

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: Industrial Group

From: Port Hawkesbury Paper LP ("PHP")

Copies: 1 electronic copy (PDF searchable)

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Request IR-1:

Reference: N-1, ELID Application, page 3.

Preamble: NSPI's Application states that "[t]he Tariff costing and billing parameters are applied as noted in the Settlement Agreement (SA) which underpins the Company's 2026-2027 General Rate Application (GRA) (M12451) currently before the Board." The SA has been provided as Attachment 4 to the Application.

(a) Please confirm whether PHP considers the ELID Tariff as filed to be consistent with the term of the M12451 Settlement Agreement relating to PHP treatment, including items (a) through (g) of the PHP Treatment section of Schedule "A."

(b) If not confirmed, please identify each provision of the proposed ELID Tariff that departs from, or goes beyond, the Settlement Agreement, and explain the nature of each such departure.

Response IR-1:

(a-b) Confirmed. Please also refer to PHP's response to NS Power IR-1(a).

1 **Request IR-2:**

2
3 **Preamble:** NSPI's evidence states that optimal dispatch of PHP's load could yield
4 system savings of \$7–\$11 million annually – which would accrue to PHP under the DR
5 credit – but that realized savings may be approximately half that amount.

6 (a) Provide PHP's and/or BAI's assessment of the reasonableness of this range,
7 including any independent production-cost modelling or analysis conducted or
8 reviewed by BAI in support of that assessment.

9
10 (b) Identify the key assumptions and constraints that drive the difference between
11 "optimal" and "realized" dispatch savings, including which of those constraints are
12 within PHP's control versus NSPI's control.

13
14 **Response IR-2:**

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16 (a) Neither PHP nor BAI have conducted an independent production-cost modelling or
17 analysis regarding the potential system savings achievable through dispatch of PHP's
18 load. Such estimates are highly dependent on actual system circumstances and fuel costs,
19 which often vary from forecasts as reflected in recent experience under the ELIADC Tariff.
20 Whether system savings in the range identified by NS Power can be achieved remains to
21 be seen. For this reason, PHP and BAI believe that the proposed methodology to calculate
22 the dispatch value after-the-fact based on actual system conditions is appropriate. As NS
23 Power states at page 10 of its Application, lines 24-28:

24
25 "The methodology to determine the dispatch value is relatively simple and
26 transparent compared to the ELIADC Tariff processes and is anticipated to
27 be less controversial. The actual system conditions that occurred
28 throughout the year will be employed to calculate the system cost to serve
29 PHP at a high load factor (i.e. the Customer Baseline), with the difference
30 between this and the Company's actual system cost appropriately
31 attributed to and credited to PHP."

32
33 (b) PHP understands that the modelling to produce the optimal savings is assuming a "perfect
34 world" outcome if all dispatches and system conditions were exactly as modelled over the
35 course of a year, in advance of the year. The realized savings are a result of many events
36 that occur over the course of a year that forecast outputs of a model could not predict
37 reliably, nor anticipate the outcome. PHP does not have access to NS Power's proprietary
38 model and cannot comment on the key assumptions and constraints within the model.

1 **Request IR-3:**

2
3 **Reference: N-2, Evidence of C. Fitzhenry and M. Gorman, page 3.**

4
5 **Preamble: PHP's consultant, Brubaker & Associates, Inc., states that the current ELID R/C**
6 **ratio is 1.04373 and recommends an R/C ratio of 1.0 "*ensuring PHP pays its cost to serve***
7 ***without subsidizing or being subsidized by other classes.*"**

8
9 **(a) Please confirm that PHP agreed to an R/C ratio of higher than 1.0 within the GRA**
10 **(M12451) proceeding?**

11
12 **(b) Identify the regulatory principle or precedent relied upon by PHP for the proposition**
13 **that an R/C ratio above 1.0, but within the Board's approved range, is inappropriate**
14 **for a new ATL tariff class and provide all supporting decisions or regulatory orders.**

15
16 **(c) Provide PHP's calculation (or BAI's) of the revenue requirement that would result**
17 **from applying a R/C ratio of 1.0 to NSPI's proposed ELID Demand Charge, Energy**
18 **Charge, and Customer Charge for 2026 and 2027.**

19
20 **(d) Provide a class-by-class table showing the impact on other ATL classes (including**
21 **LI and MI specifically) of reducing PHP's R/C ratio from 1.04373 to PHP's**
22 **recommended level of 1.0.**

23
24 **Response IR-3:**

25
26 **(a) Please refer to PHP's responses to NSPI Information Requests 1(a) and (b).**

27
28 **(b) The Principle of Cost-Causality is the primary regulatory foundation for PHP's position,**
29 **requiring that a customer class pays exactly the costs it imposes on the utility. While the**
30 **NSUARB historically accepts a "Zone of Reasonable-ness" between 0.95 and 1.05 for**
31 **Revenue to Cost ("R/C") ratios, this range is an application of the Principle of Gradualism.**
32 **Gradualism is a transitional tool used to prevent rate shock for existing customers by**
33 **slowly moving their rates toward cost-reflective levels over several years. PHP maintains**
34 **that an R/C ratio above 1.0 is inappropriate for a new ATL tariff class because the**
35 **justification for gradualism does not exist. Starting a new class at any ratio other than 1.0**
36 **creates an intentional cross-subsidy from its inception. Unlike the 2023 General Rate**
37 **Application (Matter No. M10431), where the Board allowed the Large Industrial Class to**
38 **remain above 1.0 to protect the Domestic Class, a new service offering should be revenue-**
39 **neutral from its first day to ensure competitive neutrality and avoid undue discrimination.**
40

- 1 (c) PHP and BAI have not performed the requested analysis, but NS Power workpaper, "N-
2 1.xlsx" provided the PHP cost of service calculation and revenue calculation on the PHP
3 tab. The difference between these two values would be the revenue requirement impact.
4
- 5 (d) PHP and BAI have not performed the requested analysis as they are is not specifically
6 aware of what the revised R/C ratios would be for the other classes.
7

Request IR-4:

Reference: N-2, Evidence of C. Fitzhenry and M. Gorman, Interruptible Credit, page 12.

(a) Provide all workpapers, source documents, and derivation steps underlying BAI's recommended interruptible credit of \$13.107/kVA-month, including: (i) the capital cost of the reference peaking unit; (ii) financing assumptions; (iii) applicable capacity factor; and (iv) the year in which the estimate was developed.

(b) Compare and contrast the methodology used by NSPI in the GRA to calculate the interruptible credit to the methodology proposed by BAI.

Response IR-4:

(a) BAI has not performed the requested analysis. The recommended interruptible credit of \$13.107/kVA-month was derived from NS Power's Application, Attachment 1 Extra Large Industrial Dispatchable Tariff, Page 8 of 19, footnote 5.

(b) The LIR Interruptible Credit of 7.638/kVA was calculated using both financial data and billing determinants of the LIR Class. BAI's proposed methodology would be to utilize the same methodology deployed for the LIR class, but the ELID class billing determinants. As shown in NS Power's Application, the calculation is the following:

Winter Coincident Peak of ELID of 59,446 kW x Annual Levelized Avoided
Peaker Cost of \$160.44/kW / (57,000 kW winter month system coincident
demand of ELID at customer's meter x Power Factor of 1.06383 of PHP x
12 months) = \$13.107/kVA.

Request IR-5:

Reference: N-2, Evidence of C. Fitzhenry and M. Gorman, page 19, Rate Implications.

Preamble: BAI calculates that reducing PHP's demand determinant from 65 MW to 8 MW reduces PHP's revenue requirement by approximately \$6.5 million in 2026 and approximately \$9.4 million in 2027.

(a) Identify precisely where, in NSPI's COSS, the \$6.5 million (2026) and \$9.4 million (2027) are reallocated, confirming which other customer classes bear the incremental cost if PHP's demand determinant is reduced to 8 MW, and provide a class-by-class impact table of the requested change including LI and MI.

(b) Identify any additional cost components (beyond the demand charge) where the change in demand determinant cascades through to affect other charges (e.g., rider calculations, FAM allocation) and quantify those secondary effects.

Response IR-5:

(a) BAI has not performed the requested analysis. The referenced figures were estimated by adjusting PHP's billing determinants, but no other alterations were made to other customer classes. BAI has made no determination about the reallocation of ELID revenue requirement.

(b) BAI understands that there are demand components included in the calculation of certain riders and the FAM allocation. However, BAI has not performed calculations of the individual impacts of adjusting PHP's billing determinants outside of the COSS.

1 **Request IR-6:**

2 **(a) Set out in a single consolidated table BAI's recommended rate for each ELID tariff**
3 **component for 2026 and 2027, compared to NSPI's proposed rate for the same**
4 **component.**

5
6 **(b) For each component where BAI recommends a change from NSPI's proposal,**
7 **identify: (i) the resulting impact on PHP's annual bill; and (ii) the resulting impact**
8 **on the annual revenue requirement allocated to other ATL customer classes,**
9 **including LI and MI specifically.**

10 **Response IR-6:**

11 (a) BAI has not recalculated each rate component of BAI's recommended ELID rate. BAI is
12 proposing an Interruptible credit of \$13.107/kVA in 2026 for the ELID tariff in contrast to
13 the \$7.638/kVA being proposed by NS Power

14 (b) BAI has not performed the requested analysis.

15

Request IR-7:

Reference: N-3, Evidence of PHP, page 9, ADC Energy Supply Protocol.

(a) Provide the Active Demand Control ("ADC") Energy Supply Protocol in its entirety, including all appendices, schedules, and amendments.

(b) Identify, in track-changes or side-by-side format, all provisions of the ADC Protocol that PHP proposes to retain, amend, or replace under the proposed ELID tariff, including any provisions relating to electronic dispatch.

(c) Identify all operational constraints (ramp rates, minimum run levels, production obligations, fibre and wood-supply commitments, and maintenance windows) that would limit PHP's ability to respond to RT or electronic dispatch instructions and quantify those constraints in MW and duration.

Response IR-7:

(a) See Synapse IR-2 for the Protocol and Appendix. For the Operating Mode Characteristics Schedule and amendments to it, see SBA IR-1(a-c).

(b) PHP agrees with NS Power's comment at page 11 of its Application that the Operating Procedures (which will replace the ADC Protocol) are not included as part of the ELID Tariff and not proposed to be subject to NSEB approval. The Operating Procedures remain under discussion with NS Power. The Operating Procedures 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. PHP understands NS Power is filing the most recent draft provided to PHP in a blackline in response to IG (NS Power) IR-12, Attachment 1. See also the response to SBA (PHP) IR-2.

(c) It is not practical to identify all possible constraints PHP could encounter at any point during the day that would limit PHP's ability to respond to a dispatch, nor is it practical to identify the load impact of all those possible constraints, which would include NS Power constraints. PHP provides NS Power with its Operating Modes that determine the availability of its operating lines and this forms the basis of the PHP dispatch. Constraints that limit PHP's ability to meet its dispatch require that PHP will contact NS Power or the NSPSO and, when necessary, discreet line submissions are sent to NS Power and NSPSO. NS Power constraints can also limit PHP's ability to meet its dispatch, and this process is outlined similarly in the Active Demand Control Energy Supply Protocol.

Request IR-8:

Reference: N-3, Evidence of PHP, pages 9-10 (PHP consumption forecast and PHP Wind forecast).

- (a) Provide the full workpapers, assumptions, and inputs underlying PHP's 2026 and 2027 consumption forecasts (approximately 774,000 MWh per year as referenced in N-3) and PHP Wind (Goose Harbour Lake) production forecasts (approximately 154,610 MWh in 2026 and 507,400 MWh in 2027), including the basis for the projected increase in PHP Wind output from 2026 to 2027.**
- (b) Reconcile PHP's consumption and PHP Wind production forecasts to the figures used in NSPI's COSS (Tariff Energy of 810.5 GWh in 2026 and 304.3 GWh in 2027) and explain the reasons for all material differences.**
- (c) Identify the revenue risk to NSPI and the cost risk to other ATL customers, including Large Industrial and Medium Industrial, if PHP Wind commissions later than forecast, or produces materially less (or more) than forecast in 2026 or 2027, and confirm whether PHP bears any financial responsibility for such variance. Please provide any modeling done by PHP and/or BAI of these scenarios.**

Response IR-8:

- (a) See Attachment IG IR-8(a). The monthly energy demand is developed as part of the internal annual budget process that is proprietary to PHP and is based on projected monthly paper order fulfillment and the energy requirement for the paper production per tonne. The attachment was provided to NS Power for the 2026 AAR filing. The wind forecast is based on production estimates and the projected timing of each circuit of wind generation that PHP Wind has in its plan for 2026. Goose Harbour Lake Wind will have 4 circuits, with 6 turbines in each circuit. PHP expects that the Goose Harbour Lake Wind facility will achieve full commercial operations status in December 2026 and the projected forecast of MWh for 2027 assumes the wind farm is fully operational for the year.
- (b) The data PHP submitted to NS Power for use in the COSS process were based on the forecast for the 2025 production year. The PHP Wind project forecast production was also in early stages of development and has been refined over time. The difference between the approximately 810,000 MWh and the update to approximately 774,000 MWh represents approximately a 4.5% variance.
- (c) The per unit energy cost allocated to PHP is greater with the wind than without. Meaning that if the PHP Wind does not come online according to its forecast, PHP will end up paying more than their allocated Cost of Service. PHP and BAI did not perform any modelling for this scenario. PHP believes its only financial responsibility is payment to NS Power for the energy delivered under the ELID tariff and the PHP Wind PPA and Sales Agreement.

Request IR-9:

Reference: N-3, Evidence of PHP, page 12.

Unless PHP's areas of concern are addressed by the Board in a satisfactory manner it is unlikely PHP will proceed to accept service under the ELID tariff. PHP would need to undertake the development of a below-the-line tariff with NS Power that meets the mill's needs if it chooses to not accept service under the ELID.

(a) Please specifically identify what approvals PHP is seeking from the Board with respect to the ELID tariff or any alternative proposed tariff.

(b) Does this mean that, if it does not obtain all of the changes it is requesting to the ELID tariff, it will decline to take service under this proposed tariff? Please elaborate fully.

(c) Please describe in detail what PHP means by a below-the-line tariff that would "meet the mill's needs" if it chooses not to accept service under the ELID tariff.

(d) Describe in detail any below-the-line tariff alternative that PHP is considering if the ELID tariff as proposed is not modified to address PHP's concerns, including: (i) proposed rate structure; (ii) cost responsibility; (iii) dispatchability provisions; and (iv) relationship to the existing ELIADC tariff.

Response IR-9:

(a) PHP is currently seeking approval of the ELID tariff modified to address the concerns raised in its Evidence, Exhibit N-3, at page 8, lines 18-31.

(b) Please refer to PHP's response to CA IR-5.

(c) Generally a below-the-line tariff that would meet the mill's needs is a tariff that fully values the benefits that PHP provides to the system and does not have a detrimental financial impact on PHP's ability to operate a financially sustainable business.

(d) PHP's current and recent focus has been to attempt to achieve a cost-based ATL rate. Please also refer to PHP's responses to Board Staff Information Requests 1(c) and 2 and Consumer Advocate Information Request 7(b).

Request IR-10:

Reference: N-3, Evidence of PHP, page 12. PHP describes the February 13, 2026 Maritime Link trip event and states, *"This was neither a real time (RT) schedule dispatch nor an NSPSO call for interruption."*

And Reference: N-2, Evidence of C. Fitzhenry and M. Gorman, page 16, lines 9-11.

Amidst this event, PHP's demand was dispatched down to approximately 9 MW, its lowest recorded level during any coincident peak in that two-year 8 window.

(a) Why does PHP conclude this was not a real time schedule dispatch?

(b) Provide a complete list of all events in which PHP reduced its load outside the formal RT schedule dispatch or interruption protocol, including date, time, duration, MW curtailed, and the triggering system event.

(c) Confirm whether PHP was, in fact, dispatched or instructed to curtail load by NSPI/NSPSO during each of the 2022–2023 winter 3CP hours identified in NSPI's ELID evidence. For each such hour, state: (i) PHP's metered demand immediately before any instruction; and (ii) PHP's metered demand at the time the system coincident peak was recorded.

(d) Explain, from PHP's perspective, how the operational reality of NSPI's dispatch control during system coincident peaks should inform the demand allocator used to assign production and transmission capacity costs to PHP under the ELID tariff, and provide quantitative support for PHP's position.

(e) If the lowest recorded demand level was approximately 9 MW, please explain why it would be reasonable to set the 3CP value at 8 MW?

(f) How many times in the past five years has PHP been dispatched down to 9 MW or lower?

Response IR-10:

(a) Real time schedules are sent out in advance of the next several hours, and do not account for any immediate system disturbances. NS Power sends out real time dispatches that are informed by the best available system information at the time. The call to PHP to drop load in this circumstance was not part of the real time dispatch sent by NS Power and cannot be considered a real time dispatch.

(b) Refer to SBA IR-1(a-c).

(c) See Confidential Attachment 1 to SBA IR-1(a-c) for detailed information from PHP's internal PI systems of its dispatch and load for all hours from 2020-2025, which is inclusive

of NS Power station service power for the Port Hawkesbury Biomass Plant of approximately 4 MW. Specifically with respect to the 2022-2023 winter 3CP hours:

- **1/11/2022, hour 1800:** PHP was dispatched down to OM2 in hour 1300. The load in the prior hour to peak (1700) was 104.08 MW and the load in the hour following the reduction was 70.26 MW.
- **2/15/2022, hour 1900:** PHP was dispatched down to OM2 at hour 0800, and up to OM5 at hour 1400 where the dispatch remained through the peak until the following morning at 0800. The load in the prior hour to peak (1800) was 90.14 MW and the load in the hour following was 91.90 MW.
- **12/13/2022, hour 1800:** PHP was dispatched up to OM5 in hour 2200 of the previous day prior to the peak (12/12), where the dispatch remained through the peak until hour 2400 (12/13). The load in the prior hour to peak (1700) was 109.81 MW and the load in the hour following was 111.23 MW.
- **1/12/2023, hour 900:** PHP was dispatched down to OM2 at hour 0900 two days prior to the peak (1/10), where the dispatch remained through the peak until hour 2300 (1/12). The load in the prior hour to peak (800) was 10.76 MW and the load in the hour following was 10.79 MW.
- **2/4/2023, hour 1200:** PHP was dispatched down to OM2 in hour 2000 of the previous day prior to the peak (2/3), where the dispatch remained through the peak until hour 1300 of the following day (2/5). The load in the prior hour to peak (1100) was 9.08 MW and the load in the hour following was 8.99 MW.
- **12/22/2023, hour 1800:** PHP was dispatched down to OM5 at hour 1800. The load in the prior hour to peak (1700) was 149.3 MW and the load in the hour following was 98.8 MW.

(d) Because NS Power serves PHP's interruptible demand strictly on an as-available basis and has the authority to curtail this load during system coincident peaks, this portion of PHP's demand does not drive the need for incremental generation or production capacity. Operationally, NSPI would not dispatch PHP at demand levels greater than 8 MW at times of system coincident peaks if it did not have the resource capacity to meet that higher demand level. Quantitatively, this approach ensures that PHP is only charged for the capacity NS Power must actually reserve to meet its firm commitment, while the non-fuel costs of serving any interruptible demand are more appropriately recovered through the ELID energy charge rather than a separate capacity charge. Including more than the 8 MW firm demand in the capacity allocator results in an imbalanced design that over-charges for the service actually provided.

(e) Note the lowest recorded demand level would also include the load from NS Power, thus the PHP load at the time would have been below 9MW. See also Synapse IR-3.

(f) Refer to SBA IR-1(a-c).

Request IR-11:

Reference: N-3, Evidence of PHP, pages 12-13.

Preamble: PHP states that there are aspects of PHP's load flexibility that are not being captured in the ELID filing, and that the benefits from the February 13, 2026, Maritime Link event are something that needs to be considered as an "additional ancillary service value" beyond ADC and priority interruptible.

(a) Is PHP seeking separate compensation for this additional ancillary service value in this proceeding? If so, please provide PHP's proposed tariff mechanism or credit structure for quantifying and paying for this value, and confirm the source of funding (i.e., which class or classes would bear this cost).

(b) Quantify PHP's estimate of the system value of off-protocol curtailments (i.e., reductions in load made outside the formal RT schedule dispatch or interruption protocol) provided by PHP to NSPSO under the ELIADC to present, including the methodology used to estimate that value.

Response IR-11:

(a) See the response to CA IR-7(a).

(b) PHP does not have the tools and data to estimate the system value of these curtailments. Refer to IG IR-11(a).