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Via E-File

July 21, 2020

B.C. Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

File No.: 4.2(2020)

Attention: Marija Tresoglavic
Acting Commission Secretary

Dear Ms. Tresoglavic:

**Re: Pacific Northern Gas (N.E.) Ltd.
Application for a Certificate of Public Convenience and Necessity to
Implement Automated Meter Reading (AMR) Infrastructure
Response to BCUC Confidential Information Request No. 2**

Accompanying, please find the response of Pacific Northern Gas (N.E.) Ltd. (PNG(NE)) to the referenced information request.

The British Columbia Utilities Commission (BCUC) requested that, to the extent possible, PNG(NE) provide a public response to the confidential questions. In PNG(NE)'s view, the responses provided are acceptable for public distribution. However, PNG(NE) notes that it considers the ERT unit cost information presented in the preamble to Question 5.1 to be commercially sensitive in nature and prefers that it not be publicly disclosed.

Please direct any questions regarding the application to my attention.

Yours truly,

Original on file signed by:

Verlon G. Otto

Enclosure

**Pacific Northern Gas (N.E.) Ltd.
Application for a Certificate of Public Convenience and Necessity to
Implement Automated Meter Reading Infrastructure**

CONFIDENTIAL INFORMATION REQUEST NO. 2 TO PACIFIC NORTHERN GAS (N.E.) LTD.

**5.0 Reference: PROJECT COST ESTIMATES
Exhibit B-3, BCUC IR 4.2, 9.3; Exhibit B-4, Confidential BCUC IR 3.1
Alternatives**

In response to British Columbia Utilities Commission (BCUC) Information Request (IR) 4.2, Pacific Northern Gas (N.E.) Ltd. (PNG(NE)) states that Itron's 500G Encoder Receiver Transmitter (ERT) would "enable the ability to move from a mobile to fixed network system at some point in the future... Installation of the 500G ERT would come at a higher capital cost of approximately \$85,000."

In response to BCUC IR 9.3, PNG(NE) confirms that an Advanced Metering Infrastructure (AMI) system could be implemented in a staged approach in the future "assuming that a more expensive gas ERT module purchased initially has AMI functionality (i.e. Itron 500G ERT)."

In response to Confidential BCUC IR 3.1, PNG(NE) states that Vendor A's AMI residential gas modules is \$[REDACTED] more than its Automated Meter Reading (AMR) module. Vendor A's AMI commercial gas module is \$[REDACTED] more than its AMR module as stated in response to Confidential BCUC IR 3.2.

BCUC Staff calculate the following additional capital cost of ERT gas modules with AMI functionality:

[REDACTED]

[REDACTED]

Total additional cost = \$73,322.81 [REDACTED]

- 5.1 Please explain the difference between the BCUC Staff calculation above and the approximately \$85,000 stated in response to BCUC IR 4.2 to enable the ability to move from AMI to AMR at some point in the future. To the extent possible, please provide a public response to this IR.

Response:

PNG(NE)'s calculation of the incremental cost of the 500G over the 100G is aligned with that noted in the preamble to this question. However, PNG(NE) had added 7% PST and 10% Overhead consistent with its overall capital cost forecast. As the pricing is fixed, no provision for contingency was added for purposes of the computation. On this basis, PNG(NE)'s calculated incremental cost was \$86,301, which was rounded to the nearest \$5,000, or \$85,000 as stated in response to BCUC IR 4.2.

PNG(NE) notes that, as described in response to BCUC IR 23.1, it has recently learned from Vendor A that Itron will no longer be producing the 100G ERT devices in favour of focusing on the 500G ERT devices. PNG(NE) has been able to negotiate favourable pricing for the 500G ERT, with Vendor A agreeing to provide the 500G ERT as a substitute for the 100G ERT, while maintaining the original 100G ERT price structure.

**6.0 Reference: PROJECT COST ESTIMATES
Exhibit B-2-1, Confidential Excel version of Appendix B, System Pricing
Analysis tab; Exhibit B-3, BCUC IR 4.6, 4.6.1, 18.2, 18.2.2; Exhibit B-4,
Confidential BCUC IR 1.5;
Mobile Meter Reading System**

The Itron Mobile Radio (IMR) and Mobile Collection Systems (MC3/MC3Lite) are two products in the Itron product catalogue under the mobile meter reading, drive-by, category.

Rows 18 and 19 in the System Pricing Analysis tab for the Confidential Excel version of Appendix B show that PNG(NE) includes 3 IMR and 2 MC3Lite units in the Vendor A capital cost. PNG(NE)'s responses to BCUC IRs 18.2 and 18.2.2 also explains that the forecasted new handheld maintenance costs in the financial analysis includes costs for both IMR and MC3Lite units for 2020 through 2022, and only MC3 Lite units from 2023 onward. PNG(NE) states, "[IMRs] will not be supported after a two year period and PNG(NE) would be encouraged to use only [MC3Lite]... the IMRs were to be used as a tool to transition to the AMR infrastructure."

- 6.1 Please explain why both IMR and MC3Lite units are needed considering that they are both Itron drive-by mobile meter reading products. To the extent possible, please provide a public response to this IR.

Response:

The IMR and MC3Lite units have distinct purposes.

The IMR devices are battery operated walk-by devices required to directly communicate with system ERTs for setup, modifications to programming, and troubleshooting the devices installed in the field or inventoried. The IMR device is capable of reading meters on a walk-by basis but is not capable of performing drive-by AMR.

The MC3Lite device is used strictly for collection of the field data on a drive-by basis and must be hard wired to the vehicle for power.

- 6.2 Please elaborate what is meant by the statement "the IMRs were to be used as a tool to transition to the AMR infrastructure." To the extent possible, please provide a public response to this IR.

Response:

ERTs are shipped in a factory mode where they are basically asleep and unable to be read by walk-by and drive-by readers. The IMRs will be used to program the ERTs to put them into AMR mode whereby the ERT can be read by the walk-by (IMR) and drive-by (MC3Lite) readers. IMRs are also required for ERT set up when ERTs are swapped to a new meter, such as in the case of meter exchanges.

- 6.3 Please explain whether PNG(NE) considered using only the MC3Lite given that IMRs will be not be supported after two years. Please explain why or why not. To the extent possible, please provide a public response to this IR.

Response:

Please see the response to Question 6.1. The IMRs and MC3Lites have distinct purposes and both readers are necessary. Specifically, the IMR devices are required for direct communications with the ERT's for setup, modifications to programming, and troubleshooting the devices. The MC3Lite is only used for collection of data.

In preparing the response to this question, PNG(NE) notes that incorrect information was communicated in the response to BCUC IR 18.2. It is the Itron FC300 handheld readers that are presently used by PNG(NE) for manual meter reading that will not be supported by Itron after December 2021, not the IMRs. PNG(NE) would like to clarify that the IMR is a relatively new Itron product created to replace the FC300, and that there are no plans by Itron to stop supporting the IMR.

Further, in responding to this question, it has come to PNG(NE)'s attention that a provision for annual maintenance costs for the IMRs should apply each year over the 20-year evaluation period, rather than the originally modeled annual replacement of each IMR device in each of 2020 to 2022. Correcting the forecast for these items results in an increase in the net present value of customer benefits by \$8,557.

- 6.3.1 If considered, please explain why this option was not selected.

Response:

Please see the response to Question 6.3.

- 6.4 Please confirm whether additional MC3Lite units will need to be purchased (and the number of units) after phasing out the IMR units in 2022. Please explain why or why not.

Response:

For clarity on the applicability of the IMRs and MC3Lite units, please see the responses to Questions 6.1 and 6.3.

PNG(NE) does not foresee the need to purchase additional MC3Lite units in the future to execute the reads. The two MC3Lite units will satisfy the mobile collection requirements for the project. For clarity, as described in PNG(NE)'s response to Question 6.3, there are no plans for Itron to stop supporting the IMR and PNG(NE) will continue to use them as described in the response to Question 6.1.

In response to Confidential BCUC IR 1.5, PNG(NE) explains the 3 IMR units stating that it identified “it would require one IMR being charged while another is in use, and has included provision for a third unit as a backup.”

In responses to BCUC IRs 4.6 and 4.6.1, PNG(NE) states it plans to purchase 2 MC3Lite units for system redundancy.

- 6.5 Please explain why 3 IMR units are required, when only 2 MC2Lite units are required. Could the second IMR unit (unit being charged) be used as the backup? If not, please explain why not.

Response:

Given the large geographical area of the project, having multiple IMR devices available for configuration, set up, and troubleshooting in each area will be an asset as it allows for two units to be used concurrently, and having two core units available to undertake different tasks and to avoid delays that may arise in the event only a single unit was available. In addition, a second IMR unit is considered necessary when undertaking mass programming changes to ERTs and to accommodate situations where the battery may run low. The IMR units will also be used to multitask, simultaneously being used to check stopped meters and to also implement programming changes. Planned redundancy for the IMR units includes provision for a third unit acting as a spare in the event one of the units experiences a failure or was not functional for any length of time.

The MC3Lite units are for data collection only and a spare is required to ensure there are no delays in data collection in the event that one of the units experiences a failure or was not functional for any length of time.

6.6 In light of the response to Confidential BCUC IR 1.5, please provide further information on the charging characteristics of IMR, including but not limited to:

- How long it will take for one unit to fully charge;
- How long a single charge lasts;
- What are the recharging requirements (e.g. equipment needed); and
- Given the information provide above and the geographic disbursement of PNE(NE) customers, how many IMR units are required (at minimum) to complete one meter read for all customers. Please provide separate responses for residential and commercial customers, if applicable.

To the extent possible, please provide a public response to this IR.

Response:

The IMR can be fully charged in six hours which will allow operation for approximately 10 hours on a single charge. The IMR uses a USB cable similar to Android smart phones to charge.

As described in response to Question 6.1, the IMR devices are battery operated walk-by devices required to directly communicate with system ERTs for setup, modifications to programming, and troubleshooting the devices installed in the field or inventoried. While the IMR device is capable of reading meters on a walk-by basis, it is not capable of performing drive-by AMR, therefore it is the MC3Lites that will be used for meter reads under the AMR Project, not the IMRs.

As described in the response to Question 6.5, PNG(NE) considers a minimum of 3 IMR units to be necessary to operational efficiency.

6.6.1 Please provide the same information requested above for the MC3 Lite.

Response:

The MC3Lite does not contain a battery and runs exclusively on power provided by the vehicle using a custom cable provided in the radio kit. As described in response to Question 6.5, the MC3Lite units are for collection only and a minimum of 2 units are considered necessary for operational efficiency, with one acting as a spare to ensure there are no delays in data collection if a single unit experienced a failure or was not functional for any length of time.