

**NEWFOUNDLAND AND LABRADOR  
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES**

**AN ORDER OF THE BOARD**

**NO. P.U. 3(2018)**

1 **IN THE MATTER OF** the *Electrical Power*  
2 *Control Act, 1994*, SNL 1994, Chapter E-5.1 (the  
3 “*EPCA*”) and the *Public Utilities Act*, RSNL 1990,  
4 Chapter P-47 (the “*Act*”), as amended, and regulations  
5 thereunder; and  
6

7 **IN THE MATTER OF** an application by  
8 Newfoundland and Labrador Hydro, acting in its  
9 capacity as the Newfoundland and Labrador System  
10 Operator, for approval of pro-forma Transmission Service  
11 Agreements and interim transmission rates and rate methodology,  
12 and Transmission Policies and Procedures and Code  
13 of Conduct for transmission system operations, pursuant  
14 to sections 71 and 75 of the *Act*.  
15

16 **WHEREAS** Newfoundland and Labrador Hydro (“Hydro”) is a corporation continued and  
17 existing under the *Hydro Corporation Act, 2007*, is a public utility within the meaning of the *Act*,  
18 and is also subject to the provisions of the *EPCA*; and  
19

20 **WHEREAS** the Newfoundland and Labrador System Operator (“NLSO”) is a functionally  
21 separate division of Hydro which is responsible for the safe and reliable operation of the  
22 Newfoundland and Labrador transmission system, including the administration and provision of  
23 transmission service; and  
24

25 **WHEREAS** on December 21, 2017 the Lieutenant Governor in Council, pursuant to section 5.1  
26 of the *EPCA*, issued Order in Council OC2017-380 which directs the Board to adopt a policy that  
27 the submissions of the NLSO relating to the transmission of electricity over the Province’s high-  
28 voltage transmission system be approved on the following terms:

- 29 (i) the pro-forma Transmission Service Agreements, and attached rates and rate  
30 methodology, be approved on an interim basis; and  
31 (ii) the Transmission Policies and Procedures and Code of Conduct for transmission  
32 system operations to be adopted by the NLSO be approved until such time as the  
33 Board reviews the interim proposals; and  
34

35 **WHEREAS** on February 6, 2018 Hydro, acting in its capacity as the NLSO, filed an application  
36 with the Board requesting approval of pro-forma Transmission Service Agreements, interim  
37 transmission rates and the methodology for the development of rates for transmission service, the

1 NL Transmission Policies and Procedures, and the Code of Conduct for NL Transmission System  
2 Operations (the “Application”); and  
3

4 **WHEREAS** the Application stated that Hydro seeks to provide an open access transmission  
5 regime for the Newfoundland and Labrador transmission system to ensure that all transmission  
6 customers are provided with open, non-discriminatory and non-preferential access to transmission  
7 service; and  
8

9 **WHEREAS** the Application proposed two transmission rates:

- 10 (i) an initial interim rate to become effective immediately and to remain in effect until  
11 the Labrador-Island Link comes on-line; and  
12 (ii) an interim rate to become effective when the Labrador-Island Link comes on-line;  
13 and  
14

15 **WHEREAS** the Board is satisfied that, pursuant to OC2017-380, it is required to approve, on an  
16 interim basis, the pro-forma Transmission Service Agreements, transmission rates and rate  
17 methodology, the NL Transmission Policies and Procedures and the Code of Conduct for NL  
18 Transmission System Operations, as submitted by Hydro.  
19  
20

21 **IT IS THEREFORE ORDERED THAT:**  
22


- 23 1. The pro-forma Transmission Service Agreements, the NL Transmission Policies and  
24 Procedures and the Code of Conduct for NL Transmission System Operations, as filed with  
25 the Application, are approved on an interim basis.  
26  
27 2. The rates for transmission service as set out in Schedule A to this Order are approved, on an  
28 interim basis, effective February 9, 2018.  
29  
30 3. The rates filed by Hydro for transmission service when the Labrador-Island Link comes on-  
31 line are approved on an interim basis, and Hydro shall file an application for approval of the  
32 effective date of these rates at least seven days before these rates are to become effective.  
33  
34 4. Hydro shall pay the expenses of the Board incurred in connection with this matter.

**DATED** at St. John's, Newfoundland and Labrador, this 9<sup>th</sup> day of February, 2018.



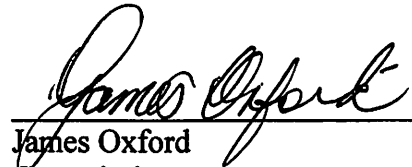
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Darlene Whalen, P. Eng.  
Vice-Chair



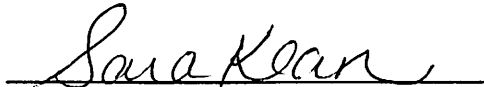
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Dwanda Newman, LL.B.  
Commissioner



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James Oxford  
Commissioner



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Sara Kean  
Assistant Board Secretary

## SCHEDULE 1

### Scheduling, System Control and Dispatch Service

This service is required to schedule the movement of power through, out of, within, or into a Control Area. This service can be provided only by the operator of the Control Area in which the transmission facilities used for transmission service are located. Scheduling, System Control and Dispatch Service is to be provided directly by the Transmission Provider (if the Transmission Provider is the Control Area operator) or indirectly by the Transmission Provider making arrangements with the Control Area operator that performs this service for the Transmission Provider's Transmission System. The Transmission Customer must purchase this service from the Transmission Provider or the Control Area operator. The charges for Scheduling, System Control and Dispatch Service, payable monthly, are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

#### Point-to-Point Transmission Service:

- 1) Yearly Delivery: One-twelfth of Cdn \$ 7,879.83 /MW of Reserved Capacity per year.
- 2) Monthly Delivery: Cdn \$ 656.65 /MW of Reserved Capacity per month.
- 3) Weekly Delivery: Cdn \$ 151.54 /MW of Reserved Capacity per week.
- 4) On-Peak Daily Delivery: Cdn \$ 30.31 /MW of Reserved Capacity per day.
- 5) Off-Peak Daily Delivery: Cdn \$ 21.59 /MW of Reserved Capacity per day.
- 6) On-Peak Hourly Delivery: Cdn \$ 1.89 /MW of Reserved Capacity per hour.
- 7) Off-Peak Hourly Delivery: Cdn \$ 0.90 /MW of Reserved Capacity per hour.

#### Network Integration Transmission Service:

- 1) Monthly Delivery: Cdn \$ 656.65 /MW of Network Integration Service per month.

On-Peak days for this service are defined as Monday to Friday. On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.

## SCHEDULE 2

### Reactive Supply and Voltage Control from Generation or Other Sources Service

In order to maintain transmission voltages on the Transmission Provider's transmission facilities within acceptable limits, generation facilities (in the Control Area where the Transmission Provider's transmission facilities are located) and non-generation resources capable of providing this service that are under the control of the control area operator are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation or Other Sources Service must be provided for each transaction on the Transmission Provider's transmission facilities. The amount of Reactive Supply and Voltage Control from Generation or Other Sources Service that must be supplied with respect to the Transmission Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the Transmission Provider.

Reactive Supply and Voltage Control from Generation or Other Sources Service is to be provided directly by the Transmission Provider (if the Transmission Provider is the Control Area operator) or indirectly by the Transmission Provider making arrangements with the Control Area operator that performs this service for the Transmission Provider's Transmission System. The Transmission Customer must purchase this service from the Transmission Provider or the Control Area operator. The charges for such service, payable monthly, are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by the Control Area operator.

#### **Point-to-Point Transmission Service:**

- |                              |   |
|------------------------------|---|
| 1) Yearly Delivery:          | One-twelfth of Cdn \$ 2,942.11 /MW of Reserved Capacity per year. |
| 2) Monthly Delivery:         | Cdn \$ 245.18 /MW of Reserved Capacity per month.                 |
| 3) Weekly Delivery:          | Cdn \$ 56.58 /MW of Reserved Capacity per week.                   |
| 4) On-Peak Daily Delivery:   | Cdn \$ 11.32 /MW of Reserved Capacity per day.                    |
| 5) Off-Peak Daily Delivery:  | Cdn \$ 8.06 /MW of Reserved Capacity per day.                     |
| 6) On-Peak Hourly Delivery:  | Cdn \$ 0.71 /MW of Reserved Capacity per hour.                    |
| 7) Off-Peak Hourly Delivery: | Cdn \$ 0.34 /MW of Reserved Capacity per hour.                    |

#### **Network Integration Transmission Service:**

- |                      |   |
|----------------------|---|
| 1) Monthly Delivery: | Cdn \$ 245.18 /MW of Network Integration Service per month. |
|----------------------|---|

On-Peak days for this service are defined as Monday to Friday. On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.

## SCHEDULE 3

### Regulation and Frequency Response Service

Regulation and Frequency Response Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled Interconnection frequency at sixty cycles per second (60 Hz). Regulation and Frequency Response Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) and by other non-generation resources capable of providing this service as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with the Transmission Provider (or the Control Area operator that performs this function for the Transmission Provider). The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Provider obligation to offer this service is conditional upon the Transmission Provider having sufficient visibility and control of the resources in the area in which the load is located to allow the Transmission Provider to perform its balancing function in a non-discriminatory fashion. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Regulation and Frequency Response Service obligation. The Transmission Provider will take into account the speed and accuracy of regulation resources in its determination of Regulation and Frequency Response reserve requirements, including as it reviews whether a self-supplying Transmission Customer has made alternative comparable arrangements. The amount of and charges for Regulation and Frequency Response Service are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

Intra-hour performance will be monitored for specific behavior that introduces a disproportionate burden on the Transmission Provider with respect to regulation and load following. Sanctions may be invoked. The determination of whether or not such activity is disproportionate will take into account the extent to which the offending party is already paying the Transmission Provider for, or self-supplying to the Transmission Provider, the regulation and/or load following services. This determination will give consideration to the net effect of aggregated intra-hour behaviors of Non-Dispatchable Generators before any such sanction is invoked.

#### Regulation and Frequency Response (Point-to-Point Transmission Service):

- 1) Yearly Delivery: One-twelfth of Cdn \$ 14,711.22 /MW of Reserved Capacity per year.
- 2) Monthly Delivery: Cdn \$ 1,225.93 /MW of Reserved Capacity per month.
- 3) Weekly Delivery: Cdn \$ 282.91 /MW of Reserved Capacity per week.
- 4) On-Peak Daily Delivery: Cdn \$ 56.58 /MW of Reserved Capacity per day.

- 5) Off-Peak Daily Delivery: Cdn \$ 40.30 /MW of Reserved Capacity per day.
- 6) On-Peak Hourly Delivery: Cdn \$ 3.54 /MWh.
- 7) Off-Peak Hourly Delivery: Cdn \$ 1.68 /MWh.

**Regulation and Frequency Response (Network Integration Transmission Service):**

- 1) Monthly Delivery: Cdn \$ 1,225.93 /MW of Network Integration Service per month.

There will be an adder applied to these prices when the Transmission Provider incurs extra costs. These extra costs will be limited to out-of-order dispatch costs associated with revised generation or load dispatch for the purpose of providing this ancillary service. The minimum period for which this service is available from the Transmission Provider is one day

On-Peak days for this service are defined as Monday to Friday. On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.



## SCHEDULE 4

### Energy Imbalance Service

Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy supplied to or withdrawn from the NL Transmission System over a single hour. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Energy Imbalance Service obligation. The Transmission Provider may charge a Transmission Customer a penalty for either hourly energy imbalances under this Schedule.

For a bilateral schedule of a single load and its single generator, this ancillary service will be applied to the net of the generation and load balance. Otherwise, this ancillary service will be applied separately to deviations from load schedules and deviations from generation schedules.

Energy Imbalance Service does not apply to inadvertent energy imbalance that occur as a result of actions directed by the Control Area operator to:

- Balance total load and generation for the Control Area, or a portion thereof, through the use of Automatic Generation Control;
- Maintain interconnected system reliability, through actions such as re-dispatch or curtailment;
- Support interconnected system frequency; or to
- Respond to transmission, generation or load contingencies.

On-Peak days for this service are defined as Monday to Friday. On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.

For each Transmission Customer taking service under the Energy Imbalance Service, the Transmission Provider will provide such service under the following terms and conditions:

Deviation bands as follows:

1. deviations within +/- 1.5 percent (with a minimum of +/- 2 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be netted on a monthly basis and settled financially, at the end of the month, at 100 percent of incremental or decremental cost as set forth below;
2. deviations greater than +/- 1.5 percent up to +/- 7.5 percent (or greater than +/- 2 MW up to +/- 10 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled financially, at the end of each month, at 110 percent of incremental cost or 90 percent of decremental cost as set forth below; and

3. deviations greater than +/- 7.5 percent (or +/- 10 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled financially, at the end of each month, at 125 percent of incremental cost or 75 percent of decremental cost as set forth below.

For purposes of this Schedule, incremental cost and decremental cost represent the Transmission Provider's actual average hourly cost of the last 10 MW dispatched for any purpose, i.e.g., to supply the Transmission Provider's Native Load Customers, correct imbalances, or make off-system sales, based on the capacity weighted cost of fuel including unit heat rates, start-up costs (including any commitment and redispatch costs), incremental operation and maintenance costs, and purchased and interchange power costs and taxes, as applicable.

**Energy Imbalance Service:**

- 1) Off-schedule Delivery: Cdn \$ 196.86 /MWh.

## SCHEDULE 5

### Operating Reserve - Spinning Reserve Service

Spinning Reserve Service (also referred to as Contingency Reserves – Spinning) is needed to serve load immediately in the event of a system contingency. Spinning Reserve Service may be provided by generating units that are on-line and loaded at less than maximum output and by non-generation resources capable of providing this service. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Spinning Reserve Service obligation. The aforementioned Transmission Provider obligation to offer this service is conditional upon the Transmission Provider having sufficient visibility and control of the resources in the area in which the load is located to allow the Transmission Provider to perform its balancing function in a non-discriminatory fashion. Spinning Reserve Service requirements arising from contingencies in excess of an incremental threshold will be the responsibility of parties causing such large contingencies. The Incremental Reserve threshold as defined by the Transmission Provider shall be established and published on OASIS and its public website. The amount of and charges for Spinning Reserve Service are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

The charges for this ancillary service, payable monthly, are set forth below:

**Operating Reserve – Spinning Reserve (Point-to-Point Transmission Service):**

- |                              |   |
|------------------------------|---|
| 1) Yearly Delivery:          | One-twelfth of Cdn \$ 26,258.80/MW of Reserved Capacity per year. |
| 2) Monthly Delivery:         | Cdn \$ 2,188.23 /MW of Reserved Capacity per month.               |
| 3) Weekly Delivery:          | Cdn \$ 504.98 /MW of Reserved Capacity per week.                  |
| 4) On-Peak Daily Delivery:   | Cdn \$ 101 /MW of Reserved Capacity per day.                      |
| 5) Off-Peak Daily Delivery:  | Cdn \$ 71.94 /MW of Reserved Capacity per day.                    |
| 6) On-Peak Hourly Delivery:  | Cdn \$ 6.31 /MWh.   |
| 7) Off-Peak Hourly Delivery: | Cdn \$ 3.00 /MWh.   |

**Operating Reserve – Spinning Reserve (Network Integration Transmission Service):**

Monthly Delivery:	Cdn \$ 2,188.23 /MW of Reserved Capacity per month.
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On-Peak days for this service are defined as Monday to Friday. On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.

There will be an adder applied to these prices when the Transmission Provider incurs extra costs. These extra costs will be limited to out-of-order dispatch costs associated with revised generation or load dispatch for the purpose of providing this ancillary service. Out-of-order dispatch costs will be calculated as the difference between the cost of serving load and the cost of serving load plus ancillaries. These costs will be charged to Transmission Customers that take this service on a pro rata share basis as a function of the quantity of the service purchased from the Transmission Provider at the time that the out-of-order occurs.

### **Supplier Obligations**

Transmission Customers that self-supply this service, and third party suppliers, shall provide between 100 and 110% of the stated MW amount within ten minutes of notification by the Transmission Provider to activate these reserves. The reserves shall be sustainable for sixty minutes from activation.

Suppliers who offer Operating Reserves have an obligation to supply these reserves when notified by the Transmission Provider. Due to the infrequent occurrence of this and the importance of reserves to overall system reliability, a penalty will be applied to any supplier who is unable to meet its obligations. The penalty will be equal to one month's charge for the amount of deficient reserves for each failure to supply.

### **Activation of Reserves**

When a contingency occurs, the Transmission Provider will activate, at its sole discretion, sufficient reserves from (1) those under contract with the Transmission Provider, (2) those provided by Transmission Customers, (3) those contracted from third parties by Transmission Customers. Typically the activation will be done to minimize the overall cost of supplying reserves and to return the system to pre-contingency conditions within the time required.

Operating Reserve service will only be available for the hour in which the contingency occurs and the following two hours. The quality of service will be firm for this time period. The Transmission Customer is responsible to address any deficiencies of its supply by the end of that time period. Any unscheduled energy withdrawal will be treated as Energy Imbalance as per Schedule 4.

## SCHEDULE 6

### Operating Reserve - Supplemental Reserve Service

Supplemental Reserve Service (also referred to as Conditional Reserve – Supplemental) is needed to serve load in the event of a system contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided by generating units that are on-line but unloaded, by quick-start generation or by interruptible load or other non-generation resources capable of providing this service. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Supplemental Reserve Service obligation. The aforementioned Transmission Provider obligation to offer this service is conditional upon the Transmission Provider having sufficient visibility and control of the resources in the area in which the load is located to allow the Transmission Provider to perform its balancing function in a non-discriminatory fashion. Supplemental Reserve Service requirements arising from contingencies in excess of an incremental threshold will be the responsibility of parties causing such large contingencies. The Incremental Reserve threshold as defined by the Transmission Provider shall be established and published on OASIS and its public website. The amount of and charges for Supplemental Reserve Service are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

#### **6(a) Operating Reserve - Supplemental (10 minute)**

This ancillary service is the portion of Operating Reserve – Supplemental that is available within 10 minutes. The charges for this ancillary service, payable monthly, are set forth below:

#### **Operating Reserve – Supplemental Reserve (Point-to-Point Transmission Service):**

- |                              |   |
|------------------------------|---|
| 1) Yearly Delivery:          | One-twelfth of Cdn \$ 10,171.83/MW of Reserved Capacity per year. |
| 2) Monthly Delivery:         | Cdn \$ 847.65 /MW of Reserved Capacity per month.                 |
| 3) Weekly Delivery:          | Cdn \$ 195.61 /MW of Reserved Capacity per week.                  |
| 4) On-Peak Daily Delivery:   | Cdn \$ 39.12 /MW of Reserved Capacity per day.                    |
| 5) Off-Peak Daily Delivery:  | Cdn \$ 27.87 /MW of Reserved Capacity per day.                    |
| 6) On-Peak Hourly Delivery:  | Cdn \$ 2.45 /MWh.   |
| 7) Off-Peak Hourly Delivery: | Cdn \$ 1.16 /MWh.   |

**Operating Reserve – Supplemental Reserve (Network Integration Transmission Service):**

- 1) Monthly Delivery: Cdn \$ 847.65 /MW of Reserved Capacity per month.

There will be an adder applied to these prices when the Transmission Provider incurs extra costs. These extra costs will be limited to out-of-order dispatch costs associated with revised generation or load dispatch for the purpose of providing this ancillary service. Out-of-order dispatch costs will be calculated as the difference between the cost of serving load and the cost of serving load plus ancillaries. These costs will be charged to Transmission Customers that take this service on a pro rata share basis as a function of the quantity of the service purchased from the Transmission Provider at the time that the out-of-order occurs.

**Supplier Obligations**

Transmission Customers that self-supply this service, and third party suppliers, shall provide between 100 and 110% of the stated MW amount within ten minutes of notification by the Transmission Provider to activate these reserves. The reserves shall be sustainable for sixty minutes from activation.

Suppliers who offer Operating Reserves have an obligation to supply these reserves when notified by the Transmission Provider. Due to the infrequent occurrence of this and the importance of reserves to overall system reliability, a penalty will be applied to any supplier who is unable to meet its obligations. The penalty will be equal to one month's charge for the amount of deficient reserves for each failure to supply.

**Activation of Reserves**

When a contingency occurs, the Transmission Provider will activate, at its sole discretion, sufficient reserves from (1) those under contract with the Transmission Provider, (2) those provided by Transmission Customers, (3) those contracted from third parties by Transmission Customers. Typically the activation will be done to minimize the overall cost of supplying reserves and to return the system to pre-contingency conditions within the time required.

Operating Reserve service will only be available for the hour in which the contingency occurs and the following two hours. The quality of service will be firm for this time period. The Transmission Customer is responsible to address any deficiencies of its supply by the end of that time period. Any unscheduled energy withdrawal will be treated as Energy Imbalance as per Schedule 4.

**6(b) Operating Reserve - Supplemental (30 minute)**

This ancillary service is the portion of Operating Reserve – Supplemental that is available within 30 minutes. The charges for this ancillary service, payable monthly, are set forth below:

**Operating Reserve – Supplemental Reserve (Point-to-Point Transmission Service):**

- |                              |  |
|------------------------------|--|
| 1) Yearly Delivery:          | One-twelfth of Cdn \$ 10,171.83 /MW of Reserved Capacity per year. |
| 2) Monthly Delivery:         | Cdn \$ 847.65 /MW of Reserved Capacity per month.                  |
| 3) Weekly Delivery:          | Cdn \$ 195.61 /MW of Reserved Capacity per week.                   |
| 4) On-Peak Daily Delivery:   | Cdn \$ 39.12 /MW of Reserved Capacity per day.                     |
| 5) Off-Peak Daily Delivery:  | Cdn \$ 27.87 /MW of Reserved Capacity per day.                     |
| 6) On-Peak Hourly Delivery:  | Cdn \$ 2.45 /MWh.  |
| 7) Off-Peak Hourly Delivery: | Cdn \$ 1.16 /MWh.  |

**Operating Reserve – Supplemental Reserve (Network Integration Transmission Service):**

- |                      |   |
|----------------------|---|
| 1) Monthly Delivery: | Cdn \$ 847.65 /MW of Reserved Capacity per month. |
|----------------------|---|

There will be an adder applied to these prices when the Transmission Provider incurs extra costs. These extra costs will be limited to out-of-order dispatch costs associated with revised generation or load dispatch for the purpose of providing this ancillary service. Out-of-order dispatch costs will be calculated as the difference between the cost of serving load and the cost of serving load plus ancillaries. These costs will be charged to Transmission Customers that take this service on a pro rata share basis as a function of the quantity of the service purchased from the Transmission Provider at the time that the out-of-order occurs.

**Supplier Obligations**

Suppliers who offer 30-Minute Reserve services shall provide between 100 and 110% of the stated MW amount within thirty minutes of notification by the Transmission Provider to activate these reserves. The reserves shall be sustainable for sixty minutes from activation.

Suppliers who offer Operating Reserves have an obligation to supply these reserves when notified by the Transmission Provider. Due to the infrequent occurrence of this and the importance of reserves to overall system reliability, a penalty will be applied to any supplier who is unable to meet its obligations. The penalty will be equal to one month's charge for the amount of deficient reserves for each failure to supply.

**Activation of Reserves**

When a contingency occurs, the Transmission Provider will activate, at its sole discretion, sufficient reserves from (1) those under contract with the Transmission Provider, (2) those provided by Transmission Customers, (3) those contracted from third parties by Transmission

Customers. Typically the activation will be done to minimize the overall cost of supplying reserves and to return the system to pre-contingency conditions within the time required.

Operating Reserve service will only be available for the hour in which the contingency occurs and the following two hours. The quality of service will be firm for this time period. The Transmission Customer is responsible to address any deficiencies of its supply by the end of that time period. Any unscheduled energy withdrawal will be treated as Energy Imbalance as per Schedule 4.

On-Peak days for this service are defined as Monday to Friday. On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.



## SCHEDULE 7

### Long-Term Firm and Short-Term Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth below:

- |                             |  |
|-----------------------------|--|
| 1) Yearly Delivery:         | One-twelfth of Cdn \$ 39,040.98 /MW of Reserved Capacity per year. |
| 2) Monthly Delivery:        | Cdn \$ 3,253.42 /MW of Reserved Capacity per month.                |
| 3) Weekly Delivery:         | Cdn \$ 750.79 /MW of Reserved Capacity per week.                   |
| 4) On-Peak Daily Delivery:  | Cdn \$ 150.16 /MW of Reserved Capacity per day.                    |
| 5) Off-Peak Daily Delivery: | Cdn \$ 106.96 /MW of Reserved Capacity per day.                    |

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (3) above times the highest amount in megawatts of Reserved Capacity in any day during such week.

- 6) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) subject to prior written approval by the PUB, any offer of a discount made by the Transmission Provider must be announced to all Transmission Customers by posting on the OASIS, (2) any Transmission Customer initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur by posting on the OASIS, and (3) once a discount is approved by the PUB, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Transmission Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.
- 7) On-Peak days for this service are defined as Monday to Friday.
- 8) On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.
- 9) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service. A Transmission Customer may sell, assign, or transfer all or portion of its rights under its Service Agreement, but only to another Eligible Customer (the Assignee). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement is hereafter referred to as the Reseller. Compensation to Resellers shall be at rates established by agreement between the Reseller and the Assignee.

## SCHEDULE 8

### Non-Firm Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non- Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below:

- |                             |   |
|-----------------------------|---|
| 1) Monthly Delivery:        | Cdn \$ 3,253.42 /MW of Reserved Capacity per month. |
| 2) Weekly Delivery:         | Cdn \$ 750.79 /MW of Reserved Capacity per week.    |
| 3) On-Peak Daily Delivery:  | Cdn \$ 150.16 /MW of Reserved Capacity per day.     |
| 4) Off-Peak Daily Delivery: | Cdn \$ 106.96 /MW of Reserved Capacity per day.     |

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in megawatts of Reserved Capacity in any day during such week.

- 5) **On-Peak Hourly delivery:** The basic charge shall be Cdn \$ 9.38 /MWh.
- 6) **Off-Peak Hourly delivery:** The basic charge shall be Cdn \$ 4.46 /MWh.
- 7) **Discounts:** Three principal requirements apply to discounts for transmission service as follows (1) subject to prior written approval by the PUB, any offer of a discount made by the Transmission Provider must be announced to all Transmission Customers by posting on the OASIS, (2) any Transmission Customer initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur by posting on the OASIS, and (3) once a discount is approved by the PUB, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Transmission Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.
- 8) On-Peak days for this service are defined as Monday to Friday.
- 9) On-Peak hours for this service are defined as the time from but excluding 07:00 a.m. to and including 11:00 p.m. Atlantic Prevailing Time.
- 10) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service. A Transmission Customer may sell, assign, or transfer all or portion of its rights under its Service Agreement, but only to another Eligible Customer (the Assignee). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement is hereafter referred to as the Reseller. Compensation to Resellers shall be at rates established by agreement between the Reseller and the Assignee.

## **SCHEDULE 9**

### **Network Integration Transmission Service**

The rate charged for Network Integration Transmission Service is based on the Transmission Customer's Net Non-coincident Monthly Peak Demand. The Net Non-coincident Monthly Peak Demand is the maximum hourly demand at each Point of Delivery designated as Network Load (including its designated Network Load not physically interconnected to the Transmission Provider's Transmission System). The charges for this service, payable monthly, are set forth below:

- 1) Monthly Delivery: Cdn \$ 3,253.42 /MW of Reserved Capacity per month.

## **SCHEDULE 10**

### **Transmission Losses**

Transmission losses are associated with all Transmission Services. The Transmission Provider is not obligated to provide transmission losses. The Transmission Customer is responsible for replacing losses associated with Transmission Service as calculated by the Transmission Provider. All Transmission Customers are required to include an amount of additional capacity in their service requests sufficient to carry the losses associated with their service. The factor applicable to transmission losses is 3.11% of the maximum hourly transfer as measured at the Point(s) of Delivery.

The Transmission Provider will calculate the annual loss factor on a path-by-path basis. For this calculation, the power flow models used to calculate the losses will include peak and off-peak hours to derive an average loss factor for each path.

Locational Loss Factors for new generation will be determined during the System Impact Study and will be applied to the generation dispatch merit order if such generation is to be economically dispatched by the Transmission Provider. If the generator is self-dispatched, loss factors will be applied to determine the unit net output.