| 1  | Q. | For th | ne budget item identified below provide the information as appropriate: |                       |   |   |  |
|----|----|--------|---|-----------------------|---|---|--|
| 2  |    |        |   |                       | <b>-</b>                                    |   |  |
| 3  |    | •      | et item   | Amount                | Description                                 |   |  |
| 4  |    | B ·    | <b>–</b> 10   | \$1,555, 000          | Install 25 kV Distribution Line             |   |  |
| 5  |    |        |   |                       | - Ebbegunbaeg                               |   |  |
| 6  |    |        |   |                       |   |   |  |
| 7  |    | a)     | Provide th  | e energy and unit     | cost of energy (cents per kWh) used in      |   |  |
| 8  |    |        | the cost b  | enefit analysis for e | each year, both for isolated and            |   |  |
| 9  |    |        | interconne  | ected alternatives.   |   |   |  |
| 10 |    |        |   |                       |   |   |  |
| 11 |    | b)     | Provide the basis for the unit cost of energy used in the study.        |                       |   |   |  |
| 12 |    |        |   |                       |   |   |  |
| 13 |    | c)     | Provide a   | cost benefit analys   | sis using the revenue requirement or        |   |  |
| 14 |    |        | customer  | cash flow method.     |   |   |  |
| 15 |    |        |   |                       |   |   |  |
| 16 |    |        |   |                       |   |   |  |
| 17 | A. | a)     | Annual en   | ergy consumption      | for both the isolated and interconnected    |   |  |
| 18 |    |        | alternative   | e is estimated to be  | 380,000 kWh. Refer to attached table for    | • |  |
| 19 |    |        | energy co   | sts.                  |   |   |  |
| 20 |    |        |   |                       |   |   |  |
| 21 |    | b)     | The foreca  | ast cost for intercor | nnected energy was based on the             |   |  |
| 22 |    |        | Holyrood  | thermal plant. Isola  | ited energy costs were based on actual      |   |  |
| 23 |    |        | _   | -                     | ata, and forecast diesel fuel costs.        |   |  |
| 24 |    |        |   | ·                     |   |   |  |
| 25 |    | c)     | No ratepa   | yers are serviced f   | rom this distribution line. The use of this |   |  |
| 26 |    |        | line is rest  | ricted to NLH for its | s facilities at the Ebbegunbaeg control     |   |  |
| 27 |    |        | structure.  |                       |   |   |  |
|    |    |        |   |                       |   |   |  |

## EBBE DISTRIBUTION LINE ECONOMIC ANALYSIS Yearly Costs for Isolated and Interconnected Energy Cents per kWh

| Year                           | Isolated Energy Cost | Interconnected Energy Cost |  |  |  |  |
|--------------------------------|----------------------|----------------------------|--|--|--|--|
|                                | <u> </u>             | <u> </u>                   |  |  |  |  |
| 2001                           | 0.0                  | 0                          |  |  |  |  |
| 2002                           | 0.0                  | 0                          |  |  |  |  |
| 2003                           | 0.142                | 0.042                      |  |  |  |  |
| 2004                           | 0.138                | 0.037                      |  |  |  |  |
| 2005                           | 0.134                | 0.038                      |  |  |  |  |
| 2006                           | 0.140                | 0.039                      |  |  |  |  |
| 2007                           | 0.139                | 0.040                      |  |  |  |  |
| 2008                           | 0.139                | 0.041                      |  |  |  |  |
| 2009                           | 0.139                | 0.042                      |  |  |  |  |
| 2010                           | 0.138                | 0.044                      |  |  |  |  |
| 2011                           | 0.138                | 0.045                      |  |  |  |  |
| 2012                           | 0.141                | 0.046                      |  |  |  |  |
| 2013                           | 0.145                | 0.048                      |  |  |  |  |
| 2014                           | 0.148                | 0.049                      |  |  |  |  |
| 2015                           | 0.152                | 0.050                      |  |  |  |  |
| 2016                           | 0.155                | 0.052                      |  |  |  |  |
| 2017                           | 0.159                | 0.053                      |  |  |  |  |
| 2018                           | 0.163                | 0.054                      |  |  |  |  |
| 2019                           | 0.167                | 0.056                      |  |  |  |  |
| 2020                           | 0.171                | 0.057                      |  |  |  |  |
| 2021                           | 0.176                | 0.058                      |  |  |  |  |
| 2022                           | 0.180                | 0.060                      |  |  |  |  |
|                                |                      |                            |  |  |  |  |
| Yearly Consumption 380,000 kWh |                      |                            |  |  |  |  |

## EBBE DISTRIBUTION LINE ECONOMIC ANALYSIS Yearly Costs for Isolated and Interconnected Energy Cents per kWh

| Year                           | Isolated Energy Cost | Interconnected Energy Cost |  |  |  |  |
|--------------------------------|----------------------|----------------------------|--|--|--|--|
|                                | <u> </u>             | <u> </u>                   |  |  |  |  |
| 2001                           | 0.0                  | 0                          |  |  |  |  |
| 2002                           | 0.0                  | 0                          |  |  |  |  |
| 2003                           | 0.142                | 0.042                      |  |  |  |  |
| 2004                           | 0.138                | 0.037                      |  |  |  |  |
| 2005                           | 0.134                | 0.038                      |  |  |  |  |
| 2006                           | 0.140                | 0.039                      |  |  |  |  |
| 2007                           | 0.139                | 0.040                      |  |  |  |  |
| 2008                           | 0.139                | 0.041                      |  |  |  |  |
| 2009                           | 0.139                | 0.042                      |  |  |  |  |
| 2010                           | 0.138                | 0.044                      |  |  |  |  |
| 2011                           | 0.138                | 0.045                      |  |  |  |  |
| 2012                           | 0.141                | 0.046                      |  |  |  |  |
| 2013                           | 0.145                | 0.048                      |  |  |  |  |
| 2014                           | 0.148                | 0.049                      |  |  |  |  |
| 2015                           | 0.152                | 0.050                      |  |  |  |  |
| 2016                           | 0.155                | 0.052                      |  |  |  |  |
| 2017                           | 0.159                | 0.053                      |  |  |  |  |
| 2018                           | 0.163                | 0.054                      |  |  |  |  |
| 2019                           | 0.167                | 0.056                      |  |  |  |  |
| 2020                           | 0.171                | 0.057                      |  |  |  |  |
| 2021                           | 0.176                | 0.058                      |  |  |  |  |
| 2022                           | 0.180                | 0.060                      |  |  |  |  |
|                                |                      |                            |  |  |  |  |
| Yearly Consumption 380,000 kWh |                      |                            |  |  |  |  |