



CAMPUT 2009

Saint John, New Brunswick

Energy Exports Opportunities and Challenges

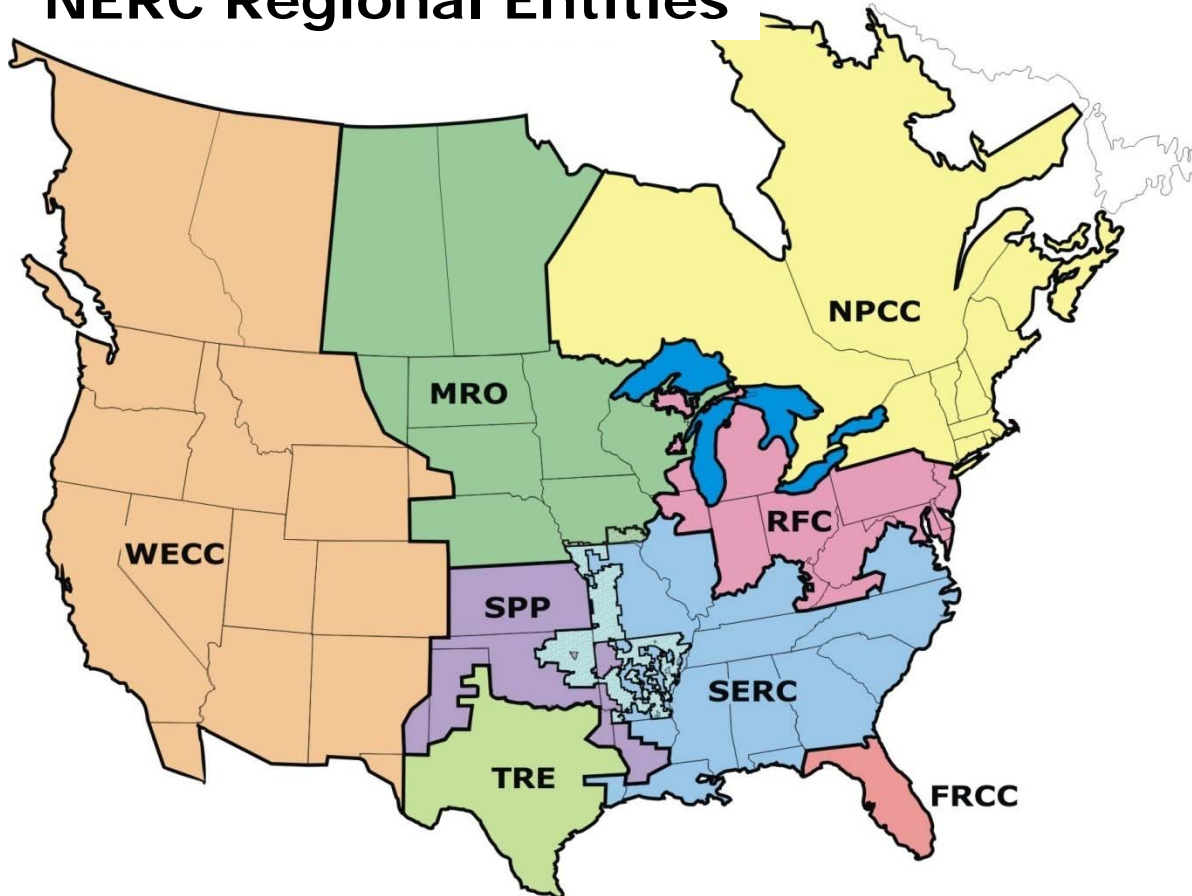
May 11, 2009

**Presentation by:
Edward A. Schwerdt
President & CEO
Northeast Power Coordinating Council, Inc.**

- **Overview**
- **International Coordination**
 - **US**
 - **Canada**
- **Opportunities for Future Coordination**

Overview

NERC Regional Entities



NPCC

- One million square miles
- 56 million people
- 45% US
55% Canadian
- Represents 70% of Canadian Load

www.npcc.org/

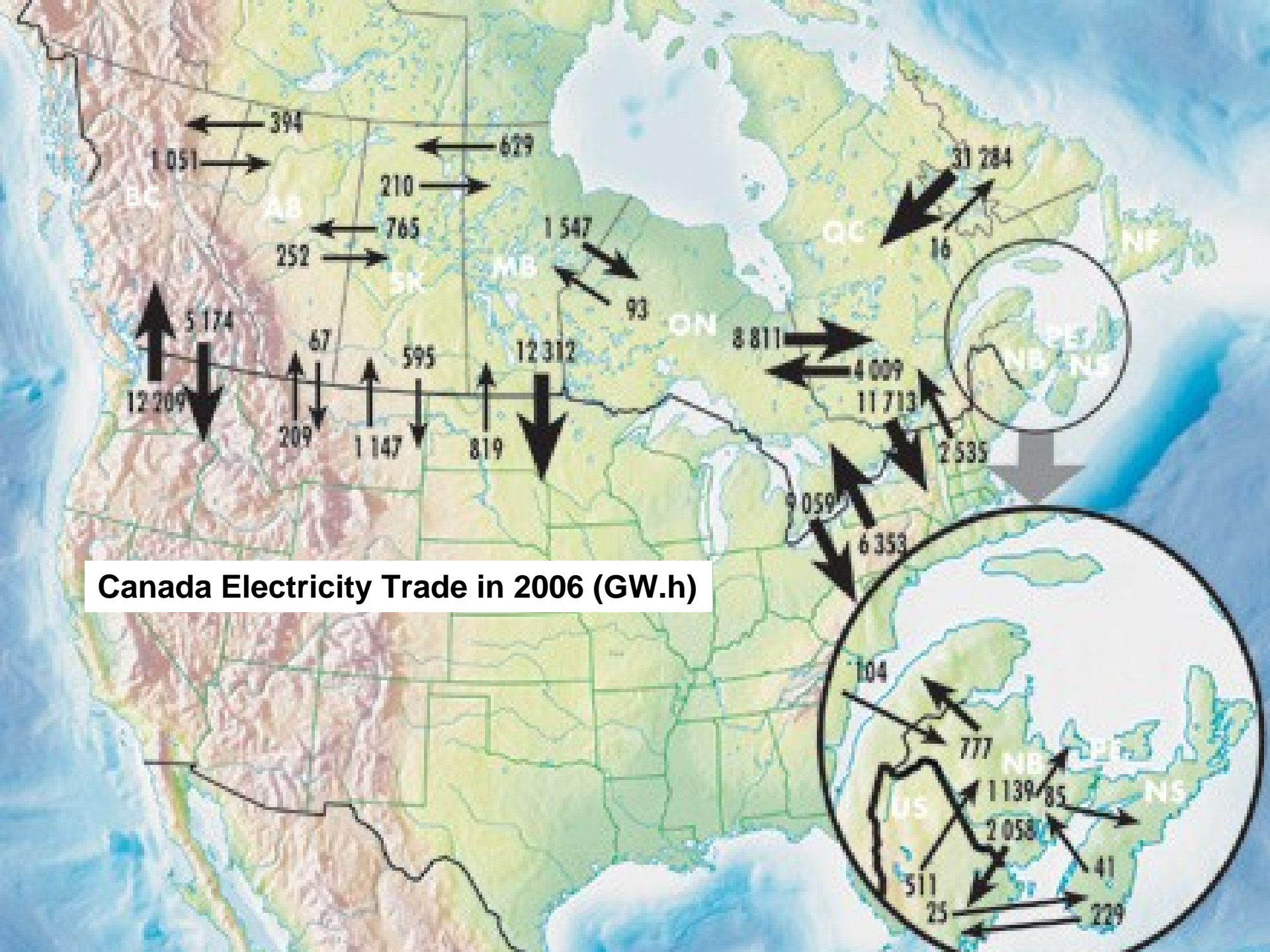
NPCC Mission – Reliability

Program Areas:

- ✓ **Reliability Standards**
- ✓ **Compliance & Enforcement**
- ✓ **Reliability Assessment**
- ✓ **Coordination of Planning & Operation**

MOUs with Canadian Provinces

- ✓ **Ontario**
- ✓ **New Brunswick**
- ✓ **Quebec**
- ✓ **Nova Scotia**



Canada Electricity Trade in 2006 (GW.h)



Today's Coordination

- **Ontario Reliability & Operability Outlook**
- **New York's Comprehensive System Plan**
- **New England's Regional System Plan**
- **Northeastern ISO/RTO Planning Coordination Protocol**

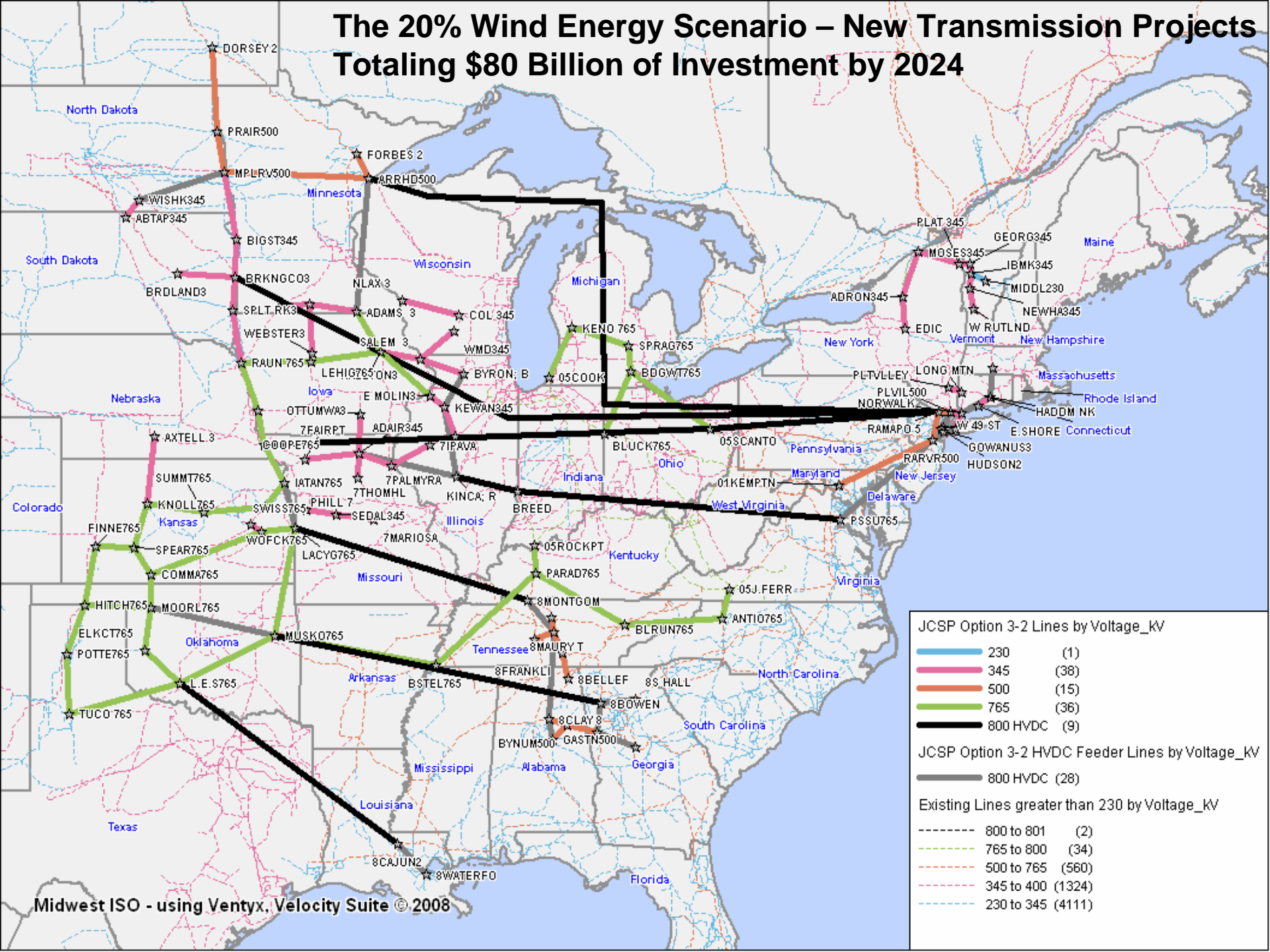
Current Initiatives

- **Federal/Provincial and regional process decisions and initiatives**
 - **FERC Order 890 requirements**
 - ✓ **Economic study requests**
 - **Ontario “Green Energy Act”**
 - **American Recovery and Reinvestment Bill**

Opportunities for Future Coordination

- **US EPACT 2009**
- **Climate Change Initiatives**
- **New England Governors' Vision**
- **Maritimes/Labrador Action Plan**
- **Hydro Quebec Development**

The 20% Wind Energy Scenario – New Transmission Projects Totaling \$80 Billion of Investment by 2024

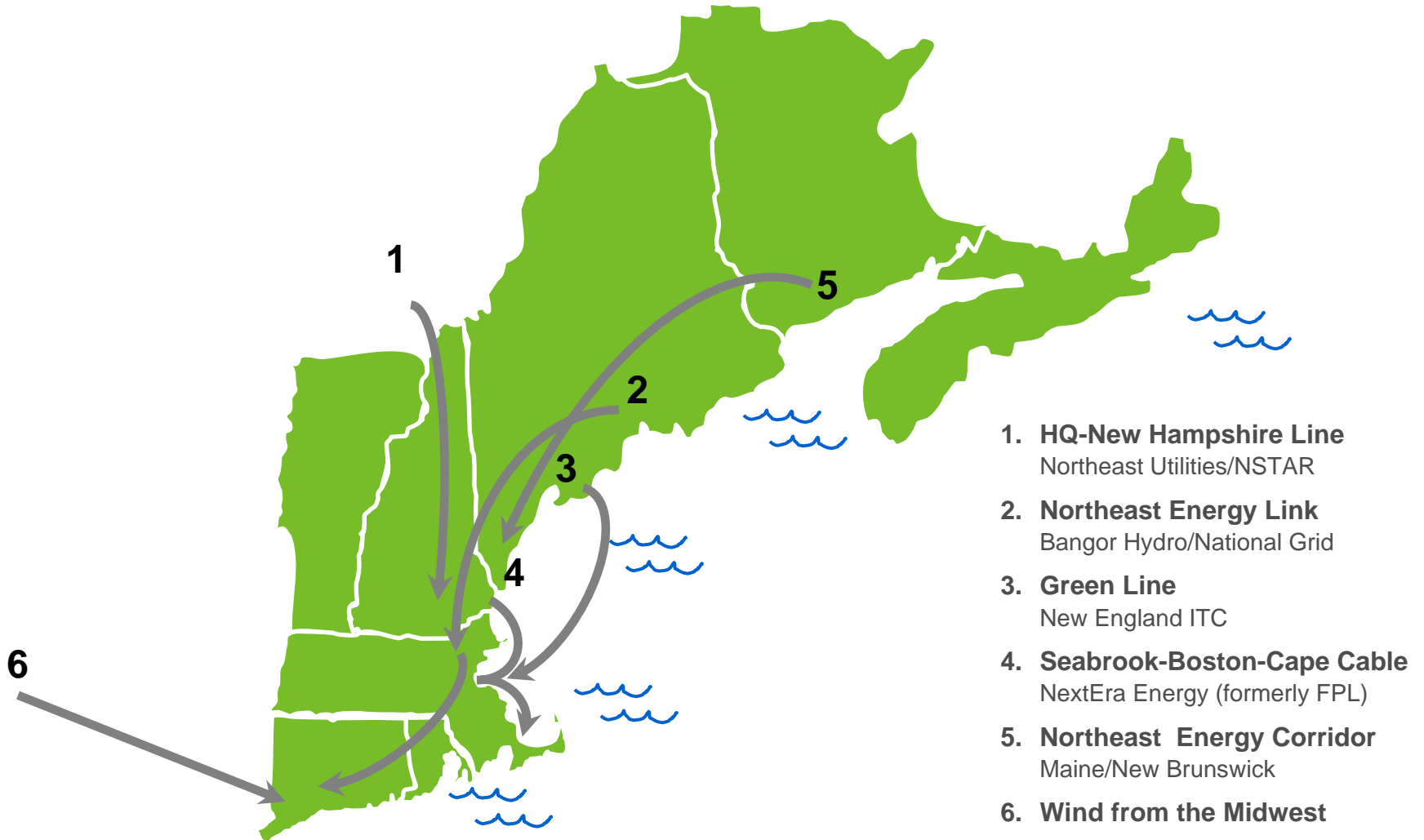


JCSP Option 3-2 Lines by Voltage_kV	
230	(1)
345	(38)
500	(15)
765	(36)
800 HVDC	(9)

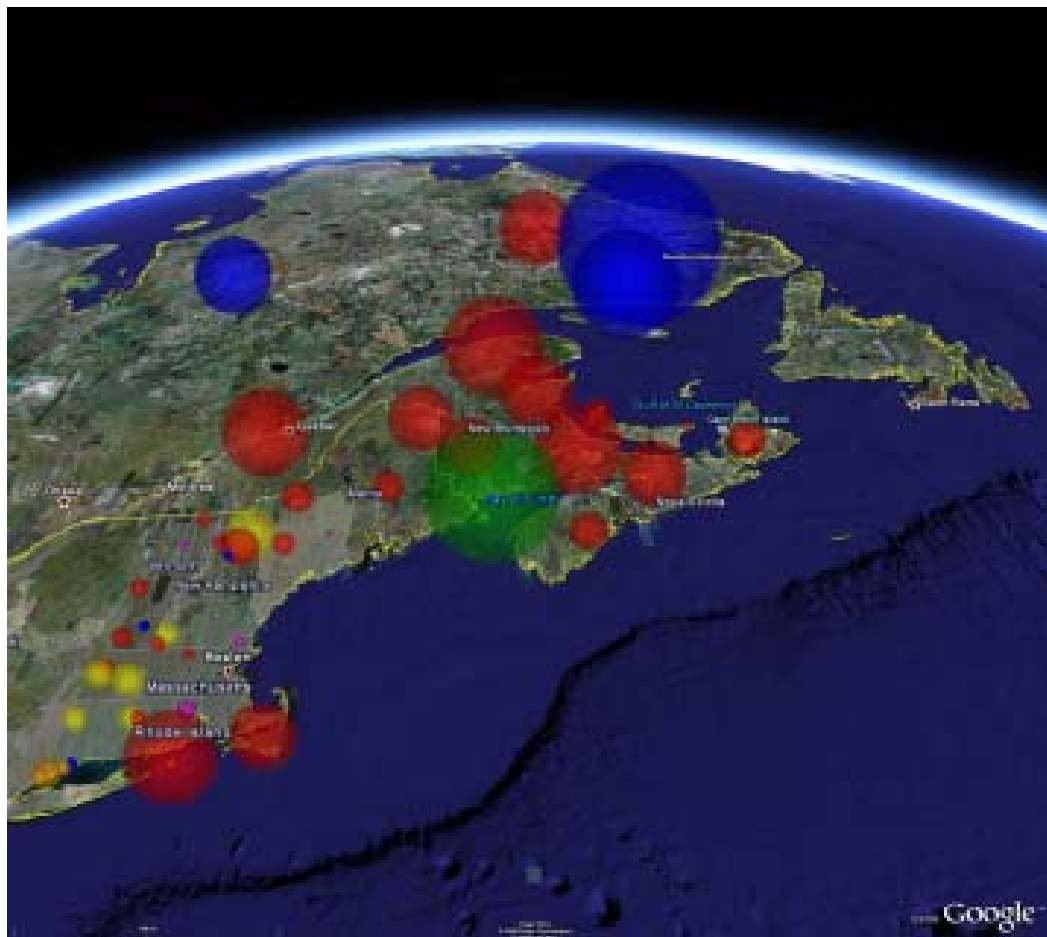
JCSP Option 3-2 HVDC Feeder Lines by Voltage_kV	
800 HVDC	(28)

Existing Lines greater than 230 by Voltage_kV	
800 to 801	(2)
765 to 800	(34)
500 to 765	(560)
345 to 400	(1324)
230 to 345	(4111)

On- and Off-shore Projects Vying to Move Renewable Energy to New England Load Centers



Developers Proposing Renewable, Low- and Non-Emitting Resources in New England, Eastern Canada



- **Hydro**
- **Wind**
- **Biomass**
- **Landfill gas**
- **Fuel cell**
- **Nuclear**