

Date : 11/23/2010 10:38:41 PM

From : "Thompson, Robert"

To : "Bown, Charles W." , "'DawnDalley@nalcenergy.com'" , "Morrissey, Ken"

Subject : RE: Capex - isolated island. list of projects, inservice dates and capex.

Attachment : image001.gif;image002.jpg;

Great points. Sentencing the Island to escalating power costs would be industrial policy suicide.

-----Original Message-----

From: Bown, Charles W.

Sent: Tue 11/23/2010 10:35 PM

To: 'DawnDalley@nalcenergy.com'; Morrissey, Ken

Cc: Thompson, Robert

Subject: RE: Capex - isolated island. list of projects, inservice dates and capex.

Some initial thoughts:

Starting in 2014, are looking at adding a new generation source every 2-3 years to meet growing demand and to replace existing capacity.

After 2020, our small hydro options run out

The Island has a limited capacity to add new wind; we are likely capped at one more 25MW project.

After 2020, our supply options for growth are thermal based only.

The current demand growth profile does not consider the impact of a major new industrial customer. In that event, our only option is a major thermal expansion.

With thermal capacity as our only option for future growth, it is likely that large industrial customer will not want to establish operations on the island (electricity price - high cost, high volatility).

Existing industrial customers (Vale -Long Harbour) will be affected by increasing electricity prices

The cost to customers in an isolated island scenario could be affected by national GHG-emissions policies that could add a price to carbon emissions or carbon-based fuels.

MF is the solution to these issues.

Charles

---

From: DawnDalley@nalcenergy.com [<mailto:DawnDalley@nalcenergy.com>]

Sent: Tuesday, November 23, 2010 10:17 PM

To: Morrissey, Ken; Bown, Charles W.

Subject: Capex - isolated island. list of projects, inservice dates and capex.

Isolated Island assumptions - total capex: approx \$3.25B

Other Holyrood upgrades (not included below): \$253M

Dawn Dalley

Manager, Communication & Shareholder Relations

Nalcor Energy

t. 709.737.1315 c. 709.727.7715 f. 709.737.1816



	In-service year		
Island Pond Hydro Plant (36 MW)	2015	\$	199,118
Holyrood ESP and Scrubbers - Pollution Control	2015	\$	581,976
Portland Creek Hydro Plant ((23 MW)	2018	\$	110,936
Round Pond Hydro Plant (18 MW)	2020	\$	185,355
Combine Cycle Combustion Turbine (170 MW) at Holyrood	2022	\$	281,562
Combustion Turbine (50 MW)	2024	\$	91,121
Combustion Turbine (50 MW)	2027	\$	96,698
Wind Farm - Fermeuse - Replacement (27 MW)	2028	\$	94,442
Wind Farm - St. Lawrence - Replacement (27 MW)	2028	\$	94,442
Combustion Turbine (50 MW)	2030	\$	102,617
Combine Cycle Combustion Turbine (170 MW) #1 at new site	2033	\$	464,883
Combine Cycle Combustion Turbine (170 MW) #2 at new site	2033	\$	346,330
Wind Farm - Replacement (25 MW)	2034	\$	98,478
Combine Cycle Combustion Turbine (170 MW) #3 at new site	2036	\$	491,888
		\$	3,239,847

## Notes:

- 1) 25 MW Wind farm in 2014 - RFP - PPA
- 2) Holyrood Refurb costs included in rates but not in this list.
- 3) Hardwoods CT retiring 2022
- 4) Stephenville CT retiring in 2024
- 5) Holyrood units 1 & 2 retiring in 2033
- 6) Holyrood unit 3 retiring in 2036