

P.U. 16(2006)

IN THE MATTER OF the *Public Utilities Act*, R.S.N.L. 1990, c. P-47 (the “*Act*”);

AND IN THE MATTER OF an Application by Newfoundland and Labrador Hydro for the approval, pursuant to s. 71 of the *Act*, of the cost of Low Sulphur Fuel as a fuel cost component to be recovered through the Rate Stabilization Plan charged to Newfoundland Power Inc. and the Island Industrial Customers.

BEFORE:

Robert Noseworthy
Chairperson and Chief Executive Officer

Darlene Whalen, P. Eng.
Vice-Chair

I APPLICATION

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2 Newfoundland and Labrador Hydro (“Hydro”) filed an application (the “Application”) with the Board on January 20, 2006 seeking an order approving, pursuant to s. 71 of the *Act*, inclusion of the costs of Hydro’s purchases of 1% sulphur fuel for the Holyrood Thermal Generating Station as prudent operating expenses to be recovered by Hydro through the Rate Stabilization Plan (the “RSP”).

1. Notice and Hearing

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10 Notice of the Application was published in papers around the Province starting the week of March 18, 2006. The Board received Notices of Intervention from Mr. Thomas Johnson, the Government appointed Consumer Advocate, the Island Industrial Customers (Corner Brook Pulp and Paper Limited, North Atlantic Refining Limited, Abitibi Consolidated Company of Canada, Stephenville and Grand Falls Division, and Aur Resources Inc.), and from Newfoundland Power Inc. The Application and supporting documentation was also made available on the Board’s website www.pub.nl.ca.

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18 Requests for information were issued by Board staff, the Consumer Advocate and the Industrial Customers.

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21 The public hearing of the Application was held at the Board’s hearing room in St. John’s on May 5 and May 8, 2006. Hydro was represented by its legal counsel Mr. Geoff Young. The Industrial Customers were represented by Mr. Joseph Hutchings, Q.C. and Mr. Paul Coxworthy, and Newfoundland Power was represented by Mr. Gerard Hayes. The Consumer Advocate, Mr. Thomas Johnson, also participated in the hearing.

26
27 Mr. Frank Ricketts, Manager of Environmental Services, and Mr. James Haynes, Vice President, Regulated Operations, provided testimony on behalf of Hydro. No other witnesses were called. Final written submissions were filed by Hydro, the Industrial Customers, the Consumer Advocate and Newfoundland Power on May 12, 2006.

2. Background

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34 Hydro operates a 500 MW heavy oil fired generating plant at Holyrood in Conception Bay. The plant consists of three units. Units 1 and 2 were installed in 1969 as 150 MW units and were upgraded in the late 1980s to 175 MW each. Unit 3 was commissioned in 1980 as a 150 MW unit. No particulate or sulphur dioxide (SO₂) emissions control equipment exists on any of the units.

39
40 Prior to 2005 Hydro burned No.6 fuel with a sulphur content of 2.2% at the Holyrood Thermal Generating Station. In 2005 Hydro began to purchase No. 6 fuel for the Holyrood plant with a sulphur content of 2%, as required by s. 14 of the *Air Pollution Control Regulations, 2004* passed under the *Environmental Protection Act*.

1 Hydro has determined that, to be compliant with provincial laws, a further reduction in
 2 sulphur content for No. 6 fuel is required. On January 8, 2006 Hydro ordered a first
 3 shipment of 1% sulphur content fuel, with delivery of 288,000 barrels received on
 4 January 26, 2006. A second shipment was ordered on February 15, 2006 with delivery
 5 for March 15, 2006. With the inventory of 2% sulphur content fuel expected to be
 6 depleted by mid-April the plant at Holyrood was expected to be burning only 1% sulphur
 7 content fuel as of mid-April 2006. (PUB-1 NLH)

9 **3. Application Proposals**

11 Hydro is requesting approval to recover the additional costs associated with the purchase
 12 of 1% sulphur content fuel through the RSP. These costs will then be recovered from
 13 Newfoundland Power, commencing on July 1, 2006, and the Island Industrial Customers,
 14 as of January 1, 2007, as part of the ongoing operation of the RSP.

16 Hydro stated in its Application that the change to 1% sulphur content fuel will result in
 17 additional annual fuel costs of \$7,974 million based on a forecast difference between 2%
 18 sulphur fuel and 1% sulphur fuel of \$3 per barrel. Hydro is proposing that this difference
 19 in fuel costs be recovered through the operation of the RSP. This translates into rate
 20 impacts of 1.0% for retail customers as of July 1, 2006 and of 2.3% for Island Industrial
 21 Customers as of January 1, 2007. (IC-4 NLH) In its response to CA-2 Hydro advised
 22 that, because of a revised forecast difference from \$3 to \$2 per barrel, the current
 23 estimated rate impacts would be approximately a 0.50% to 0.75% increase in rates to
 24 Newfoundland Power's and Hydro's (non-Labrador Interconnected) residential and
 25 general service customers and an approximate 1.5% increase to Hydro's Island Industrial
 26 customers.

28 **II BOARD AUTHORITY**

30 The Board is an economic regulator which is constituted by statute and derives its
 31 jurisdiction primarily from the *Act* and the *Electrical Power Control Act* (the "*EPCA*").
 32 The Board is required to act within the authority set out in its enabling and other relevant
 33 legislation as discussed below.

35 The *Act* sets out the relevant powers of the Board:

- 37 "16. *The board shall have the general supervision of all public utilities and may make*
 38 *all necessary examinations and inquiries and keep itself informed as to the*
 39 *compliance by public utilities with the law and shall have the right to obtain from*
 40 *a public utility all information necessary to enable the board to fulfil its duties.*
- 42 17. *The board may inquire into a violation of the laws or regulations in force in the*
 43 *province by a public utility doing business here, or by the officers, agents or*
 44 *employees, or by a person operating the plant of a public utility, and has the*
 45 *power and it is its duty to enforce this Act as well as all other laws relating to*
 46 *public utilities.*

- 1 37. (1) *A public utility shall provide service and facilities which are reasonably safe*
 2 *and adequate and just and reasonable.*
 3 (2) *The board may either with or without notice to a public utility make an order*
 4 *appointing a person to make examinations, investigations or tests for the purpose*
 5 *of ascertaining whether service reasonably safe and adequate and just and*
 6 *reasonable is being supplied by the public utility and may in the order make*
 7 *provision as to the remuneration and expenses the person is to be paid by the*
 8 *public utility where the board certifies that they are payable.”*
 9

10 Section 3 of the *EPCA* sets out the power policy of the Province and ss. 3(b) states
 11 specifically:

- 12 “3(b) *all sources and facilities for the production, transmission and distribution of*
 13 *power in the province should be managed and operated in a manner*
 14 (i) *that would result in the most efficient production, transmission and*
 15 *distribution of power,*
 16 (ii) *that would result in consumers in the province having equitable access to*
 17 *an adequate supply of power,*
 18 (iii) *that would result in power being delivered to consumers in the province*
 19 *at the lowest possible cost consistent with reliable service,*
 20 (iv) *that would result in, subject to Part III, a person having priority to use,*
 21 *other than for resale, the power it produces, or the power produced by a*
 22 *producer which is its wholly-owned subsidiary,*
 23 (v) *where the objectives set out in subparagraphs (i) to (iv) can be achieved*
 24 *through alternative sources of power, with the least possible interference*
 25 *with existing contracts,*
 26
 27 *and, where necessary, all power, sources and facilities of the province are to be*
 28 *assessed and allocated and re-allocated in the manner that is necessary to give*
 29 *effect to this policy.”*
 30
 31

32 The Board is also required to observe the power policy of the Province as set out in s. 4
 33 of the *EPCA*:

- 34 “4. *In carrying out its duties and exercising its powers under this Act or under the*
 35 *Public Utilities Act, the public utilities board shall implement the power policy*
 36 *declared in section 3, and in doing so shall apply tests which are consistent with*
 37 *generally accepted sound public utility practice.”*
 38
 39

40 The Board’s mandate requires that the Board ensure least cost reliable reasonably safe
 41 power is provided in accordance with the laws of the Province. Environmental issues are,
 42 to some extent, inherent in this mandate. As set out above s. 16 and s. 17 of the *Act*
 43 require the Board to ensure that the utility observes the laws of the Province, including
 44 environmental laws. The Board is also required to ensure that Hydro is managing the
 45 provision of power in a manner consistent with sound financial administration. Therefore
 46 environmental issues must be considered in relation to how they impact the financial
 47 administration of the utility. Finally the Board must consider environmental issues to the
 48 extent that they are a part of reasonably safe and adequate and just and reasonable service

1 as set out in s. 37 of the *Act* and as required by generally accepted sound public utility
2 practice.

3
4 It is noted that there is a comprehensive regulatory scheme overseen by the Department
5 of Environment and Conservation (the “Department”), separate and apart from this
6 Board, which specifically regulates Hydro with regard to environmental issues. In this
7 context the Board must be careful to avoid potential duplicative and inconsistent
8 regulation with regard to these issues. Given that the Board is an economic regulator and
9 that there is a separate comprehensive environmental regulatory scheme, the authority of
10 the Board with respect to the oversight of environmental issues is limited to that
11 necessary to carry out its mandate with respect to utility regulation. Issues outside of the
12 jurisdiction of the Board may be addressed by an exemption or direction from
13 Government pursuant to the *Act* or the *EPCA*.

14 15 **III HYDRO’S ENVIRONMENTAL REGULATORY FRAMEWORK**

16
17 Hydro’s emissions from the Holyrood Thermal Generating Station are subject to the
18 provisions of the *Environmental Protection Act*, R.S.N.L 2002, c. E-14-2, and the *Air*
19 *Pollution Control Regulations, 2004 Consolidated Newfoundland Regulations 39/04*
20 made under that Act.

21
22 Subsection 7(2) of the *Environmental Protection Act* states that:

23
24 “7(2) *A person shall not release or permit the release of a substance into the*
25 *environment in an amount, concentration or level or at a rate of release*
26 *exceeding that expressly authorized under this Act or an approval issued under*
27 *this Act.”*

28
29 The *Air Pollution Control Regulations, 2004* set out the limits for which certain
30 substances may be emitted into the air. Specific limits on the sulphur content in No. 6
31 fuel are set out in s. 14 at 2.0% on an annual basis. Subsection 3(2) of the Regulations
32 states that the concentration of air contaminants from all sources shall not exceed the
33 standards prescribed in Schedule A. Schedule A sets the ambient air quality standards for
34 sulphur dioxide (SO₂) at 900 µg/m³ for one hour, 600 µg/m³ over three hours, 300 µg/m³
35 over 24 hours, and 60 µg/m³ annually. The limits for nitrogen dioxide (NO₂) and
36 particulate matter are also set out in Schedule A. Opacity limits of a visible emission on
37 a continuous basis are set out in s. 9 of the Regulations.

38
39 The Department of Environment and Conservation’s guidance document titled
40 “*Determination of Compliance with the Ambient Air Quality Standards – Compliance*
41 *Determination GD-PPD-009.2*”, filed in this proceeding in response to CA-18(a) NLH,
42 defines the procedure that the Department follows in determining whether a facility is in
43 compliance with s. 3 of the *Air Pollution Control Regulations, 2004*. Paragraphs 2 and 3
44 of GD-PPD-009.2 state:

- 1 “2. For all facilities covered by this guideline, compliance with the ambient air quality
2 standards will be determined through a dispersion model, registered with the
3 department and conducted in accordance with GD-PPD-019.
4 3. Compliance for a facility will be determined based on the predicted levels for all
5 locations at or beyond the administrative boundary as defined in the associated
6 Certificate of Approval.”
7

8 GD-PPD-009.2 requires existing facilities with annual residual fuel oil consumption in
9 excess of 2 million litres annually to complete a stack emission test and dispersion model
10 every two years where the modeling indicates the facility to be non-compliant, and every
11 four years where the modeling indicates that the facility is compliant. In response to
12 PUB-5 Hydro stated:
13

14 *“In the case of the HTGS, stack emission testing has been conducted every two years
15 since 1993 and air dispersion modeling has been performed annually since 1995 using
16 emission characteristics prorated from the stack test results to the production
17 information from the year of modeling. Each modeling scenario has indicated ground
18 level sulphur dioxide concentrations in excess of the standard specified in the Air
19 Pollution Control Regulations...”*
20

21 In October 2005 Hydro filed the results of its dispersion modelling testing for 2004 with
22 the Department of Environment and Conservation. The final report CALPUFF Air
23 Dispersion Modelling SO₂, CO, NO_x and TSP Emissions of 2004 for the Holyrood
24 Thermal Generating Station was prepared by SENES Consultants Limited of Richmond,
25 Ontario and Calixte Environmental Management of St. John’s, and was filed in this
26 proceeding in response to information request IC-1(b) NLH. This report concluded (at
27 pg. 5-1) exceedances above regulatory standards at off-property receptors were predicted
28 for SO₂ concentrations for the following averaging periods:
29

- 30 • 1-hour (at a frequency of 0.06% over a 2.2 km² area),
31 • 3-hour (at a frequency of 0.8% over a 1.7 km² area), and
32 • 24-hour (at a frequency of 0.3% over a ~0.1 km² area).
33

34 Exceedances above regulatory standards at off-property receptors for NO_x concentrations
35 were predicted for a 1-hour averaging period (at a frequency of 0.01% over a ~0.1 km²
36 area). Carbon monoxide (CO) and total suspended particulates (TSP) were not predicted
37 to exceed regulatory standards based on the 2004 air dispersion modeling.
38

39 Pursuant to an agreement with the Department Hydro has in place an extensive ambient
40 air monitoring system to measure the actual levels of these substances at certain locations
41 in the vicinity of the generating station. Since 1992 Hydro has monitored SO₂ and TSP
42 levels in the ambient air at the following residential locations: 1) Indian Pond Road;
43 2) Butterpot Road; 3) Green Acres Road; and 4) Lawrence Pond Road. In addition a TSP
44 ambient air monitor is located at the main gate of the Holyrood Thermal Generating
45 Station. As of November 2004 NO_x and PM_{2.5} (particulate matter having a mean
46 diameter of less than 2.5 µm) monitoring equipment has been installed and commissioned

1 at the Indian Pond Road, Butterpot Road, Green Acres Road and Lawrence Pond Road
2 sites, and a new monitoring site was established at Indian Pond Drive. (PUB-6 NLH)

3
4 Evidence was presented that in December 2005 exceedances were recorded for SO₂
5 concentrations at the Indian Pond Road site. Three consecutive ambient air
6 concentrations in excess of the regulatory limit of 900 µg/m³ per hour were recorded:
7 970 µg/m³ at 1600 hours, 1106 µg/m³ at 1700 hours, and 1044 µg/m³ at 1800 hours.
8 (PUB-6 NLH) No evidence was presented of any other recorded exceedances for SO₂ at
9 any of the monitoring stations other than the December 2005 readings. During cross-
10 examination Mr. Haynes advised that it was his understanding that the Department would
11 have been provided with information on these exceedances. (Transcript, May 8, 2006, pg.
12 132) In October 2005 the PM_{2.5} monitor at the main gate (located within the plant's
13 property boundary) recorded a single daily average air concentration slightly in excess of
14 the regulatory limit. Hydro also advised that it routinely exceeds the prescribed opacity
15 limits. (CA-6 NLH)

16
17 In the context of the exceedances for SO₂ and NO_x predicted by the 2004 air dispersion
18 modeling conducted in accordance with the Guidance Document or the actual recorded
19 exceedances there is no evidence that the Department issued a stop work order or other
20 directive requiring immediate rectification of the non-compliance, or imposed penalties
21 for non-compliance. In February 2006 the Department issued a Certificate of Approval
22 to Hydro pursuant to s. 83 of the *Environmental Protection Act* for the operation of the
23 thermal generating station at Holyrood. The Certificate of Approval did not require that
24 Hydro switch to 1% sulphur content fuel. It did include a stated requirement that all
25 necessary measures be taken to ensure compliance with all applications, acts, regulations,
26 policies and guidelines, including the Compliance Determination Guidance Document
27 and the Plume Dispersion Modelling Guidance Document. The letter accompanying the
28 Certificate of Approval, dated February 2, 2006, stated:

29
30 *"In accordance with the Department's Determination of Compliance with the Ambient*
31 *Air Quality Standards Guidance Document (GD-PPD-009.02), Hydro have been found to*
32 *be non-compliant with the Air Pollution Control Regulations, 2004 with respect to*
33 *ambient air concentrations of sulphur dioxide, particulate matter and nitrogen oxides in*
34 *areas outside of the thermal generating station property line. Furthermore, this*
35 *Department cannot issue a compliance agreement if HYDRO remains unwilling to*
36 *acknowledge non-compliance. Subject to this I hereby wish to advise HYDRO that full*
37 *compliance with the Environmental Protection Act, associated regulations and the*
38 *Certificate of Approval is required..."*

39
40 Further correspondence from the Department dated February 9, 2006 from Mr. Derrick
41 Maddocks advised Hydro that, based on the results of the plume dispersion model
42 conducted by SENES Consultants Limited dated October 2005, the Department has
43 deemed the emissions of SO₂ and NO_x from the Holyrood facility to be non-compliant
44 with the ambient air quality standards set out in the *Air Pollution Control Regulations,*
45 *2004*. Mr. Maddocks stated:

1 *“Pursuant to Section 3 of the Air Pollution Control Regulations, 2004 the Department*
 2 *has deemed the emissions of sulphur dioxide and nitrogen oxides from the Newfoundland*
 3 *and Labrador Hydro (Hydro) thermal generating station in Holyrood to be non-*
 4 *compliant with the ambient air quality standards. These exceedances occur in areas*
 5 *outside the generating station’s property line. As such the Department requires Hydro to*
 6 *perform the mitigative actions necessary to reduce the emissions levels to the regulatory*
 7 *standards.”*

8
 9 It is noted that the February 9, 2006 letter does not advise Hydro that it is non-compliant
 10 with respect to particulate matter, which is not consistent with the February 2, 2006 letter
 11 from the Department. The Board notes that the 2004 SENES modeling results do not
 12 predict exceedances above the regulatory limits for TSP.

13 Paragraphs 9-11 of the Guidance Document GD-PPD-009.2 sets out the options available
 14 when a facility is deemed to be non-compliant. Paragraph 9 states:

- 15
 16 *“9. If non-compliance is determined, a facility may elect to enter into a compliance*
 17 *agreement with the department for the purposes of:*
 18 *a) attaining compliance within a reasonable timeframe; or*
 19 *b) establishing a compliance ambient monitoring network at locations of*
 20 *maximum predicted non-compliance. If the network indicates*
 21 *compliance at all locations for all timeframes after 2 years of monitoring*
 22 *then the facility will be deemed compliant. If the network indicates non-*
 23 *compliance at any locations for any timeframe within 2 years of*
 24 *monitoring, then the facility will enter into an additional compliance*
 25 *agreement for the purposes of attaining compliance within a reasonable*
 26 *timeframe.”*

27
 28 Paragraph 10 states:

- 29
 30 *“10. Where a facility elects to establish and operate a compliance ambient monitoring*
 31 *network, it will be established subject to the provisions of the facility’s*
 32 *Certificate of Approval and in accordance with PPD 98-01.”*

33
 34 Paragraph 11 states:

- 35
 36 *“11. Where it is not practical to establish a compliance ambient monitoring network*
 37 *at locations of maximum predicted non-compliance, upon application to the*
 38 *department, the facility may establish a compliance ambient monitoring network*
 39 *at alternate locations in close proximity to the location of maximum predicted*
 40 *non-compliance. In such situations, compliance will be based on prorating the*
 41 *monitored levels to the locations of maximum predicted non-compliance based*
 42 *on the registered dispersion model.”*

43
 44 In the February 9, 2006 letter wherein Hydro was advised of its non-compliance with
 45 respect to SO₂ and NO_x emissions Mr. Maddox stated:

46
 47 *“The thermal generating station will be deemed non-compliant until such time as*
 48 *acceptable modeling based on current stack testing data, or approved compliance*

1 *monitoring in areas of exceedances, demonstrates compliance. Please review the*
2 *attached guidance document for further information.*

3
4 *The Department is willing to continue discussing options for reducing emissions and*
5 *compliance agreements to allow time for Hydro to implement mitigative measures...”*
6

7 In cross-examination of both Mr. Ricketts and Mr. Haynes the question of whether Hydro
8 had pursued a compliance agreement with the Department as provided for in paragraph 9
9 of the Guidance Document was raised. In response to a question from the Board on
10 whether Hydro was currently in discussions with the Department with respect to a
11 compliance agreement Mr. Ricketts stated:

12 *“Not at present, we, during the negotiations associated with the Certificate of Approval*
13 *or discussions associated with the Certificate of Approval, we also discussed the*
14 *compliance agreement as an option. We weren’t able to reach agreement with them on*
15 *finalizing that, so what was issued was a certificate of approval in place of any*
16 *compliance agreement.”*
17

18 Mr. Haynes also addressed this issue on questioning by counsel for the Industrial
19 Customers:

20
21 *“Q. Going back then to paragraph 9A, whenever non-compliance was determined, did Hydro*
22 *elect to enter into or negotiate a compliance agreement with the Department?”*

23 *A. Certainly we started. There were discussions on a compliance agreement, along*
24 *concurrently with the certificate of approval, and -*

25 *Q. This is the certificate of approval that was issued in February of 2006?*

26 *A. Yes, but concurrently with that, there was discussions on a compliance agreement with*
27 *respect to air emissions specifically.*

28 *Q. So when would those discussions with respect to a compliance agreement, when would*
29 *they have commenced?*

30 *A. They would have commenced over a year ago, we probably started that. A long time*
31 *getting the, you know, certificate of approval and the compliance agreement, and we*
32 *never did execute the compliance agreement.” (Transcript, May 8, 2006, pg. 39/17 to pg.*
33 *40/11)*
34

35 On further questioning Mr. Haynes confirmed that the Department has not agreed to
36 Hydro’s plan to move to 1% sulphur content fuel as being acceptable for achieving
37 compliance with the ambient air quality regulations:

38
39 *“Q. So they haven’t agreed to one percent sulphur reduction being the solution?*

40 *A. No, they haven’t, but we think we have a –we think that by going to one percent sulphur*
41 *and doing our best in the plant with respect to, you know, watching the situation and*
42 *maybe curtailing load occasionally when we have to, if we can, if there are other*
43 *generation available, we have a pretty good crack of getting it. But at the end of the day,*
44 *give us, you know, a year or two burning one percent sulphur fuel and we’re still non-*
45 *compliant, obviously we’ll have to address the issue again.” (Transcript, May 8, 2006,*
46 *pg. 41/6-19)*

1 III ANALYSIS AND DECISION

2
3 The basis of Hydro's Application is that it is required to take action to reduce SO₂
4 emissions at the Holyrood Thermal Generating Station in order to be compliant with the
5 law. In final argument Hydro stated:

6
7 *"Hydro has incurred increased fuel related expenses in an effort to become compliant*
8 *with environmental regulations. In incurring these expenses, Hydro was acting upon*
9 *information received from the environmental regulator, the Department of Environment*
10 *and Conservation (DOEC) of the Government of Newfoundland and Labrador. Hydro*
11 *submits that taking action to reduce its emissions at the HTGS was a responsible*
12 *initiative that enabled it to ensure the continued supply of reliable service in a manner*
13 *that was in compliance with the law. Doing less would have amounted to a shirking of*
14 *Hydro's responsibilities under the spirit and letter of the law, would have caused Hydro*
15 *to have continued the emission of pollutants into the environment at levels and*
16 *concentrations found to be hazardous to health and in excess of legal limits, and could*
17 *possibly have exposed Hydro to stop work orders or prosecution."*

18
19 The question of whether Hydro has demonstrated non-compliance with the regulations
20 with respect to SO₂ and NO_x emissions was clearly established by the evidence and not
21 effectively challenged by any party to the hearing. With respect to SO₂ emissions it is
22 clear that, based on the 2004 modeling results conducted in accordance with the standards
23 approved by the Department of Environment and Conservation, the predicted
24 concentrations for SO₂ exceed the standards for one-hour and three-hour periods. As
25 such, the Department has deemed the Holyrood Thermal Generating Station to be non-
26 compliant with respect to SO₂ emissions as provided for in the Guidance Document GD-
27 PPD-009.2. While there were several issues raised by the Industrial Customers and the
28 Consumer Advocate with respect to the modeling results, which may have merit, the
29 regulatory scheme established by the Department relies on the modeling results to
30 determine whether there is an exceedance for purposes of the regulations. The Board
31 therefore accepts that Hydro has demonstrated non-compliance with the *Air Pollution*
32 *Control Regulations, 2004.*

33
34 To address this non-compliance Hydro has commenced purchasing 1% sulphur content
35 fuel. According to Hydro's evidence a reduction in sulphur content from 2% to 1% in the
36 fuel burned at the Holyrood Thermal Generating Station will result in a near 50%
37 reduction in sulphur dioxide emissions. (PUB-9 NLH) Hydro did not provide conclusive
38 evidence that the switch to 1% sulphur content fuel will ensure compliance with respect
39 to SO₂ and NO_x emissions. In pre-filed testimony Mr. Ricketts stated:

40
41 *"While it is not certain that this level of emissions reduction will be sufficient to ensure*
42 *compliance with the Air Pollution Control Regulations, 2004, it is believed that there is a*
43 *strong likelihood that this measure will be effective and Hydro has determined that it will*
44 *await further testing outcomes before any further increases in its emission related*
45 *operating costs are incurred or before any significant related capital improvements are*
46 *undertaken."*

1 Under cross-examination Mr. Ricketts stated:

2
3 *“Q: Okay, all right. So we don’t need to consider for the purposes of these*
4 *proceedings whether or not you’re going beyond what is necessary. All you’re*
5 *proposing is to get yourselves in compliance”.*

6
7 *A: That’s the intent of this action, yes”.*
8 (Transcript, May 5, 2006, pg. 44/5-10)

9
10 The question for the Board then is whether Hydro has demonstrated that the immediate
11 switch to 1% sulphur content fuel is necessary to comply with provincial laws and
12 whether or not it has been shown to be the least cost means of achieving that compliance.

13
14 The Industrial Customers submitted that the additional cost to Hydro associated with the
15 use of lower sulphur fuel is not a reasonable and prudent expense under the *Act* which
16 should be recoverable in rates. In referencing the provisions of paragraph 9 of the
17 Guidance Document the Industrial Customers argued:

18
19 *“Given that these are the specific options outlined in the Compliance Determination*
20 *Guidance Document, with which Hydro is bound to comply under the Certificate of*
21 *Approval, the reasonable and prudent, and indeed anticipated, course would be to*
22 *negotiate a compliance agreement for implementation of one of these options, in*
23 *accordance with the Department’s own Guidance Document, to resolve the issue of non-*
24 *compliance presented in the February 2006 letters.”*

25
26 According to the Industrial Customers, paragraph 11 of the Guidance Document makes it
27 clear that the Department is willing to take a practical approach to the proximity of the
28 monitoring network to locations of predicted maximum non-compliance. The Industrial
29 Customers stated:

30
31 *“Given this express recognition by the Department that modelling results are not*
32 *sacrosanct, and that determination of compliance can be subject to monitored*
33 *observations, surely the presumption of Hydro and of the Board, absent any evidence to*
34 *the contrary, should be that the Department would negotiate reasonably with Hydro on*
35 *the terms of a compliance agreement, should one be actively sought by Hydro.”*

36
37 The Industrial Customers submitted that Hydro has a very strong case to negotiate for the
38 establishment of a compliance agreement based on the results of the SENES modelling
39 and the fact that the forecast production at Holyrood is significantly less than when the
40 modeling was completed due to the closure of the Stephenville mill in 2006. The
41 following position was stated by the Industrial Customers in final submission:

42
43 *“Any prudent business operator, including any prudent utility, would, in these*
44 *circumstances, commit itself to serious negotiations with the regulator, and thereby*
45 *determine whether there is the need to incur any additional operational costs as a result*
46 *of the deemed non-compliance. There is a strong case to make that, notwithstanding the*
47 *dispersion modelling, there is no actual, material exceedance based on monitored results.*

1 *Assuming even a marginally reasonable position on the part of the Department of*
2 *Environment, this matter should have been resolved between Hydro and the Department*
3 *by an agreement which would allow use of the existing and recently enhanced ambient*
4 *monitoring network, utilizing if necessary the pro-ration provisions of paragraph 11 of*
5 *the Guidance Document, and deferring the additional costs associated with compliance*
6 *measures, such as lowering the percentage of sulphur in the fuel until such time as this*
7 *was demonstrably necessary. Notwithstanding the potential logistical difficulties if*
8 *additional monitoring stations are required, many millions of dollars could be saved by*
9 *deferring the change to low sulphur fuel rather than risk having to invest a few hundred*
10 *thousand dollars in additional monitoring stations.”*

11
12 The Consumer Advocate submitted that Hydro has not established that the immediate
13 switch to 1% sulphur fuel is either required or the least cost means of achieving
14 compliance with the limits imposed by provincial environmental laws and regulations. In
15 final submission the Consumer Advocate argued:

16
17 *“...we are disadvantaged in this proceeding from being able to assess the viability of*
18 *other options for achieving compliance with provincial environmental laws. For*
19 *instance, we do not know if Hydro would be able to enter a Compliance Agreement to set*
20 *up a compliance monitoring network. If a compliance monitoring network is not possible*
21 *what time frame would be acceptable for compliance? Hydro has not discussed time*
22 *frames. The state of the record, unfortunately, is wanting.”*

23
24 He further stated:

25
26 *“The Consumer Advocate is mindful of the fact that many residents who live on the*
27 *vicinity of Holyrood and perhaps many other consumers would not object to paying a*
28 *small amount more on their electricity bills each month if it meant a cleaner*
29 *environment. However, there may indeed be many others who will object to any further*
30 *increases regardless of the justification. Ultimately, consumers have a statutory right to*
31 *insist that all facilities for the production of power are managed and operated in a*
32 *manner that results in the most efficient production of power and at the lowest possible*
33 *cost consistent with reliable service. Viewed in that context and in light of the evidence,*
34 *this Application has failed to meet that requirement.”*

35
36 Newfoundland Power submitted that the key matter of controversy with respect to this
37 application is the impact of paragraph 9(b) of the Guidance Document. In final
38 submission Newfoundland Power stated:

39
40 *“There is no specific evidence before the Board indicating that further ambient air*
41 *monitoring could reasonably be expected to alter the HTGS’s current non-compliance*
42 *with the AAQS. But it is perhaps the absence of specific evidence indicating that further*
43 *ambient air monitoring could not be reasonably expected to alter the HTGS’s current*
44 *compliance with the AAQS that is at the heart of the matter surrounding the impact of*
45 *paragraph 9(b) of the Guidance Document on the Application.*

46
47 *The central question therefore for the Board on the issue of paragraph 9(b) of the*
48 *Guidance Document is the sufficiency of the evidence referred to on page 13 of this*
49 *Submission to justify the exclusion of further ambient air monitoring as a reasonably*
50 *viable alternative to dealing with HTGS’s non-compliance.”*

1 The Board accepts the position of the intervenors that the wording of paragraphs 9 to 11
2 of the Guidance Document GD-PPD-009.2 provides Hydro with the opportunity to elect
3 to enter into a compliance agreement with the Department. According to paragraph 9 this
4 agreement may provide for attaining compliance within a reasonable timeframe or may
5 be entered into for the purposes of establishing a compliance ambient monitoring network
6 at locations of maximum predicted non-compliance, as determined by the modeling. In
7 particular paragraph 9(b) provides the opportunity for Hydro to demonstrate that it is
8 compliant with regulations by providing satisfactory monitoring results for a two-year
9 monitoring timeframe. This provision seems to be intended to allow for the uncertainties
10 inherent in modeling predictions of non-compliance, and in this instance would replace
11 the predicted results of the modeling with actual results of monitoring. This approach
12 would appear to be reasonable based on the demonstrated differences in the predicted and
13 actual results as raised by the intervenors. While acknowledging that this may be the
14 case Mr. Ricketts suggested that the provisions of paragraphs 9(b) and 11 are intended to
15 measure the results of any action taken by Hydro to attain compliance to see if in fact
16 Hydro has attained compliance. (Transcript, May 5, 2006, pg. 153/4-13; pg. 154/10-17;
17 and pg. 156/10-13)

18
19 Hydro did not elect to enter into a compliance agreement with the Department with
20 respect to SO₂ and NO_x emissions reduction. The reasons for this are not entirely clear to
21 the Board based on the testimony but, according to the response of Mr. Haynes to
22 questions of the Industrial Customers, it appears to be related to legal concerns with
23 acknowledging non-compliance with respect to emissions from the Holyrood Thermal
24 Generating Station. (Transcript, May 8, 2006, pg. 60/2-9)

25
26 Hydro also cites the exceedances for SO₂ recorded in December 2005 as supporting its
27 decision to switch to 1% sulphur content fuel. While the specific date of this recorded
28 exceedance was not identified by Hydro, it appears on the basis of the evidence that the
29 presentation to senior management on the proposal to switch to 1% sulphur content fuel
30 was made in the fall of 2005. It is not clear however whether this presentation was made
31 before this recorded exceedance as Mr. Haynes was not sure of the exact date of the
32 presentation. (Transcript, May 8, 2006, pg. 20/21-24) Aside from the recorded
33 exceedance on this one occasion the evidence suggests that the ambient monitoring
34 network has not recorded any SO₂ concentrations in excess of the regulated standards
35 since the original four monitoring stations were established. (Transcript, May 8, 2006, pg.
36 46/13-20) Mr. Haynes also stated that he could not recall whether, during the
37 presentation to senior management, the modeling results of the SENES report were
38 actually talked about. (Transcript, May 8, 2006, pg. 23/14-18)

39
40 There was also some conflicting testimony about the establishment of a compliance
41 monitoring network. Mr. Ricketts stated that the existing ambient monitoring network
42 would not meet the criteria for a compliance monitoring network as set out in ss. 9(b) of
43 the Guidance Document. (Transcript, May 5, 2006, pg. 123/23 to pg. 124/8). He
44 expressed concerns about the possibility of setting up a compliance monitoring network
45 in the locations of predicted non-compliance due to issues of accessibility, and technical
46 challenges with power supply and quality control. (Transcript, May 5, 2006, pg. 120/9 to

1 pg. 122/8) Mr. Haynes took the position that the existing monitoring network was in fact
2 a compliance monitoring network and that there was nothing to be gained from setting up
3 additional monitoring since “*we already have a tremendous amount of data, all of which*
4 *or most of which is incorporated in the studies.*” (Transcript, May 8, 2006, pg. 43/1-11)
5

6 The Board notes that paragraph 12 of the Guidance Document specifically states that
7 “*The establishment of a compliance monitoring network in no way supercedes any*
8 *requirements placed on a facility to operate a community ambient monitoring network as*
9 *defined in the associated Certificate of Approval.*” Clearly the Department has made a
10 clear distinction between the community ambient monitoring network, which is in place
11 now and consists of five monitoring stations, and a compliance monitoring network
12 which would be installed at locations of maximum predicted exceedances. While this
13 may be the case Hydro does not appear to have pursued this option with the Department.
14

15 Regardless of the reasons for Hydro not entering into a compliance agreement Hydro’s
16 Application is based on the fact that it is required by law by virtue of its SO₂ and NO_x
17 emissions to switch to 1% sulphur content fuel. The available evidence does not support
18 this contention and in fact suggests that the Department is willing to continue discussing
19 options for reducing emissions, including compliance agreements. In his February 9,
20 2006 letter Mr. Maddox indicated that:
21

22 *“The thermal generating station will be deemed non-compliant until such time as*
23 *acceptable modeling based on current stack testing data, or approved compliance*
24 *monitoring in areas of exceedances, demonstrates compliance. Please review the attached*
25 *guidance document for further information.*
26

27 *The Department is willing to continue discussing options for reducing emissions and*
28 *compliance agreements to allow time for Hydro to implement mitigative measures...*
29

30 This letter, dated after the SENES 2004 air dispersion modeling report showing predicted
31 exceedances and after the recorded December 2005 SO₂ exceedances and after this
32 Application was submitted to the Board is critical to Hydro’s case that it is required to
33 switch to 1% sulphur content fuel to be compliant with the law. Clearly the Department,
34 as late as February 2006, was open to Hydro demonstrating compliance with approved
35 compliance monitoring. The evidence of Hydro itself was that if it entered into a
36 compliance agreement with the Department for the establishment of a compliance
37 monitoring network it would be compliant with the laws of the Province. (Transcript,
38 May 5, 2006, pg. 144/20 to pg. 145/9)
39

40 While it is not possible to know what conditions would have been placed on Hydro with a
41 compliance agreement the Board would have the certainty that the action being taken by
42 Hydro meets with the environmental regulator’s approval. Instead, the only evidence on
43 the record as to the Department’s view of Hydro’s approach is the testimony of Mr.
44 Haynes that the Department commented that “*it was a good start.*” (Transcript, May 8,
45 2006, pg. 68) Contrary to this third party report as to the Department’s view, the
46 February 9, 2006 letter clearly sets out the option of approved compliance monitoring.

1 The Board is supportive of Hydro's efforts to improve its environmental performance by
2 reducing emissions at the Holyrood Thermal Generating Station. The Board
3 acknowledges the concerns that have been expressed in the past relating to these
4 emissions, especially as they relate to particulates. In fact the Board has in the past
5 approved a number of capital projects which included an environmental justification,
6 which was within the mandate of the Board. However the Board agrees with the
7 intervenors that it cannot approve the proposed expenditure by Hydro of somewhere
8 between \$6 million and \$8 million annually for lower sulphur content fuel on the basis
9 that the expenditure is required by law in the absence of evidence which shows that it is
10 in fact required by law. The evidence presented in this Application does not show that:

- 11
- 12 • Hydro is required by law to burn less than 2% sulphur content fuel;
- 13 • An immediate switch to 1% sulphur content fuel is required to be compliant with
- 14 the statute, regulations, Guidance Document or Certificate of Approval;
- 15 • The Department was unwilling to enter into a compliance agreement with Hydro;
- 16 • The Department would not permit Hydro to establish a compliance monitoring
- 17 network to monitor actual emissions for two years; or that
- 18 • Hydro's course of action is acceptable to the Department as a means of addressing
- 19 this non-compliance.
- 20

21 The Board agrees with the comments of the Consumer Advocate in his final submission
22 that:

23
24 *“Given this quandary, the Consumer Advocate is left little choice but to submit that*
25 *Hydro has not established that the immediate switch to one percent (1%) sulphur content*
26 *fuel is either required or the least cost means of achieving compliance with the limits*
27 *imposed by provincial environmental laws and regulations. Hydro's Application should*
28 *be declined.”*
29

30 The Board finds that Hydro has failed, on the basis of the evidence presented, to show
31 that its decision to move to purchasing 1% sulphur content fuel is necessary to be
32 compliant with the laws of the Province. As Hydro did not provide any other basis
33 within the jurisdiction of the Board to justify this decision at this time the Board cannot
34 approve Hydro's proposal to recover increased fuel costs for 1% sulphur content fuel
35 from ratepayers. In the absence of an exemption or direction from Government pursuant
36 to the *Act* or the *EPCA* Hydro can continue the purchase of this fuel but must do so
37 without recovery from ratepayers. On a go forward basis it is open to Hydro to reapply to
38 the Board with evidence of the requirement to switch to lower sulphur content fuel which
39 it failed to provide in this Application.

40

1 **IV ORDER**

2

3 **IT IS THEREFORE ORDERED THAT:**

4

5 1. Hydro's request for an order approving, as a prudent fuel purchase expenditure to
6 be recovered through the RSP, Hydro's costs of purchasing 1% sulphur fuel is
7 hereby denied.

8

9 2. Hydro shall pay the expenses of the Board arising from this Application.

Dated at St. John's, Newfoundland and Labrador this 2nd day of June 2006.

Robert Noseworthy
Chairperson and Chief Executive Officer

Darlene Whalen, P.Eng.
Vice-Chair

G. Cheryl Blundon
Board Secretary