

2010

ORIGINAL

NSUARB-E-BER-R-10

NOVA SCOTIA UTILITY AND REVIEW BOARD
IN THE MATTER OF THE PUBLIC UTILITIES ACT

- and-

IN THE MATTER OF the Application of the Town of Berwick Electric Commission, for
approval of an amendment to its Schedule of Rates for Electric Supply

INFORMATION REQUESTS

To: Mr. Don Regan
Superintendent
Berwick Electric Commission
236 Commercial Street, PO Box 130
Berwick, NS BOP 1EO

RECEIVED
NOV 22 2010
Nova Scotia
Utility and Review Board

From: Nova Scotia Utility and Review Board

Responses Due by: Monday, November 22, 2010

Questions:

IR – 1: Please file the latest audited financial results for the Berwick Electric Commission.

(Note: If already filed with the Board, please re-file so the information becomes a part of the record for this application.)

Response: Audited financials as of March 31, 2010 are attached.

IR – 2: Please provide the total annual peak demand for billing purposes (kW or kVA), along with the month of occurrence, total annual MWh purchased, and total annual MWh sold, for each of the fiscal years ending March 31, 2006, 2007, 2008, 2009, and 2010.

Response: The requested data is contained in the attached spread sheet "NSUARB ANNUAL STATS REQUEST NOV 2010.xls"

IR – 3: Please provide total system monthly metered peak demand by customer class, for the period December 2007 through March 2010.

Response: Attached is a spreadsheet titled "MONTHLY DEMANDS.xls" which lists this information for the Demand General and Industrial rate classes. We do not have this data for the Residential (Domestic) and Small General or unmetered rate classes.

IR – 4: Please provide the number of customers by customer class as of March 31, 2007, 2008, 2009, and 2010.

Response: Please see the table below.

CUSTOMER COUNT BY CLASS, AS OF MARCH 31 2006, 07, 08, 09, AND 2010						
CLASS		2006	2007	2008	2009	2010
LIGHT LOAD UNMETERED		7	7	7	7	7
SMALL GENERAL		71	71	71	68	72
DEMAND GENERAL		80	74	74	75	74
INDUSTRIAL		2	2	2	2	2
RESIDENTIAL		1150	1164	1169	1179	1201

IR – 5: Please provide total annual energy sales (MWh) by customer class for years ending March 31,2007,2008,2009, and 2010.

Response: The spread sheet filed in response to **IR – 2** contains the requested information.

IR – 6: Please compare and elaborate on General Demand coincident and non-coincident peak demands.

Response: Exhibit 6 from Berwick's last full rate application using the test period fiscal April 1, 2008-March 31, 2009 provides the following estimates for the General Demand Class:

- Co-incident Demand 1650 kVa
- Non Co-incident Demand 1950 kVa

This provides for a system co-incident factor of 84.6% . NSP load research data for their General Class indicates a system co-incidence of 85.2% (Exhibit 9 A- NSP 2009 General Rate Application). We are not aware of any significant changes to this data in the interim.

On average, for Berwick's 74 General Demand Customers, the demands are about 63% of those estimated for NSP (22.3 and 26.4 KVA per customer versus 35.1 and 41.2 for NSP).

Differences in rate availability, loss allocation, and Berwick's use of its' own generation to minimize peak demand requirements do not materially change the co-incident, non-coincident relationship of approximately 85% for this group of customers at the two Utilities.

The demands are utilized in the Cost Of Service study to assign cost responsibility for generation/peak billing and transmission related costs (co-incident) and distribution related costs (non-coincident).

IR – 7: With reference to the proposed General Demand Time of Use Rate:

a) How many customers are expected to use this rate?

Response: We do not expect any customer to immediately take up this rate. We want to offer it so that customers can consider if they can use it to their advantage. It is more likely that a new build or a facility planning significant renovations would be able to use the rate.

b) Please estimate the impact of the proposed Rate on annual coincident peak demand.

Response: This is difficult to quantify given we have no current applicants. Electrically heated office space could contribute in a manner similar to domestic TOU customers who typically divert 4 kW from peak.

b) Does the new Rate require additional metering costs? If yes, please elaborate.

Response: BEC has in inventory meters that record interval data; they do cost more but not a significant amount. For single phase meters the difference is about \$40.00, for 3 phase about \$90.00. We have been buying such meters for data acquisition.

c) Please elaborate on the impact of the availability of this rate to the financial health of the Commission.

Response: We expect this rate will have no effect on the Commission's financial health.

IR – 8: With reference to the proposed General Demand Peak Coincident Rate:

a) How many customers are expected to use this rate?

Response: One customer is expected to take this rate initially. We did have discussions this year with a potential new customer concerning a demand control rate somewhat similar to this.

b) Please estimate the impact of the proposed Rate on annual coincident peak demand.

Response: We expect that the annual co-incident peak will be lower by about 40 kW with one customer on the rate.

b) Does the new Rate require additional metering costs? If yes, please elaborate.

Response: Please see the response to **IR - 7 (b)**.

d) Elaborate on the impact of the availability of this rate on the financial health of the Commission. Please provide supporting data.

Response: We expect to retain a portion of the demand savings realized from customers taking this rate. Attached is a Spread Sheet "DEMAND CONTROL

EXAMPLE.xls” using the prospective customer’s recent billing history to demonstrate outcomes. The results could vary substantially from year to year; the customer uses solar driven hydronic heat as base heat and has 100 kW of resistance heat as backup and 2 air source heat pumps to supplement in occupied spaces. The heat pumps are about 30 kW each.

d) Is there a precedent for this rate? If yes, please provide details.

Response: The residential TOU rates offered by utilities in NS are similar in action in that they are intended to reduce peak load. Interruptible rates are similar in concept. Water heater and air conditioning direct control rates and irrigation rates are similar. BEC has for some years had a Rider to its Industrial rate that shared demand savings demonstrated by average winter peaks being lower than average summer peaks.

IR – 9: Based on the application, Board staff understands that the proposed number of demand control intervals in one fiscal year shall not exceed 24, and that the demand control credit will be based on the customer’s demand reduction coincident with the Commission’s winter peak:

a) Using an assumed behavior of a typical customer expected to subscribe to the General Demand Peak Coincident Rate, please show how the customer’s demand reduction is calculated.

Response: Please see the attached SS “DEMAND CONTROL EXAMPLE.xls”.

b) Does the Commission plan to send demand control signals to all customers subscribed to the rate at the same time? If not, please explain the method of customer selection.

Response: That would be the initial intent. If various demand control mechanisms are successful to the extent that we are no longer reducing the maximum peak but merely shifting it then staggering demand control signaling would be in order. That happenstance would also likely mean staggering TOU options. We do not anticipate this situation will arise soon.

c) Please respond to the observation that a customer’s demand control credit may not be proportional to the customer’s demand reductions and to the benefits customer’s actions provide to the Commission.

Response: There exists the possibility that a customer fails to effect a demand reduction when signaled, whether due to equipment failure or whatever. If such an event happens on the actual winter peak as determined retrospectively, then they may not see a credit proportional to effort. The utility might exhaust its demand control opportunities due to the limitations on control events, and miss the actual peak. There is some risk on both parties, but we consider it small and close to symmetric. It is difficult to precisely apportion the benefit; we chose to give most to the customer while retaining enough to assure that other ratepayers and the utility are not harmed. A customer could game the rate by artificially boosting load on cold days, but they would have to buy extra energy for several hours on several days to accomplish this.

IR – 10: Is the availability of the proposed rates limited to General Demand customers? If so, please explain why these new rates are not available to other classes.

Response: These rates are limited to General Demand customers. Residential customers have access to a TOU rate. Small General customers tend to have energy use too low to afford much opportunity to shift load, but the Residential TOU rate could be extended to customers in this rate class. As noted in the response to **IR – 8 (d)** we have had an Industrial Demand reduction Rider for some time. BEC is not adverse to considering other options for customers so long as the other ratepayers and the utility are kept whole.

Copies: 3

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BERWICK ELECTRIC COMMISSION
ANNUAL kVA and MWh PURCHASES

RATCHETED				RATCHETED			
Month F06	Peak Demand kVa	Current Demand	MWh Purchased	Month F07	Peak Demand kVa	Current Demand	MWh Purchased
April	5916	4944	2235	April	5664	4932	2207
May	5916	5124	2191	May	5664	4344	2009
June	5916	4644	2096	June	5664	4644	2001
July	5916	4896	2284	July	5664	4608	2136
August	5916	4980	2444	August	5664	4608	2166
September	5916	4776	2241	September	5664	4560	2255
October	5916	4824	2522	October	5664	5004	2580
November	5916	5268	2524	November	5664	5148	2479
December	5844	5664	2854	December	5484	5388	2846
January	5772	5484	2793	January	5832	5832	3057
February	5664	5484	2673	February	5880	5880	2937
March 06	5664	5436	2743	March 07	5988	5988	2891
Total	70272	61524	29600	Total	68496	60936	29564

RATCHETED				RATCHETED			
Month F08	Peak Demand kVa	Current Demand	MWh Purchased	Month F09	Peak Demand kVa	Current Demand	MWh Purchased
April	5880	4980	2360	April	5616	5076	2196
May	5880	4932	2172	May	5616	4356	2169
June	5880	4404	2076	June	5616	4656	2101
July	5880	4740	2355	July	5616	4920	2482
August	5880	4764	2356	August	5616	4644	2336
September	5880	4428	2195	September	5616	4332	2198
October	5880	5088	2480	October	5616	5172	2537
November	5880	5352	2749	November	5784	5784	2641
December	5880	5616	3192	December	5772	5772	2870
January	5880	5616	3018	January	5976	5976	3259
February	5616	5544	2768	February	5976	5676	2754
March 08	5748	5748	2813	March 09	6048	6048	2858
Total	70164	61212	30534	Total	68868	62412	30401

RATCHETED			
Month F10	Peak Demand kVa	Current Demand	MWh Purchased
April	5976	4956	2219
May	5976	4692	2076
June	5976	4392	2086
July	5976	4956	2331
August	5976	4932	2421
September	5976	4356	2239
October	5976	5124	2661
November	5976	5208	2689
November	~	~	809
December	5976	5952	3135
December	~	~	216
January	5958	5628	3065
February	5958	5928	2772
February	~	~	40
March	5958	5448	2715
March 10	~	~	408
Total	71658	61572	31882

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TOTAL MWh SOLD ~ BERWICK ELECTRIC COMMISSION
FISCAL YEARS ENDING MARCH 31

Fiscal Year	MWh Sold
2006	30403
2007	30641
2008	31147
2009	31091
2010	30976

ANNUAL ENERGY SALES (MWh) BY CUSTOMER CLASS

Fiscal Year	Domestic	Small General	General	Industrial	Total
2006	13424	589	7423	8967	30403
2007	13606	593	7624	8818	30641
2008	14104	566	7889	8588	31147
2009	14099	607	7681	8704	31091
2010	14036	614	7775	8551	30976

DEMAND INDUSTRIAL
GENERAL CLASS
CLASS

DEMAND DEMAND
IN KW IN KVA

Mar-07	1951	1792
APR	1835	1638
MAY	1933	1765
JUNE	1806	1703
JULY	2045	1790
AUG	2068	1820
SEPT	1834	1250
OCT	1716	1702
NOV	1806	1742
DEC	1977	1415
Jan-08	1956	1693
FEB	1860	1663
MAR	1919	1638
APR	1848	1823
MAY	1909	1359
JUNE	1873	1704
JULY	2150	1811
AUG	1996	1844
SEPT	1847	1721
OCT	2003	1915
NOV	1935	1642
DEC	1991	1742
Jan-09	2079	1752
FEB	1873	1572
MAR	2019	1801
APR	1960	1723
MAY	1987	1710
JUNE	1950	1766
JULY	2060	1681
AUG	2037	1811
SEPT	1900	1715
OCT	1789	1637
NOV	1808	1631
DEC	1935	1603
Jan-10	2013	1303
FEB	1755	1484
MAR	1965	1633