



February 26, 2013

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

RE: Algoma Power Inc. ("API")
Application to Amend its Distribution Licence: ED-2009-0072

Please find accompanying this letter two (2) copies of API's Application to amend its distribution licence. Coincidentally with this written submission, a PDF version has been filed via the Board's Regulatory Electronic Submission System.

If you have any questions in connection with the above matter, please do not hesitate to contact the undersigned at (905) 994-3634.

Yours truly,

Original signed by:

Douglas R. Bradbury
Director, Regulatory Affairs

Enclosure



An Application
By
Algoma Power Inc.
to
Amend its Distribution Licence
ED-2009-0072

Submitted: February 26, 2013

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998, C.*
S.O. 1998, c.15 (Sched. B);

AND IN THE MATTER OF an Application by Algoma Power Inc. for an Order or Orders including an extension to the exemption from the provisions of the Standard Supply Service Code for Electricity Distributors requiring time-of-use pricing for regulated price plan consumers with eligible time-of-use meters, as of the mandatory date.

Application

1. The applicant is Algoma Power Inc. ("API" or the "Applicant"), a wholly-owned subsidiary of FortisOntario Inc. ("FortisOntario"). The Applicant, an Ontario corporation with its head office in Sault Ste. Marie, Ontario carries on the business of owning and operating electricity distribution facilities in the Algoma District of Ontario.
2. API is requesting an amendment to its Distribution Licence, ED-2009-0072. The date of the last amendment is November 8, 2012 in proceeding EB-2012-0339.
3. API requests an extension to exemption from the provisions of the Standard Supply Service Code for Electricity Distributors (the "Code") requiring time-of-use pricing for regulated price plan ("RPP") consumers with eligible time-of-use meters, as of the mandatory date. This extension is specific to certain meters which are detailed in this Application. Due to technological constraints, it is not practical to include these in the time-of-use pricing as of the date specified in EB-2012-0339.
4. API requests that the board establish the duration of the extension to begin on January 1, 2013 and to have an indefinite expiry date.

5. API requests that this proceeding be conducted by way of written hearing.

API's contact information for this Application is as follows:

The Applicant:

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Director Regulatory Affairs
Algoma Power Inc.

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DATED at Fort Erie, Ontario this 8th day of February, 2013.

ALGOMA POWER INC.



Douglas Bradbury, P.Eng.

Preamble

On October 22, 2012, Algoma Power Inc. (“API”) applied to the Ontario Energy Board (the “Board”) for an Order or Orders approving its proposed electricity distribution rates for API effective January 1, 2013. The Ontario Energy Board issued File Number EB-2012-0104.

On June 15, 2012 API submitted its application for Smart Meter Cost Recovery. The Board assigned File Number EB-2012-0285 to this matter. On July 17, 2012, API requested that the Smart Meter application referenced above be “held in abeyance and combined with API’s future 2013 IRM rate application”. The Board granted permission for the Smart Meter application to be held in abeyance until such time as Algoma filed its 2013 IRM rate application, at which time both the Smart Meter application and the 2013 IRM rate application would be combined.

In the application submitted October 22, 2012, (EB-2012-0104), API requested an exemption from the requirements of Time of Use billing for 47 remote customers that are beyond the reach of conventional communications infrastructure.

On November 8, 2012, the Ontario Energy Board (the “Board”) issued its Decision and Order in the matter of EB-2012-0339; an application by Algoma Power Inc. (“API”) to amend its distribution licence ED-2009-0072 to include an exemption from the requirement to apply time-of-use pricing by a mandatory date under the Standard Supply Service Code for Electricity Distributors. This Decision and Order granted an extension until December 31, 2012.

On December 10, 2012, API requested to withdraw the requested exemption from the application (EB-2012-0104), and submit a separate application to amend its distribution license as it relates to its installations.

Extension Request

API is requesting an extension of the exemption granted on November 8, 2012. The requested term of the extension is from January 1, 2013, with an indefinite expiry date.

API requests this exemption because there are no options that will meet full compliance. The options that are available will only achieve partial compliance and the costs are excessively high. This situation is not expected to be resolved until there is improved telecommunication infrastructure or when future technological advancements in automated meter infrastructure become available. There is no estimated time for these improvements and advancements, and as such, the required extension is for an indefinite period.

During the extension period API proposes that those hard to reach customers would remain on two-tier pricing specified in section 3.3 of the Code.

Background

The Provincial Smart Meter Functional Specification imposes a very high standard related to Smart Meter data retrieval and availability of that data for processing and customer use. The implementation of a workable solution is a significant challenge for urban and more densely populated rural areas but the existing technologies have proven to have a limit in their reach to

support Smart Meter requirements in the very rural and very sparsely populated portions of Algoma Power Inc. service territory.

API continues to work with the industry and vendors to accelerate the development of technology enhancements that will extend the “smart meter reach” to these customers. Based on anticipated progress, a solution that adequately addresses this gap is not expected anytime soon at a reasonable cost.

API is in a position similar to Hydro One Networks Inc. (“Hydro One”) with regards to being able to collect interval data from smart meters in extremely remote areas and subsequently being able to bill these customers on TOU rates.

- Key similarities between API and Hydro One’s smart meter challenges in remote areas:
 - API serves a vast service area in Northeastern Ontario with low population density.
 - Much of API’s service area is beyond the reach of 3rd party cellular networks.
- Key differences between API and Hydro One’s smart meter challenges in remote areas:
 - API’s AMI network does not rely on cellular coverage to the same extent that Hydro One’s network does.
 - API’s “hard to reach” meters represent approximately 2% of total meter population.
 - API’s network uses licensed radio frequency (RF) coverage in the 900 MHz range for communication between Tower Gateway Basestations (TGB’s) and thousands of meters. This coverage is supplemented by FlexNet Network Portals (FNP’s), and FlexNet Regional Portal (FRP’s). FNP’s do not require backhaul communications, but rather act as a RF repeater to extend TGB RF coverage into “blind spots”. FRP’s essentially act as a “mini-TGB” to collect data from a small number of meters in areas beyond the limits of TGB coverage. FRP’s require a separate communications backhaul.

The timelines related to implementation of the AMI, and associated challenges in extremely remote areas are as follows:

- API signed a contract with its AMI provider (Sensus) in October 2009 and subsequently completed detailed propagation studies and AMI system deployment.
- API completed installation of 8 TGB’s in 2010 and the first half of 2011.
- By October 31, 2010, API had completed approximately 90% of meter exchanges.
- Installation of FNP’s and most FRP’s occurred throughout 2011 and into 2012 to improve and extend RF coverage. The backhaul selected for FRP’s was a mixture of ordinary telephone lines and cellular modems.
- In combination with a very low number of customers, API found that a few of the extremely remote areas requiring FRP’s did not have access to either ordinary telephone lines or cellular modems. API began investigating alternative backhaul communications.
- API initiated a ‘network tuning’ process in 2012 to improve performance for meters that were unheard or that had low read interval success (RIS) levels. This is a process where communication modes of individual meters are reviewed and changed if necessary to ensure optimum communication with infrastructure in the area (TGB vs FNP/FRP).

The timelines related to TOU billing at API are as follows:

- June 24, 2010: OEB issued a proposed determinant on TOU billing.

- July 7, 2010: CNPI commented that API would have to transition to the CNPI SAP CIS system in order to avoid duplicating MDMR integration efforts.
- August 4, 2010: OEB final determination mandated API to implement TOU billing by June 2011.
- September 2010: API became aware of Hydro One's application for an exemption from mandated TOU pricing for certain RPP customers in remote areas. API realized that it was facing similar challenges, but elected not to file a similar application for the following reasons:
 - API had focused its efforts to date on installation of TGB's and the mass deployment of smart meters. Remote repeaters had yet to be installed and meters had yet to be exchanged in some of API's most remote areas.
 - API would be part of a FortisOntario application for exemption for mandated TOU pricing due to the above-mentioned CIS migration issue.
 - If approved, the FortisOntario request would result in a new mandatory TOU date of July 2012.
 - In reviewing expansion plans for local cellular service providers, it became apparent that coverage would be expanding in API's service area during the 2010-2012 period.
 - API believed that significant progress could be made in the September 2010 to July 2012 period and an application similar to the Hydro One application could be made in advance of July 2012, if required.
 - In July 2012, API filed an application (EB-2012-0339) for a further extension of its exemption from the requirement to apply TOU pricing. The Board's decision in this matter extended the exemption to December 31, 2012.
 - API continued efforts in the balance of 2012 to extend and improve communications to meters in rural and remote areas. As a result of this effort the number of meters where read success was less than adequate for TOU implementation was reduced from over 1000 meters to approximately 300 meters. The status of the remaining meters is described below.

The following is a summary of remote areas where technical and/or cost challenges remain a barrier to being able to read meters via the AMI system. All of these areas are far enough from TGB coverage that an FRP would be required. The estimated cost to install a FRP at each location is in the \$10-20 thousand range, depending on whether or not a new pole and cellular amplifiers are required. The estimated incremental O&M costs per site is \$300 per month for Industry Canada licensing and \$100 per month for communication, if cellular backhaul or phone lines are available. Where cellular or telephone backhaul is not available, API currently does not have a realistic means of remotely reading these meters.

The vast majority of customers in these areas fall into the following categories:

- Seasonal – typically low-consumption summer usage
- Small Commercial
 - Lodges – typically a number of campsites or cabins behind a single meter (seasonal service)
 - Government Ministries and Contractors – park campsites, radio towers, highway maintenance
 - Telecommunications Companies (Telco) and Railways – towers, equipment buildings, signaling
 - Station Service – backup station service for transformer and generating stations – typically no consumption

Location	Cell	Phone	# Meters	Customer Notes
Anjigami	No	No	8	6 Seasonal, 2 Small Commercial
Catfish Lake	No	No	3	3 Small Commercial
Fungus Lake	No	No	2	2 Small Commercial
Hammer Lake	No	No	1	1 Small Commercial
Hwy 101 East	No	No	9	5 Seasonal, 1 Residential, 2 Small Commercial, 1 Temp Service
Lake Sup Prov Park (North)	No	No	1	1 Small Commercial
Lake Sup Prov Park (South)	Yes	No	10	10 Small Commercial
Lochalsh	No	No	1	1 Residential
Missanabie Outlying	No	No	6	6 Small Commercial
Montreal River – Canoe Rd	Yes	No	3	2 Seasonal, 1 Small Commercial
Steephill	No	No	1	1 Small Commercial
Trembley-Magpie	No	No	2	2 Small Commercial
Total			47	

In addition to the 47 meters above for which API does not expect to be in a position to implement a reasonable solution in the foreseeable future, there are approximately 250 meters for which API expects delays in the implementation of TOU pricing. A breakdown and explanation of these meters follows.

Issue	# of Meters
Communication Issues with Existing FRP's	85
Repeater Installation Pending	40
Main Breaker on Line Side of Meter / Tuning Outstanding / Radio Failure	125
Total	250

- Communication Issues with Existing FRP's – API has experienced chronic reliability issues with the phone line backhaul to FRP's in some of its more remote areas, causing the connection to this equipment to be dropped. Despite substantial investigation by the telephone company and Sensus, the issue has not yet been resolved.
- FRP/FNP Installation Pending – API is planning to install one additional FRP and one additional FNP early in 2013 to improve communication to two groups of meters where network tuning efforts in 2012 were ultimately unsuccessful bringing read success to the level required to implement TOU pricing. Installation of this equipment will occur once the winter season has passed, allowing construction crews access to the areas.
- Main Breaker on Line Side of Meter / Tuning Outstanding / Radio Failure – These issues are combined as it is occasionally difficult to distinguish between these issues based on report from the AML system alone. Also some meters are affected by more than one of these issues, and the presence of one issue may prevent resolution of another (i.e. a meter in need of tuning cannot be tuned while the customer's main breaker is in the off position.

- API has discovered that a significant number of installations are configured such that the customer's main breaker is located on the line side of the meter. For many seasonal customers, the main breaker has been found in the off position as API prepared to implement TOU pricing for these customers. As a result, API does not have recent history to confirm that the read success rates on these meters are appropriate for the transition to TOU pricing. Synchronizing these meters with the MDM/R prior to the main breaker being turned back on would result in a number of challenges for API billing staff.
- Some of the network tuning initiated in 2012 remains outstanding. There are three main issues that have slowed the progress for certain meters:
 - Where a customer's main breaker located on the line side of the meter is in the off position, the meter cannot be tuned until power is restored to the meter. This presents a challenge in areas where the customer's use of the property is infrequent and/or inconsistent.
 - In some locations, the tuning process is a balance between changing the meter communications parameters enough to obtain sufficient read success and changing the parameters to the point where the increase of messages causes interference with other meters. In these situations, the tuning process has been iterative, with small changes followed by performance monitoring and further changes.
 - In areas with particularly dense vegetation, the effect of foliage on RF signal propagation changes throughout the year.

Conclusion

API's assessment is that there are no options that are economically prudent, cost effective, and fully compliant. The options available at the current time would cost in excess of \$40,000 for the two locations if cellular backhaul was available. For those locations that currently do not have cellular or telephone backhaul available, API currently does not have a realistic means of remotely reading these meters.

At this time, there are no economic and compliant smart metering solutions for customers located in the very rural, low density areas and those areas with no cellular or telephone coverage within API's service territory.

API will continue to work on solutions for the 250 meters in 2013 and continue to monitor the industry for economic options to comply with the current Code requirements for the remaining 47 meters. Until then, API requires the extension to be able to continue to bill, using two-tier, customers without becoming non-compliant.