

1 **Q. Has Newfoundland Power considered installing AMI meters which could**
2 **communicate outage and restoration data to the Outage Management System?**
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4 A. Newfoundland Power has considered installing advanced metering infrastructure
5 (“AMI”) meters as an alternative to the automated meter reading (“AMR”) technology
6 that the Company is currently implementing.¹ In its Rate Design Report completed in
7 2009 the Company considered pricing options to encourage peak load management. At
8 that time pricing that focused on peak load management was not considered to be cost
9 effective for the Island Interconnected System.² As a result there was no justification
10 with proceeding to install AMI technology.
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12 In addition to communicating outage and restoration data to the Outage Management
13 System, AMI technology offers a variety of benefits compared to both traditional meter
14 reading and AMR. These benefits include:
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- 16 (i) Reduced meter reading costs as AMI meters are read remotely and do not require
17 an employee to visit the customer premise.
18 (ii) AMI meters can be read at more frequent intervals. Currently meters are read on
19 a monthly basis for electricity billing purposes. AMI meters can be configured to
20 read at more frequent intervals, such as daily, hourly or every 15 minutes.³ This
21 information can be used for a number of purposes ranging from out-of-route reads
22 to creating detailed load profiles of the electrical system for distribution planning.
23 (iii) AMI meters can provide more data points than just the customer’s energy and
24 demand usage, such as voltage and current readings, indications of meter
25 tampering, as well as power outage and power restoration notifications.
26 (iv) Two way communications to AMI meters allows the utility to send information or
27 commands to the meter. This can be used to disconnect or reconnect a service
28 remotely, or to ‘ping’ a meter to determine if power has been restored.
29 (v) Customer interface technology can provide customers with detailed billing
30 information and displays of their electricity usage patterns.
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32 However, AMI requires a higher capital investment compared to traditional meter reading
33 and AMR technology. A complete AMI implementation would include replacing all of
34 the Company’s existing electricity meters with AMI meters. The AMI implementation
35 would also require the necessary communication infrastructure to facilitate

¹ In its *2013 Metering Strategy* filed with the 2013 Capital Budget Application the Company justified purchasing only AMR meters for all meter replacements and new installations. The implementation of this strategy will result in approximately 81% of all in service meters being AMR by the end of 2017.

² See the response to Request for Information CA-NP-294 from Newfoundland Power’s 2010 General Rate Application.

³ Increasing the frequency of meter readings will increase the amount of long term data storage required to archive the information collected from each AMI meter.

1 communicating with all of Newfoundland Power’s customer premises.⁴ AMI systems
2 also require a Meter Data Management System to process and archive the high volume of
3 data received from the AMI meters.
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5 Newfoundland Power’s consideration of AMI and AMR technology has determined that,
6 due to the lower initial capital cost, AMR is currently the least-cost approach to meter
7 reading for the Company. The Company periodically evaluates available technologies to
8 ensure meter reading is completed at least cost to customers. A reduction in capital cost
9 for AMI meters, changes to electricity rate structures, or government intervention may
10 result in the Company implementing AMI technology in the future.⁵

⁴ Communication to AMI meters is typically done using power line carrier or wireless technology using pole and/or tower mounted collector stations. The cost of the communications infrastructure would be in addition to the cost of the AMI meters. This is not the case with AMR technology.

⁵ A change in electricity rate structure in Newfoundland and Labrador, particularly time of use rates, may require the installation of AMI technology. Also, government intervention related to environmental policy, such as incentives or directives, has triggered AMI deployments in other regulatory jurisdictions.