line located adjacent to proposed trailer park area (approximate location shown on shown on drawing B1-1403-121-C-003).
9. Construction Sewage:
  - A. Contractor to supply and maintain sewage holding tanks suitable for expected construction work force.
10. Construction Work Force Parking:
  - A. Owner to provide designated space outside of existing Holyrood Generating Station (HGS) gate (unsecured area). Security protocol for entering HGS site to be established.
11. Combustion Generator and Unit Breaker
  - A. Protection
    - i. Generator Protection including relay installation, wiring and settings development within the confines of the new plant shall be performed by Contractor in conjunction with its subcontractor(s).
    - ii. For any available contacts deemed necessary between the generator protection and switchgear in the Holyrood switchyard, Contractor shall supply and install an interface panel (either a fibre optic patch panel or a supervisory junction box) and electrical conduits that shall penetrate the building, thereby allowing cables to be installed from the combustion turbine generator to the Holyrood Switchyard by Owner.
    - iii. Terminations at new Combustion Turbine plant cabinets from the New Combustion Turbine shall be performed by Contractor's subcontractor. Terminations of cables coming from the existing Holyrood Switchyard shall be terminated by Owner.
    - iv. Installation and termination of cables at the Holyrood switchyard on new switchgear equipment shall be performed by others.
    - v. Terminations at Holyrood switchyard on existing switchgear equipment shall be performed by NL Hydro Operations.

- vi. The commissioning of the new combustion turbine and controls shall be completed by Contractor and it's subcontractor. This includes transformer testing, unit breaker function testing, protection circuits on the unit, and associated equipment as per the commissioning manual. However, once gas turbine is ready to be put on line to the grid as determined by the project team, Owner will be part of this endeavor and the testing/commissioning team. SCADA point verifications will be completed by Owner.

**B. Control and Indication**

- i. Plant Controls, including Combustion Generator and Balance of Plant, shall be developed, installed and tested by Contractor in conjunction with its subcontractor(s).
- ii. Contractor shall provide Owner with a list of SCADA points that are available. Owner in consultation with Contractor will determine which points are selected for use.
- iii. The RTU at the combustion turbine plant shall be supplied and installed by Owner in the Contractor provided switchgear.
- iv. Cabling between the new Combustion Turbine Plant cabinets and the Owner RTU shall be installed by Contractor's subcontractor, including a supervisory junction box as required.
- v. Interface wiring from the new Combustion Turbine Plant to the Owner RTU, including Balance of Plant, shall be terminated by NL Hydro Operations at the RTU.
- vi. Interface wiring from Owner RTU to the new Combustion Turbine Plant, including Balance of Plant, shall be terminated by Contractor's subcontractor at the new plant cabinets, including the supervisory junction box.
- vii. The commissioning of the new combustion turbine and controls shall be completed by Contractor and it's subcontractor. This includes transformer testing, unit breaker function testing, protection circuits on the unit, and associated equipment as per the commissioning manual. However, once gas turbine is ready to be put on line to the grid as determined by the project team, Owner will be part of this endeavor and the testing/commissioning team. SCADA point verifications will be completed by Owner.

**12. Communications and Remote Operation Interconnection:**

- A. Contractor shall supply and install adequate cable tray for telephone and Ethernet wiring.
- B. Contractor to provide a quantity of two (2) , 150 mm diameter schedule 40 Rigid PVC conduits, complete with long radius bends, from the inside of the electrical room of the combustion turbine to extend a minimum of 1.0 meter beyond the

exterior of the building's foundation, on the North side of the combustion turbine. Those conduits are to accommodate future requirements for control cables between the thermal plant and the control room of the combustion turbine.

## II. Scope of Work Exclusions

### A. Owner Supplied Items

- Demin Water Analysis
- Site Survey / GeoTech
- Resistivity Report
- Coordination Study Report
- Fire water delivered to the site boundary
- Raw water connection at the site boundary
- Sewer connection at the site boundary
- Construction power and back feed capability within the schedule requirements
- Ground grid tie-in points at the site boundary
- Adequate supply of liquid fuel to the site boundary in accordance with OEM specifications
- All local permits required to build, test and operate the power plant and associated pipelines
- A project site that is clean, flat, and level, requiring minimal cut and fill to prepare for construction and with a soil bearing capacity of at least 3,000 psf. Note: This does not include the proposed alternate fuel oil storage and truck offloading site that will be developed completely by ProEnergy.
- Fuel Storage Area- Contractor has an allocated allowance currently of U.S.\$ 897,867.00 in the contract price. Costs exceeding the allocated allowance will be reimbursed by Owner on a cost basis.
- Repair of any roads inside of the gate to the site effected by the transport of the major equipment

### B. Other Out of Scope Items

- Pre-existing hazardous site conditions and archaeological finds
- Any required remediation due to existing soil contamination
- Any excavated soils which are required to be removed from the project site
- Contractor has prepared a route survey however if extraordinary work must be undertaken by PES during the transportation of equipment, this will be to the Owner's account on a cost basis. Examples of extraordinary work would be repair work to bridges, inability of wharfing to withstand delivery weight, inability to land at the designated port due to weight or size of load. Examples of work that is not extraordinary are lifting wires, laying plate on bridges for load dispersal, and short detours.
- Pilings, piers, engineered soil, removal of rock, or subterranean obstacles whatsoever