



January 5, 2018

VIA E-FILING

Patrick Wruck
Commission Secretary
BC Utilities Commission
6th Floor 900 Howe Street
Vancouver, BC V6Z 2N3

Re: BC Hydro Open Access Transmission Tariff - Dynamic Scheduling Amendments Application ~ Project No.1598931 Final Submissions of BCOAPO et al.

Introduction

1. We make the following submissions on behalf of our clients, the British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Council of Senior Citizens' Organizations of BC, Disability Alliance BC, Together Against Poverty Society, and the Tenant Resource and Advisory Centre, known collectively in regulatory processes as "BCOAPO et al." The constituent groups of BCOAPO et al. represent the interests of low and fixed income energy consumers within BC and more specifically in this process, the interests of BC Hydro's low and fixed income residential ratepayers.

Application

2. When BC Hydro's transmission service rates were first approved in 1996 transmission scheduling was undertaken on an hourly basis and transmission capacity reservations were minimum one hour blocks that matched the scheduling. In 2005, BCTC filed an Application for approval of OATT amendments to provide for dynamic scheduling of exports of energy and ancillary services from the BCTC control area¹.
3. The 2005 Application was made in order to enable its customers to participate in intra-hour markets operated by the California Independent System Operator (CAISO). As a result of the Application, BC Hydro currently offers its transmission customers the option of dynamic scheduling pursuant to Attachment Q-1 of the OATT. A dynamic schedule is an energy transfer from one Balancing Authority Area (BAA) into another BAA that varies within the hour and is updated in real time. However, the 2005 Application and subsequent approval limited dynamic scheduling

¹ Exhibit B-1, pages 4-5

to the export path and required that the transmission customer have sufficient firm point-to-point transmission service to enable the required dynamic schedule².

4. In October 2017 BC Hydro filed an Application with the BC Utilities Commission seeking amendments to its OATT (specifically Attachment Q-1) that will: (a) allow for dynamic scheduling for imports, in addition to exports; and (b) allow dynamic scheduling on all transmission service reservations, including Firm Service, non-firm point-to-point transmission service (Non-Firm Service), and network integration transmission service (NITS), including network economy service (Network Economy Service). At the same time BC Hydro is also proposing to update the definitions, correct typographical errors and simplify/clarify the language in Attachment Q-1³.

Need

5. Since the introduction of dynamic scheduling there has been a substantial investment in renewable energy resources such as wind and solar generation whose output is intermittent. This has led to the development of increasingly complex sub-hourly transaction options in energy and capacity markets and an expanded use of dynamic scheduling to receive and balance intermittent energy on an intra-hour basis⁴.
6. In 2014 the CAISO initiated the Energy Imbalance Market (EIM) for the real-time wholesale purchase and sale of imbalance energy. This market facilitates the efficient dispatch of generation resources within each participating BAA as well as 15-minute and five-minute transfers between participating BAAs⁵. Powerex intends to participate in the EIM beginning in April 2018 and various filings have been made with FERC to enable its participation⁶.
7. Powerex's participation in the EIM will be facilitated by the use of dynamic scheduling on both the import and export paths between BC and the US. As a result, Powerex has requested that BC Hydro expand the use of dynamic scheduling to imports (as well as exports) and to all transmission reservations. Changes to the OATT are required by January 31, 2018 in order to allow for parallel operations with the CAISO as of February 1, 2018 in order to demonstrate readiness of systems and operations personnel⁷.
8. The request to include import paths reflects the fact that the EIM is an imbalance market that responds to both positive and negative deviations and, therefore, participants generally require both import and export capability⁸.

² Exhibit B-1, page 5

³ Exhibit B-1, page 2

⁴ Exhibit B-1, pages 7=9

⁵ Exhibit B-1, page 9

⁶ Exhibit B-2, BCUC 1.1.1

⁷ Exhibit B-1, page 3 and Exhibit B-2, BCUC 1.1.1.2

⁸ Exhibit B-2, BCUC 1.2.1.2

9. BC Hydro has indicated that its evaluation of the request concluded there was no valid reason to restrict dynamic scheduling to exports using Firm Service. It also concluded that expanded availability of dynamic scheduling on its transmission system is: i) in alignment with evolving markets and practices of the Western Interconnection and ii) would give BC Hydro's OATT customers the option to participate in markets that rely on dynamic scheduling⁹.
10. While Powerex is the only BC Hydro OATT customer that has formally expressed an interest in expanded use of dynamic scheduling, the amendments would be available to all eligible customers¹⁰. Furthermore, over the longer term BC Hydro expects that OATT customer demand for dynamic scheduling may increase as more customers access new and existing markets¹¹.

Benefits

11. OATT customers (particularly Powerex) will benefit from the expanded availability of dynamic scheduling as it will allow them to participate in new market opportunities¹² and to better utilize their transmission reservations¹³.
12. BC Hydro notes that the expanded availability of dynamic scheduling offers the potential for increased trade revenues and may have a favourable impact on its revenue requirement from increased transmission revenues¹⁴. However, while Powerex has indicated that it anticipates participating in CAISO's EIM, BC Hydro cannot forecast the Powerex volume of energy that will be involved or the resulting impact on trade revenues¹⁵. Similarly, BC Hydro cannot predict the extent to which there will be an increase in transmission volume. Indeed, the use of dynamic scheduling may just increase the use of transmission service OATT customers have already contracted for¹⁶.
13. BC Hydro also notes that Powerex's participation in the EIM will also permit the deployment of BC Hydro's balancing capacity that is not needed to meet BC Hydro's domestic balancing needs. Furthermore, such participation will allow deviations in BC Hydro load and generation output in a given time 5 or 15-minute interval to be offset with EIM transfers if this is more economic than deploying BC Hydro's balancing reserves¹⁷.
14. Overall, the expanded availability of dynamic scheduling offers the opportunity for both increased revenues (that would reduce BC Hydro's future revenue requirements) and a more economically efficient operation of BC Hydro's system.

⁹ Exhibit B-1, page 10 and Exhibit B-2, CEC 1.4.5

¹⁰ Exhibit B-1, page 11 and Exhibit B-2, CEC 1.4.4

¹¹ Exhibit B-2, BCUC 1.4.5

¹² Exhibit B-2, BCUC 1.3.1 and 1.3.1.1

¹³ Exhibit B-2, BCUC 1.4.4.1.2

¹⁴ Exhibit B-2, BCUC 1.3.1 and 1.3.1.1

¹⁵ Exhibit B-2, BCUC 1.2.1 and 1.2.1.1

¹⁶ Exhibit B-2, BCUC 1.4.3

¹⁷ Exhibit B-2, BCUC 1.3.1.2

However, the extent of the impact is unknown and not expected to be significant. In terms of the current F2017-F2019 RRA, it is not expected to materially change the forecast revenues¹⁸.

Costs

15. BC Hydro estimates the total cost to implement enhanced dynamic scheduling in the OATT (and to implement the planned adjustment to the network utilization test¹⁹) to be approximately \$300,000 which will be recovered from Powerex²⁰.
16. Payment of the \$300,000 will impact Powerex's net income and hence will impact BC Hydro's overall revenues. Additional trade revenues from EIM participation will serve to offset this impact²¹. However, the impact of the additional \$300,000 in cost for Powerex will negate any initial benefits to BC Hydro from increased Powerex trade revenues due to the expanded availability of dynamic scheduling.
17. BC Hydro has indicated that the \$300,000 does not cover the cost of the consultation process leading up to the filing of the Application nor the cost of the current BCUC proceeding²². BC Hydro considers costs, such as the cost of the current proceeding, to be part of the overall task of maintaining its tariffs and recoverable from all rate payers²³. As a result, any initial increase in BC Hydro revenues through either increased sales of transmission capacity or Powerex trade revenues would need to be considered as offsetting such costs as opposed to benefitting BC Hydro rate payers.
18. Finally, BC Hydro has also indicated that that it will incur additional costs as a result of Powerex's participation in the EIM which are not included in the current Application²⁴. While it is not entirely clear from the information request responses, it appears that any such incremental costs will be recovered through the OATT rates²⁵.

¹⁸ Exhibit B-2, BCUC 1.4.3.2

¹⁹ See Exhibit B-1, page 21. No BCUC approval is required to adjust the manner in which the utilization rate is determined.

²⁰ Exhibit B-1, page 26 and Exhibit B-2, BCUC 1.6.1.1

²¹ Exhibit B-2, BCOAPO 1.6.1

²² BCOAPO 1.5.2

²³ Exhibit B-2, CEC 1.4.6

²⁴ Exhibit B-2, BCU 1.6.1.2

²⁵ Exhibit B-2, BCUC 1.6.10

Operational and Longer-Term Considerations

19. BC Hydro has explained that advanced computerized interchange mechanisms are now available to accommodate the coordination required between BAAs to facilitate dynamic scheduling²⁶. Furthermore, BC Hydro already has the required arrangements in place for dynamic scheduling services with CAISO and with other BAAs as well²⁷.
20. BC Hydro also has the required computer technology and systems in place (apart from those implementation requirements specifically identified) to offer the expanded dynamic scheduling²⁸.
21. Overall, BC Hydro does not expect any significant operational impacts as a result of the expanded dynamic scheduling²⁹.
22. From a longer-term perspective, participation in the EIM is not expected to have an impact on the availability of transmission capacity, but instead would impact how transmission customers utilize their existing transmission reservations or they would access surplus transmission system capacity when available and as needed. Furthermore, any requests for additional transmission service would be processed through BC Hydro's OASIS. As a result, the long-term transmission capacity in the province will not be affected by the short-term energy scheduling for EIM purposes³⁰.
23. Similarly, since dynamic scheduling is a service that allows five-minute (or less) adjustments to transmission schedules with neighbouring balancing authorities, it does not impact BC Hydro's planning criteria for meeting future load service obligations³¹.

Conclusion

24. The proposal to expand availability of dynamic scheduling is aimed at meeting the needs of BC Hydro's OATT customers, principally Powerex. Furthermore, the main beneficiaries of the expanded availability will be the OATT customers, (again) principally Powerex.
25. Any potential benefits to BC Hydro's other ratepayers (e.g. Residential customers) in terms of additional revenue for the Corporation are likely to be small. Similarly, there may be opportunities for reducing the cost of managing BC Hydro's short-term imbalances but there are no estimates as to the potential savings.

²⁶ Exhibit B-1, page 12

²⁷ Exhibit B-2, CEC 1.5.1

²⁸ Exhibit B-2, BCUC 1.6.5

²⁹ BCOAPO 1.3.3

³⁰ Exhibit B-2, BCUC 1.4.4 and 1.4.6

³¹ Exhibit B-2, BCUC 1.2.2 and 1.2.3

26. However, the costs that will be incurred (and not recovered from OATT customers) are also small and there are no risks from either a transmission or generation reliability perspective.

Sincerely,

BC PUBLIC INTEREST ADVOCACY CENTRE

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