
Electricity Rates Forecasting: Muskrat Falls Will Stabilize Rates for Consumers

NOVEMBER 6, 2012

Objectives

- Analyze historical and future electricity rate impacts for Island residential electricity consumers.
- Determine which generation option results in the lowest cost to Island residential electricity consumers.

Key Consideration

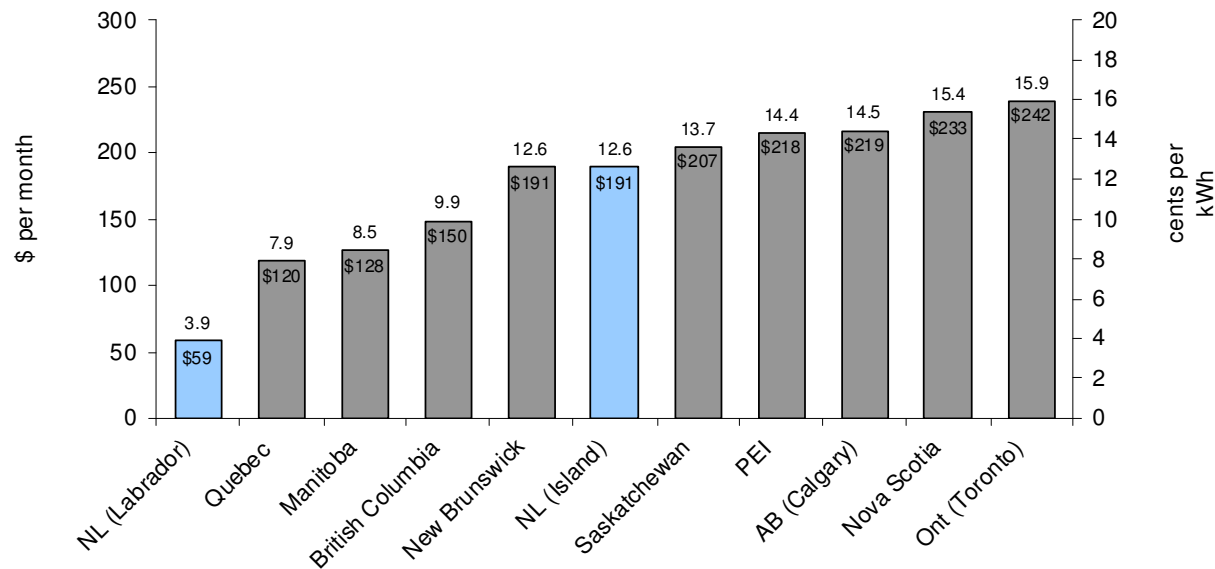
- In the Energy Plan, the Provincial Government identified that, in meeting the objective of least cost power, its priority was to meet electricity needs with environmentally friendly, stable and competitively-priced power and to maximize the value of any surplus power with export to other markets.

Methodology Approach

- Review information from various sources including Nalcor Energy, NL Hydro, PIRA Energy Group, U.S. Energy Information Administration and Wood Mackenzie.
- Analyze historical electricity costs for Island residential customers and primary drivers.
- Based on DG3 information and market forecasts, assess future electricity costs and drivers for Island residential electricity consumers under the two supply options:
 - Muskrat Falls
 - Isolated Island/Holyrood

Canadian Electricity Costs

- Historically, NL residents have paid less than the Canadian average for their electricity.
- Jurisdictions with the lowest rates typically have large hydroelectric generation.



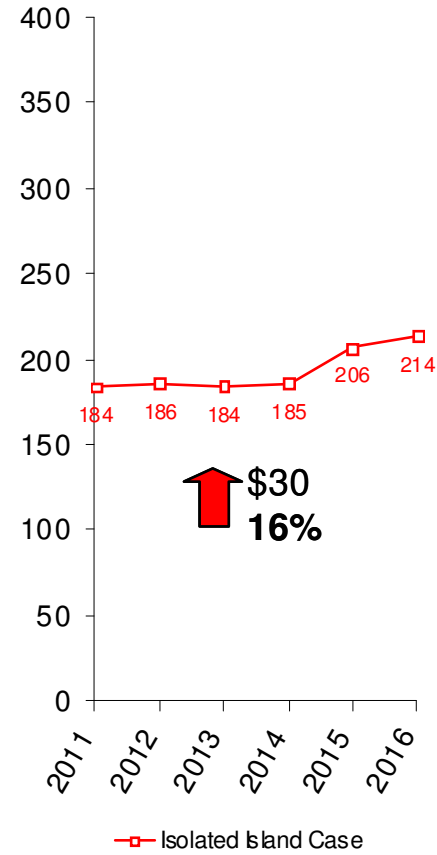
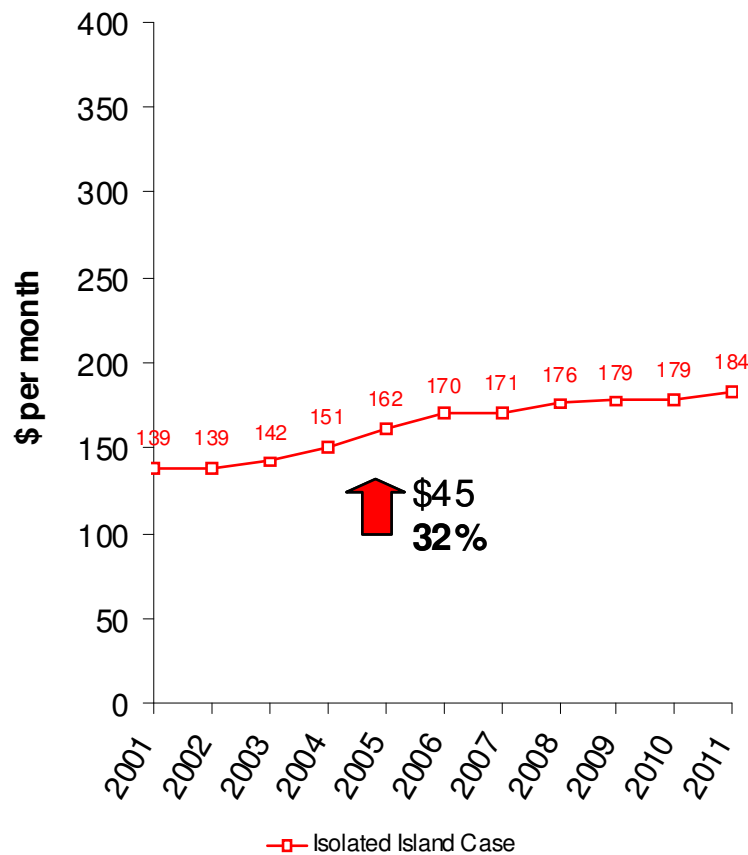
Historical Electricity Costs

- NL utilities recover the costs associated with generating and distributing power to ratepayers.
- Island electricity rates between 2001 and 2011 have increased, on average, by 32% or about \$45 per month.
- Primary factor influencing Island rates in last decade was increased oil prices for Holyrood operation.
- Holyrood provides electricity in the winter heating season, during dry hydro periods and during periods with increased demand.

The Next Five Years

- Electricity rates between 2011 and 2016 for the average Island ratepayer are projected to increase by 16%, or approximately \$30 per month.
- Rate increases are primarily due to increased electricity consumption and higher oil prices.
- These rate impacts are not related to the development of Muskrat Falls.

History & Near Future - Average Customer*



*Electricity costs based on average household monthly consumption of 1,517kWh.

The Long Term Future

- Without Muskrat Falls, the increase in electricity rates between 2016 and 2030 will be double for the average ratepayer.
- Without Muskrat Falls, electricity rates for the average ratepayer would increase by 38% or approximately \$82 per month over the same period.
- By comparison with Muskrat Falls, electricity rates for the average ratepayer will increase by 18% or approximately \$38 per month.

Electricity Customer Profiles

Profile 1

- Customer who doesn't use electric heat as primary source
- 775 kWh per month (90,000 customers)

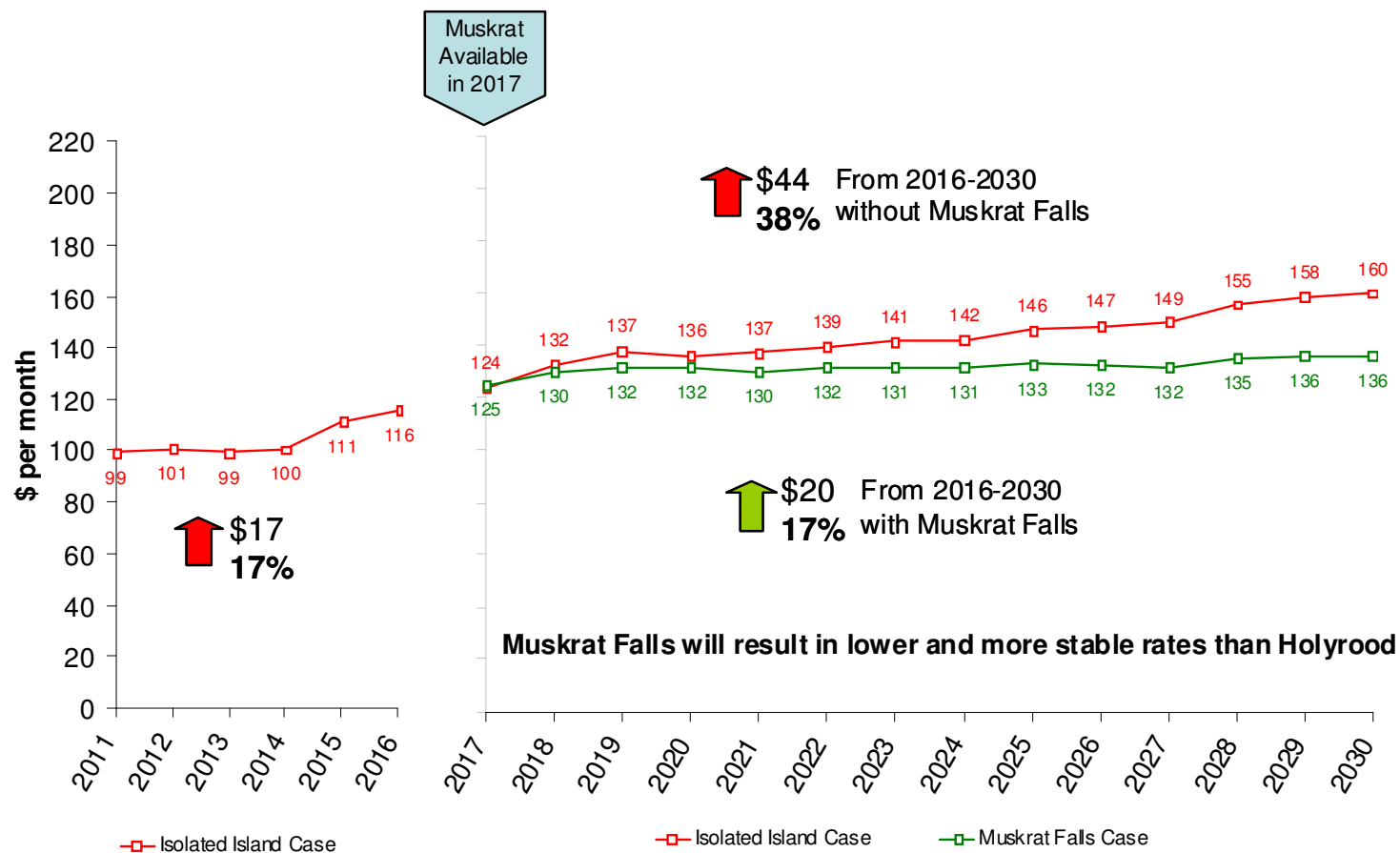
Profile 2

- Customer who uses electric heat as primary source
- 2058 kWh per month (140,000 customers)

Profile 3

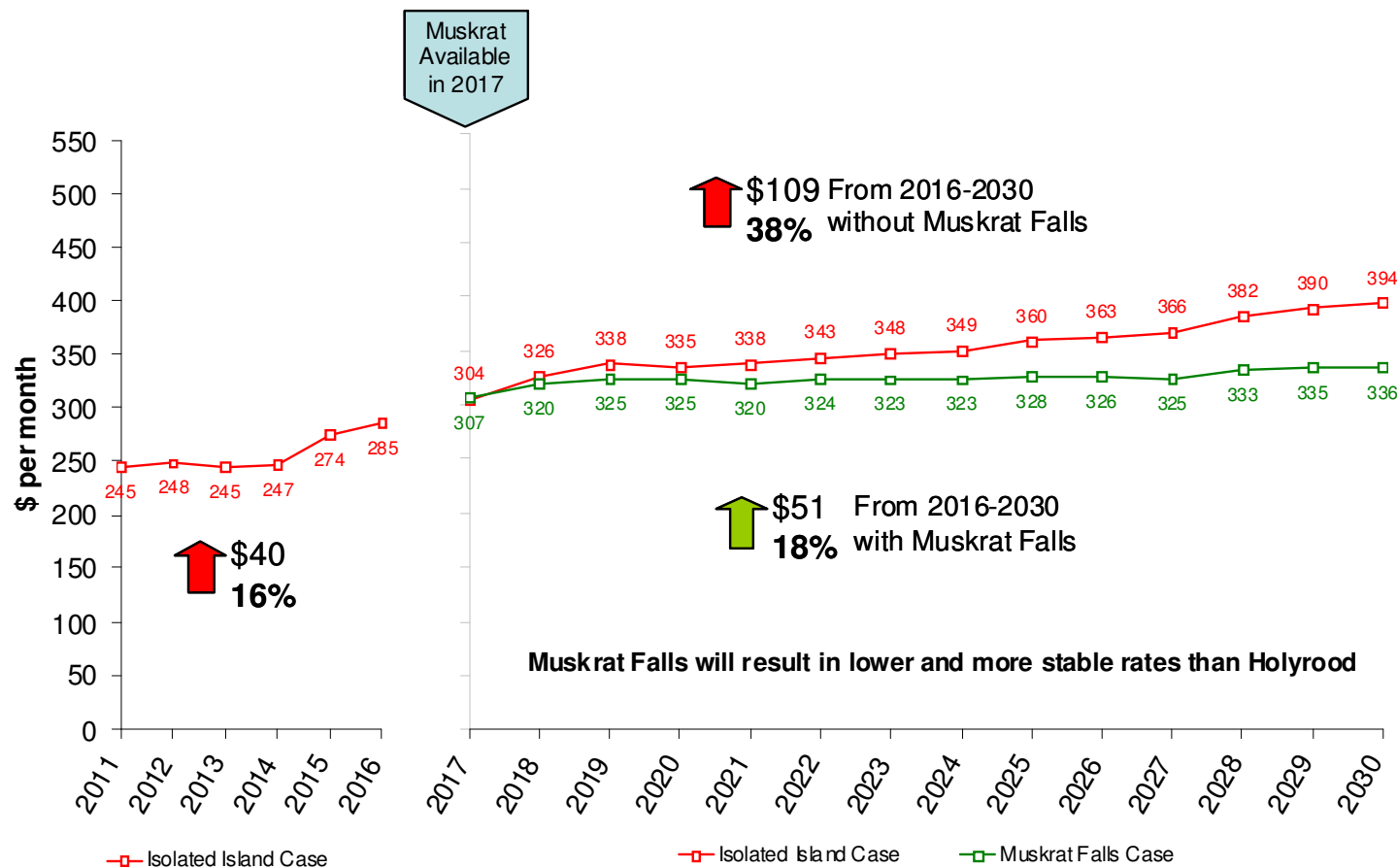
- Average of all Island residential customers
- 1517 kWh per month (230,000 customers)

Profile 1 - Customer without Electric Heat*



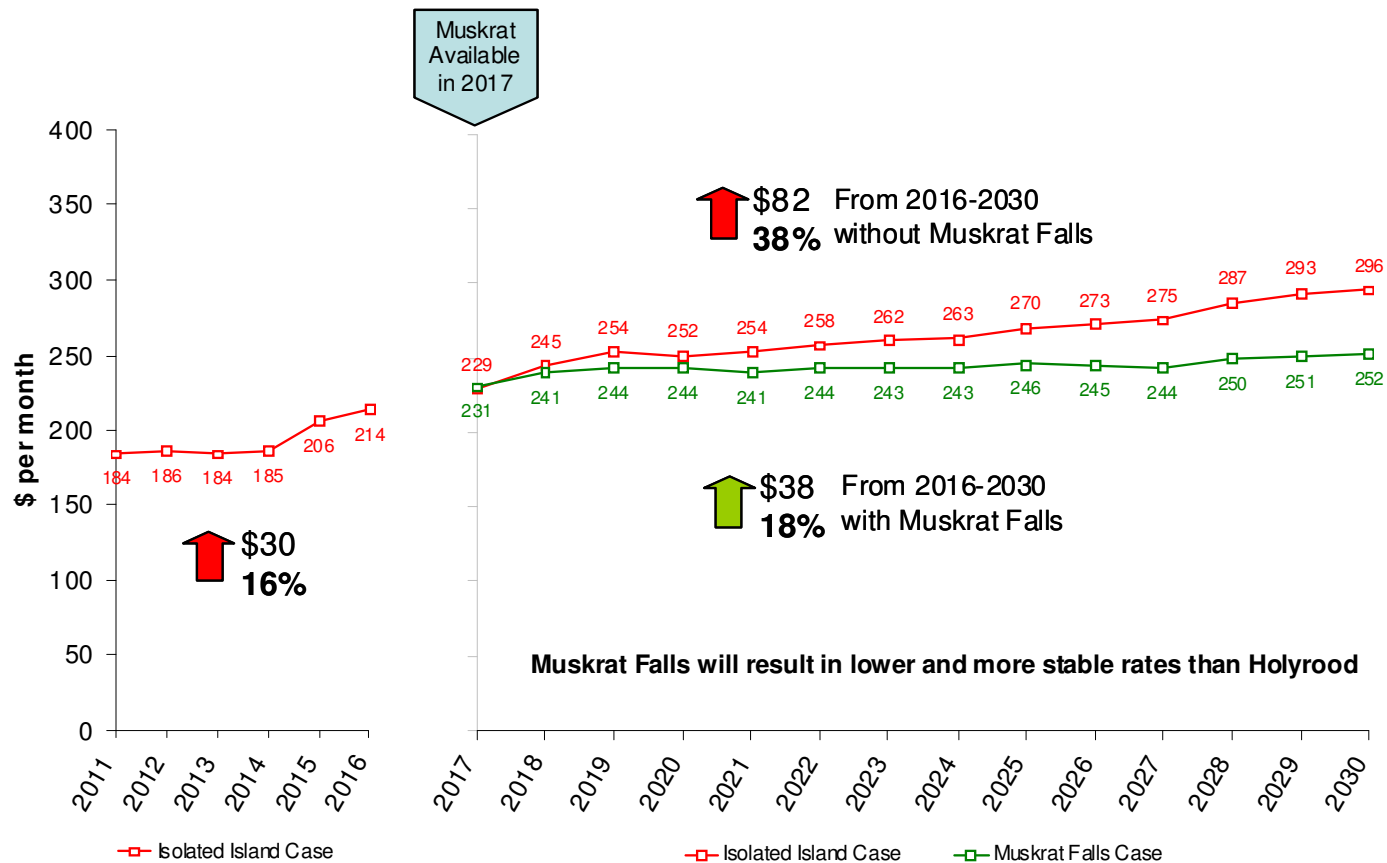
*Electricity costs based on average household monthly consumption of 775kWh.

Profile 2 – Customer with Electric Heat*



*Electricity costs based on average household monthly consumption of 2,058kWh.

Profile 3 - Average Customer*



*Electricity costs based on average household monthly consumption of 1,517kWh.

PIRA's Assessment of Future Oil Price Trends

- PIRA suggests that global economic growth that will average 3.6 per cent per year between 2012 and 2025.
- PIRA forecasts that in the long term, global oil prices will rise, due to increasing demand requiring new supply at a higher cost.
- PIRA estimates that overall oil demand will grow approximately 1.5 per cent per year over the 2012-2025 period.
- From just under 90 million barrels per day today, oil demand will reach 110 million barrels per day by 2025.
- Long-term forecasts indicate that the price of crude oil will average approximately \$100 to \$105 per barrel (\$2011).

Conclusions

- Holyrood will have to be used more into the future with increasing electricity consumption.
- The cost of operating Holyrood will increase with rising world oil prices.
- Crude oil prices are predicted by experts to stay above \$100 per barrel. World oil demand expected to increase and new supply is more expensive.
- Ratepayers will be vulnerable to price volatility and uncertainty with respect to supply and demand related to global oil markets.

Conclusions

- Muskrat Falls will reduce the province's dependence on oil and associated rate impacts.
- Funds that would be used to purchase foreign oil can be used towards Muskrat Falls and support a provincially owned revenue generating asset.
- Muskrat Falls will ensure a secure and renewable source of power at the lowest cost.
- Hydroelectric power generated from Muskrat Falls will result in lower and more stable electricity rates.