Restructuring Roundtable
Transmission and Renewable Developments in New England

April 17, 2015
About Emera

$9.85 billion of assets in Canada, United States and Caribbean
NEW ENGLAND

- Meet greenhouse gas reduction target; 2020 GHG target of 25% reduction compared to 1990
- Reduce over-dependence on natural gas fired generation; Long term wind contracts offer effective hedge for volatility of gas market impact on electric rates
- Backfill approximately 8000 MW of planned capacity retirements;
- Meet Renewable Portfolio Standards; demand for REC qualified energy is outpacing supply.
- Terrestrial wind and Canadian imports offer lowest-cost solutions.
RPS Compliance

New England Class I Renewable Resource Supply and Demand Balance (Cumulative GWh)
GHG Compliance

Massachusetts GHG Emissions

- Non-electricity GHGs
- Electricity GHGs

- GWSA 2020 Target
- GWSA 2050 Target
- 2020 Gap: 9.2 MMTCO$_2$e

Million Metric Tons of CO$_2$ equivalent
Will we turn the ship? When should we start?
Lower Churchill Phase 1 and Maritime Link

**MUSKRAT FALLS (MF) GENERATION & LABRADOR TRANSMISSION (LTA)**
- $4.2 billion project value
- 824 MW hydroelectric facility
- 4.9 TWh/yr
- 100% Nalcor owned

**LABRADOR ISLAND LINK (LIL)**
- $2.79 billion project value
- 900 MW capacity
- 1,100 km
- Emera to invest $400 million for a ≈ 35% equity interest in the LIL

**MARITIME LINK (ML)**
- $1.577 billion project value
- 500 MW capacity
- 170 km undersea link
- 100% Emera owned for 35 years

**TRANSMISSION LINES**
- Green: Existing Transmission Lines
- Cyan: Proposed Northeast Energy Link
- Stripes: NSPI, Emera Maine Transmission Lines
- Blue: Utility Service Area
Maritime Link Project

- 500 MW +/-200 kV
- 170 km HVdc subsea cable
- 400 + km of overland transmission
  - 230kVvac, +/-200 Kvdc, and Grounding lines
- Divided into three distinct areas:
  - Western Newfoundland
  - Cabot Strait
  - Cape Breton, Nova Scotia
Maritime Link: Work Underway

Mulcher clearing ROW in NL

Woodbine Converter Station site (NS)

Accommodation facility construction at Granite Canal, December 2014
Nalcor Energy: Muskrat Falls
Nalcor Energy: Muskrat Falls
AC Transmission Upgrades in Maine

- Emera Maine – CMP MOU
- Objective: optimized AC transmission to collect large scale renewables
- Scope could include rebuild of existing MEPCO line
- In-service by 2018
Wind in Nova Scotia
Time is of the Essence