Q. Please provide information on any other Canadian jurisdiction which has large wholesale or transmission connected customers with curtailable loads (with particular reference to Manitoba Hydro, SaskPower, Hydro Quebec), and whether these jurisdictions reduce the forecast peak capacity imposed on the system in their Cost of Service studies to reflect the fact that the interruptible capacity could have been interrupted at all critical peak times to lower the customer's peak?

A. The requested information is provided below.

Hydro-Québec has interruptible/curtailable rate options that are applicable to the company's Medium and Large Power customers.[1]

For each, Medium and Large Power, there are two interruptible options that specify conditions of interruption, such as advance notice, duration of interruption, interruptions per day. Each interruptible option has a corresponding monthly demand credit to the otherwise firm demand charge that is paid regardless of whether the customer is called on to interrupt, as well as a variable energy credit. In a telephone call with Hydro-Québec, it was confirmed that the demand allocators in the company's cost of service study are not reduced to reflect interruptible capacity.

[1] Hydro-Québec's Distribution Tariff, including rates for Medium and Large Power customers, effective April 1, 2014 are at: http://www.hydroquebec.com/publications/en/docs/distribution-tariff/distribution_tariff.pdf. An addendum to this Distribution Tariff, effective September 8, 2014 that contains revisions to the April 1, 2014 Distribution Tariff for Large and the introduction of new interruptible electricity options for large and medium power customers is at: http://www.hydroquebec.com/publications/en/docs/distribution-tariff/addendum-sept-2014.pdf.

SaskPower has two demand response programs that differ by the advance notice given.[2] The 12-minute advance notice program has a fixed rate credit of $52,000/MW-year and no variable credit. The two-hour advance notice program has a fixed credit of $20,000/MW-year with a variable credit of $150/MWh of curtailed energy. Payments are paid out of fuel and purchased power expense. Both programs have penalty provisions for failure to interrupt. A conversation with SaskPower confirms that the company does not reduce its forecast peak capacity in its cost of service study to reflect anticipated interruptible demand.

Manitoba Hydro offers a Curtailable Rates Program for individual customers with a minimum curtailable load of 5 MW.[3] In an email exchange with Manitoba Hydro's principal cost of service person, it was indicated that in its Cost of Service Study (COSS) the demand for curtailable customers is forecast as if the customers are not curtailed at the time of system peak, and the class demand is not adjusted for forecast load reductions. The participating classes of service, General Service Large 30-100 kV and GSL>100 kV, are then credited with a cost reduction against allocated costs equal to the value of the curtailable load.

Transmission costs are classified as demand in the COSS, but Manitoba Hydro does not explicitly classify any generation costs as demand-related. Generation costs are allocated using a weighted energy allocator, with class consumption over 12 time periods weighted by the relative value of energy in each period.

[2] SaskPower demand response program offers are at: http://www.saskpower.com/efficiency-programs-and-tips/business-programs-and-offers/demand-response-program/demand-response-program-offers/

[3] Terms and Conditions of the program can be found at: http://www.hydro.mb.ca/regulatory_affairs/electric/gra_2014_2015/pdf/appendix_6_10.pdf.

Nova Scotia Power (NS Power) has an interruptible rider applicable to its firm service tariff. Customers electing interruptible service must provide written notice to the company, specifying the portion of load that is to be firm and the portion that is to be interruptible (minimum 2,000 kVA). The interruptible notice period is ten minutes. A $3.43/kVA demand credit is applied every month to the interruptible portion of the customer's non-coincident kVA as an offset to the customer's otherwise firm rate of $11.995/kVA of maximum non-coincident ratcheted demand.

The premise of NS Power's cost of service and rate treatment of interruptible load is that: (1) capacity costs are reduced or deferred by virtue of the long-term commitment of its interruptible customers; and (2) firm customers are to be indifferent with regard to the amount of interruptible load on the system. NS Power's cost of service execution is as follows:

- Generation demand-related expenses are initially allocated to customer classes based on total demand needed to meet system peak, both firm and interruptible;
- The cost of service then credits interruptible customers with the marginal cost of deferred capacity using an equivalent peaker methodology; and
- It then debits the same dollar amount credited to interruptible customers to all customers, inclusive of interruptible, thereby keeping firm customers indifferent to the amount of interruptible load on the system.

New Brunswick Power's Large Industrial Rate has a curtailable power credit of $3.00/kW/month applicable to the otherwise firm demand charge. Effective April 1, 1999, new or additional curtailable credits are no longer available. Since the curtailable power credit is applied against the firm demand rate, it is understood

that the forecast peak is not reduced in the cost of service study for anticipated interruptible or curtailed capacity.

BC Hydro (BCH) does not have curtailable rates for its Industrial Customers. The company noted in an email exchange, that since it does not have any large-scale curtailment programs, it does not make any specific adjustments to the cost of service analysis for interruptions. However, as BCH allocates peak costs using coincident loads from the past five years, any curtailments, for which there were some in 2011, would have lowered load and would be accounted for in its embedded cost of service results.