

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: The *Public Utilities Act*, R.S.N.S. 1989, c.380, as amended

- and -

IN THE MATTER OF: An Application by NOVA SCOTIA POWER INCORPORATED for
approval of an Extra Large Industrial Dispatchable Above-the-
Line Tariff applicable to Port Hawkesbury Paper

PHP INFORMATION REQUEST RESPONSES

To: Small Business Advocate

From: Port Hawkesbury Paper LP ("PHP")

Copies: 1 electronic copy (PDF searchable)

Contact Person: James MacDuff
McInnes Cooper
1300 – 1969 Upper Water Street
Purdy's Wharf, Tower II
Halifax, NS B3J 2V1
james.macduff@mcinnescooper.com

Request IR-1:

Refer to M12661, Exhibit N-3, Direct Evidence of Port Hawkesbury Paper ("PHP") (the "PHP Evidence"). Regarding the statement, on page 5, line 3-6:

DA and RT Schedules can range from longer periods of stable load level, to being dispatched down to base load for days at a time and not knowing the exact timing of when PHP will have available power to produce paper

please provide the following information for events occurring between 2020 to present:

- a) The reason NS Power initiated the event – i.e. active demand control ("ADC"), interruptible rider, operational emergency or other reason.
- b) The duration of the event, with start and end dates.
- c) The base load reduction during the event and whether that was continuous across all hours.
- d) The 5-minute interval load data in native spreadsheets as defined in the Extra Large Industrial Dispatchable ("ELID") tariff, as described in Exhibit N-1, Extra Large Industrial Dispatchable Tariff Application – Attachment 1. Page 6 of 8. Paragraph 4.

Response IR-1:

(a-c) See Confidential Attachment 1 to SBA IR-1(a-c) for NS Power's rolling dispatch of operating modes for each hour and PHP's load levels from 2020-2025. Note that the PHP load shown in the Attachment is inclusive of NS Power station service power for the Port Hawkesbury Biomass Plant of approximately 4 MW. The actual load is taken from PHP's internal PI systems. In terms of Operating Modes, the ranges during the relevant time periods are provided in Confidential Attachment 2 to SBA IR-1(a-c).

PHP notes there is only one instance of being interrupted by the NSPSO over the past 6 years, all others were as the result of ADC and/or PHP operational decisions. This event occurred January 9, 2021. PHP was asked to go to zero MW by the NSPSO due to a system emergency, which it did. No other details were provided to PHP on the cause of the event. Twenty minutes after the call by NSPSO, PHP received a call from NSPSO that it could begin restoring load.

(d) See Confidential Attachment 1 to SBA IR-1(d).

Request IR-2:

Refer to M12661, Exhibit N-3, the PHP Evidence, page 6, lines 6-7, where it states, in reference to the benefits that ADC provides the grid, "If this practice is expected to continue, an improved tariff protocol will be required, if PHP chooses to move to the ELID tariff" and:

- a) Please identify specifically which provisions within the tariff PHP believes need to be improved under the ELID relative to ELIADC, for example:
 - (i) Reliability events
 - (ii) How each event is counted toward the allowed annual/hourly limit.
 - (iii) Dispatch communication
 - (iv) Other
- b) Of the provisions within the tariff listed that PHP believes need improvement, which have already been addressed in NS Power's ELID filing and which remain unaddressed?
- c) Please provide a redline version of NS Power's ELID that would address all issues.

Response IR-2:

(a-c) PHP's comment was with respect to the existing Protocol, not the Tariff itself. At this time, PHP does not believe that any significant wording changes are required to NS Power's Tariff language proposed in Attachment 1 of the Application. The modifications proposed by PHP would result in updates to the dollar figures provided for the demand charge, energy charge, ELID Interruptible Rider Credit, and ELID Priority Interruptible Credit. As noted in response to IG IR-7(a), the Operating Procedures which will replace the Protocol remain under discussion with NS Power and will be subject to continued review as part of the transition to the Independent Energy System Operator and the adoption of the electronic dispatch tool.

1 **Request IR-3:**

2
3 **Refer to M12661, Exhibit N-3, the PHP Evidence. Regarding PHP's desire to move to an**
4 **above the line ("ATL") tariff, please answer the following:**

- 5 a) **Does PHP believe that the ATL ELID tariff should be designed as an embedded or**
6 **marginal based rate or combination?**
- 7 b) **If PHP supports a marginal-cost-based design, please explain how marginal pricing**
8 **is compatible with PHP's stated objective of greater price stability under an ATL**
9 **tariff.**
- 10 c) **If PHP supports a combination of embedded and marginal costs for the ELID tariff,**
11 **does PHP believe that this should apply for other ATL customers?**
- 12

13 **Response IR-3:**

- 14
15 a) At page 15, lines 25-27 of NS Power's Application, Exhibit N-1, NS Power states that:

16
17 "The proposed ELID Tariff is a fully cost-based tariff. The demand and
18 energy components are embedded cost based. The Customer Charge, the
19 Interruptible Rider, and the Dispatchable Rider credit are incremental cost
20 based."

21
22 PHP agrees that the ELID tariff should be designed in this manner, but does not agree
23 that as proposed by NS Power the ELID demand charge or Interruptible Rider are cost
24 based.

- 25
26 b) PHP does not support a fully marginal cost-based design for an ATL tariff.
- 27
28 c) PHP does not have a view on whether a combination of embedded and marginal elements
29 should apply for other ATL customers.
- 30

1 **Request IR-4:**

2
3 **If PHP did not take service under the new ELID tariff:**

4 **a) When does PHP understand the development of a new tariff would occur?**

5 **b) Would it be a new ATL or a below-the-line tariff?**

6 **c) Would PHP require interim service if the alternative tariff was not developed**
7 **prior to January 1, 2027? If so, under what rate?**

8
9 **Response IR-4:**

10
11 (a-c) Please refer to PHP's responses to Board Staff IR-2 and CA IR-7(b).

1 **Request IR-5:**

2
3 Refer to M12661, Exhibit N-2, Evidence of Colin T. Fitzhenry and Michael G. Gorman on
4 behalf of PHP, page 18, lines 5-23 and page 19, lines 1-6. specifically, the use of three
5 coincident peak ("3-CP") and cost-causation principle guidance provided by the National
6 Association of Regulatory Utility Commissioners ("NARUC"), please answer the following:
7

- 8 a) Identify the National Association of Regulatory Utility Commissioners ("NARUC")
9 Manual that you rely on to
10 (i) exclude interruptible capacity from CP allocations,
11 (ii) exclusion of a representative CP for controlled load, and
12 (iii) requirement to treat allocation of CP inclusive of full interruptible ability.
13 b) If the NARUC Manual does not expressly address interruptible loads, please state
14 that cost-causation principal claims are a matter of interpretation, or if NARUC
15 Manual does, provide a direct citation.
16 c) If the maximum interruptible hours are met in a month, i.e. more than 16 hours in a
17 day 15% in a year or 30% in a month, would PHP still reduce load?
18 d) Could PHP not perform, i.e. not interrupt, when called by NS Power to interrupt. ?
19 e) What is the proposed penalty if PHP does not perform during an interruptible event?
20 f) Provide an example of penalty of non-performance during the last three
21 interruptible events.
22 g) Provide your proposed statistical method for developing a 3-CP allocator for a
23 controlled large load with formulas intact and in alignment with NARUC principles.
24 h) Explain why the historic contribution to peak as used by NS Power is not
25 appropriate.
26 i) If 65MWs reflects the historical reliance of interruptibility (including suppressed
27 meter readings), why is this not an appropriate allocation?
28

29 **Response IR-5:**

- 30
31 (a) The Electric Utility Cost Allocation Manual, January 1992, (NARUC Manual). The NARUC
32 Manual doesn't use the term interruptible, but it does recognize the concept of shifting
33 demands on the system to avoid generation capacity costs and to allocating costs to the
34 customers that cause the cost to be incurred.
35

36 The NARUC Manual at page 5 observes that:
37

38 The challenge to the system planner is to provide sufficient generating
39 capacity to satisfy the peak demand, while recognizing that much of that
40 plant will not be needed for a large part of the day and year. As different
41 types of generating units are marked by different operational and cost
42 characteristics, the utility will attempt to build the types of units that provide
43 it with the flexibility to match supply to demand for every hour at the lowest
44 possible cost.
45

46 At page 7 of the NARUC manual it observes that:
47

48 In recent years it has become apparent that utilities have the option of
49 influencing their demand curves as well as varying their sources of supply.
50 Thus, a utility with base load capacity but a rising demand may be able to

1 shift some of its peak load to off peak hours, to make better use of its base
2 load facilities, rather than building additional peaking units.
3

4 The manual goes on to discuss cost allocation and states that a purpose of regulatory cost
5 allocation is "To attribute costs to different categories of customers based on how those
6 customers cause costs to be incurred" (at page 12).
7
8

9 (b) The NARUC manual is clear that shifting load can assist the utility to avoid adding new
10 capacity cost. The Manual is also clear that costs should be allocated to the load that
11 causes the cost to be incurred. The interpretation of the Manual should be limited within
12 these parameters.
13

14 (c) Under the Interruptibility provisions of the proposed ELID Tariff, PHP is required to reduce
15 its load by, at a minimum, the amount requested by NS Power within 10 minutes of such
16 request by NS Power. While those types of interruptions are limited to 16 hours per day
17 and 5 days per week to a maximum of 30% of the hours per month and 15% of the hours
18 per year as noted, PHP will remain subject to the active management of its load under the
19 Dispatchable Rider. In such circumstances, PHP expects it will still be incented to reduce
20 its load as and when requested by NS Power. However, only Interruption calls initiated
21 pursuant to the Interruptible Rider are subject to the penalty, and the extent of those
22 interruptions is limited as noted. To ensure that it is clear whether a formal supply
23 interruption call is being made, as opposed to NS Power hourly dispatch in the normal
24 course, the proposed Dispatchable Rider to the ELID Tariff (Application, Attachment 1,
25 page 8) includes language that: "The Company shall specifically identify in advance if any
26 of the Customer's load is being interrupted pursuant to the terms and conditions of the
27 Interruptible Rider in accordance with those procedures rather than the Operating
28 Procedure."
29

30 (d) If PHP does not interrupt when called by NS Power pursuant to the Interruptibility
31 provisions of the proposed ELID Tariff, it would be subject to the penalty as noted in
32 response to (e) below.
33

34 (e) The proposed ELID Tariff contains the same penalty provision for failure to interrupt as
35 the current ELIADC Tariff (Application, Attachment 1, page 6):
36

37 (4) Failure to comply in whole or in part with a requirement to interrupt load
38 will result in penalty charges. The penalty will be comprised of two parts: a
39 Threshold Penalty and a Performance Penalty.
40

41 The Threshold Penalty charge shall be the cost of the appropriate firm
42 billing effective at that time for the consumption used in that billing period.
43

44 The Performance Penalty which is based on the Customer's performance
45 during the interruption event is calculated as per the formula below:
46

47 Performance Penalty = (\$15/kVA x A) + (\$30/kVA x B)
48

49 Where:
50

1 • "A" is any residual customer demand (above that required by the
2 interruption notice) remaining in the third interval directly following two
3 complete 5-minute intervals after the interruption call is initiated and
4 sent by NS Power.

5
6 • "B" is the customer's average demand based on 5-minute interval data
7 during the entire interruption event excluding the interval used to
8 determine "A."

9
10 • The total penalty will not exceed two times the cost of the appropriate
11 firm billing effective at that time for the consumption used in that billing
12 period.

13
14 (f) PHP has no such examples of penalties for non-performance.

15
16 (g) BAI has not made the requested calculation. However, NS Power 3CP should be
17 developed based on firm demand only, because interruptible load need not be served by
18 NS Power during peak demand periods.

19
20 (h) PHP load can be served at the time of system peak, but NS Power can elect to interrupt
21 the load if it does not have the capacity to serve the demand. If PHP's load was not
22 interrupted during NS Power peak demand hours used to measure its 3CP demand,
23 adjustment to the demand is required so its load is not viewed as firm load obligation of
24 NS Power. Again, NS Power has discretion of serving or interrupting PHP demand above
25 8 MW during peak hours. Therefore, PHP demand above its firm load does not contribute
26 to NS Power's need to invest in capacity to serve its peak demand obligation. PHP only
27 receives 8 MW of firm service from NS Power. If 65 MW of capacity is allocated to the
28 PHP rate, then PHP will pay for 65 MW of firm capacity but only have rights to 8 MW of
29 firm capacity service. Hence, it results in an excessive charge to PHP for its actual firm
30 service it takes from NS Power.

31
32 (i) Please see response to subpart (h).
33
34

Request IR-6:

Refer to M12661, Exhibit N-2, Evidence of Colin T. Fitzhenry and Michael G. Gorman on behalf of PHP, regarding the non-fuel savings created by the Dispatchable Rider ("DR"), please answer the following:

- a) Does PHP believe the DR component should include avoided transmission and production capacity costs? Please explain.
- b) Does PHP believe the DR credit, as PHP proposes, would overlap with the interruptible credit? Please explain.
- c) Does PHP believe that the DR credit, as proposed by NS Power, fully passes the benefits related to energy dispatch savings to PHP? Please explain.
- d) Provide a table to show which credit is associated with each value attribute, i.e. generation 2 capacity, transmission capacity, ancillary service, etc. included in DR credit, interruptible 3 credit, priority credit, or unaccounted.

Response IR-6:

- (a) No, avoided transmission and production capacity costs should primarily be captured through the interruptible credit or through an appropriate demand allocation.
- (b) No. While PHP believes that the Dispatchable Rider does provide both energy and capacity benefits to the system. The DR credit, as proposed by NS Power, would include energy cost savings, such as fuel and operating and maintenance expenses, and would not include the capacity cost savings captured by the interruptible credit.
- (c) PHP has not reviewed a finalized methodology for calculating DR benefits related to energy dispatch savings. Thus, it would be premature to assess the validity of this methodology.
- (d) Please see the table below:

Value Attribute	Associated Credit / Component
System Energy Savings	Dispatchable Rider (DR) Credit
Generation Capacity	Interruptible Credit
Transmission Capacity	Interruptible Credit
Priority Interruption	Priority Interruptible Credit
Ancillary Services (Operating Reserves)	Unaccounted (Functionality exists in DR but is not specifically priced)

Request IR-7:

Refer to M12661, Exhibit N-2, Evidence of Colin T. Fitzhenry and Michael G. Gorman on behalf of PHP, regarding the utilization of the marginal cost of capacity at \$13.107/kVa for the interruptible credit, beginning at page 20 line 14 through page 22 line 7, and please answer the following:

- a) Confirm that PHP has not provided its own estimate of the value of capacity but is referencing NS Power's estimate.
- b) Does PHP believe that its performance should be valued as if no limits to its availability to 15 be called? Please explain.
- c) Has PHP determined an accredited capacity factor to incorporate interruptibility? If so, please provide with formulas intact.
- d) Does PHP believe that a DR credit is duplicative if provided the full avoided cost of capacity? Please explain.
- e) Does PHP believe that it provides the same interruptible benefit as LIIR customers? Please explain.

Response IR-7:

- (a) Confirmed. PHP's estimate would likely be higher as a result of dated peaker capacity cost included in the NS Power estimate.
- (b) No, PHP's load must be moved in large increments per approved operating modes.
- (c) No, PHP has not performed the requested calculation.
- (d) No, the DR credit captures energy cost savings not captured by avoided capacity cost.
- (e) No, PHP provides priority interruptible service to NS Power.

Request IR-8:

Refer to M12661, Exhibit N-2, Evidence of Colin T. Fitzhenry and Michael G. Gorman on behalf of PHP, regarding the transmission avoided costs, please answer the following:

- a) Identify the NS Power studies relied on to claim, at page 18, lines 1-2, "...PHP's demand is minimal during system peaks."
- b) For an N-1 contingency assessment, as referenced at page 17, list all high-voltage system upgrades that would be triggered when PHP's winter coincident peak contribution is modeled at:
 - (i) 65 MW
 - (ii) PHP's actual load during most recent CP hour
 - (iii) at 8 MW
- c) Is PHP recommending an additional credit for transmission capacity? Please explain.

Response IR-8:

- (a) The referenced NS Power study is based on BAI's understanding of how these studies are conducted for NS Power's system.
- (b) PHP is unaware of any high-voltage system upgrades that would be triggered when PHP's winter coincident peak contribution is modelled at any of the specified MWs.
- (c) No. PHP requests a price that reflects NS Power's cost of firm and interruptible production and transmission serve that is provided under its tariffed rate. A single demand charge for production and transmission service is reasonable, if accompanied with an appropriate interruptible credit to metered demand that is in excess of the PHP 8 MW firm service.