

# Increasing Trade in Clean Electricity

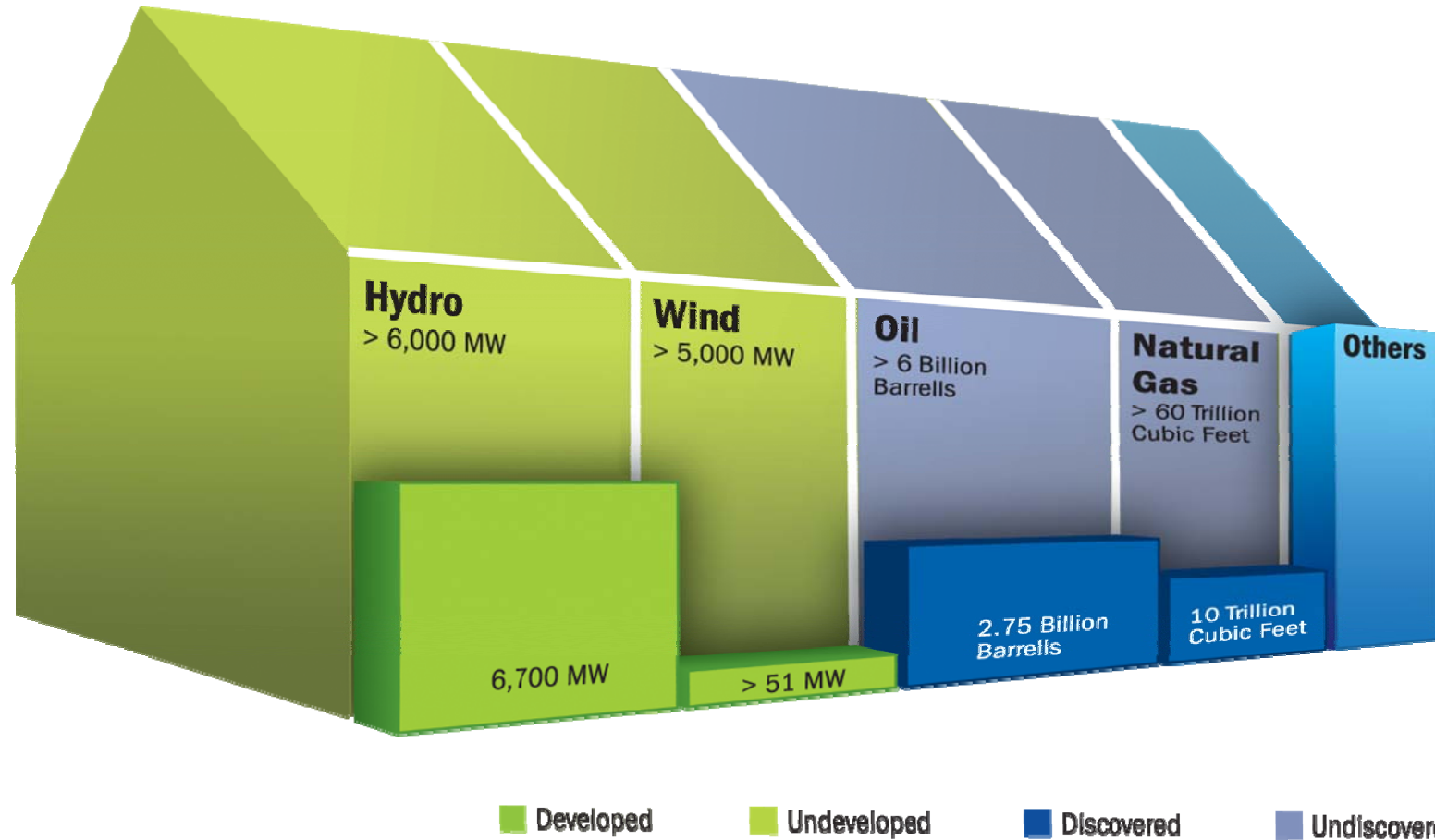
Gilbert Bennett

Vice President – Lower Churchill Project, Nalcor Energy

Boundless Energy

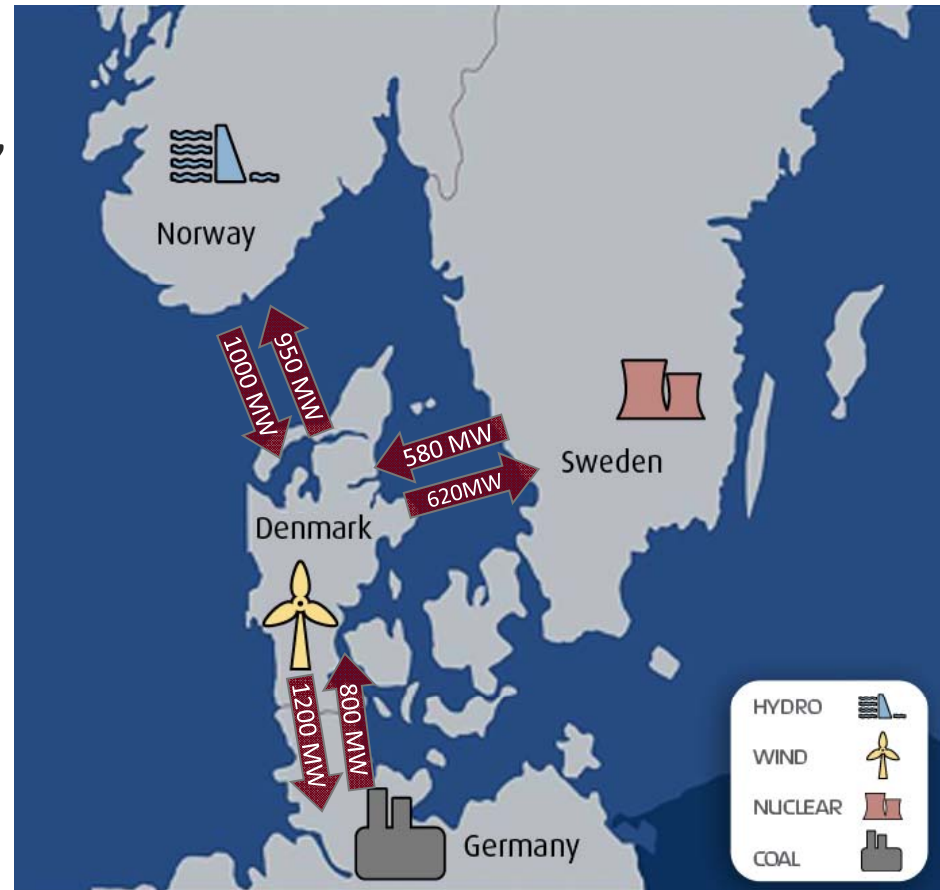


# Newfoundland and Labrador's Energy Warehouse



# The Scandinavia Success Story

- Scandinavia cooperation achieved a collective vision, while maintaining distinct individual identities.
  - Development of resource base in each country
  - Increased security of supply
  - Portfolio balancing ability
  - Treasury benefits resulting from energy export



# Lower Churchill Hydroelectric Generation Project

A dam and powerhouse at Gull Island



2250 MW/ 12 TW-h/yr  
Reservoir length – 232 km  
Flood area – 85 sq km

Two dams and powerhouse at Muskrat Falls



824 MW/ 5 TW-h/yr  
Reservoir length - 60 km  
Flood area – 41 sq km

- 735 kV transmission line connecting Churchill Falls and Gull Island
- Two 230 kV transmission lines connecting Gull Island and Muskrat Falls

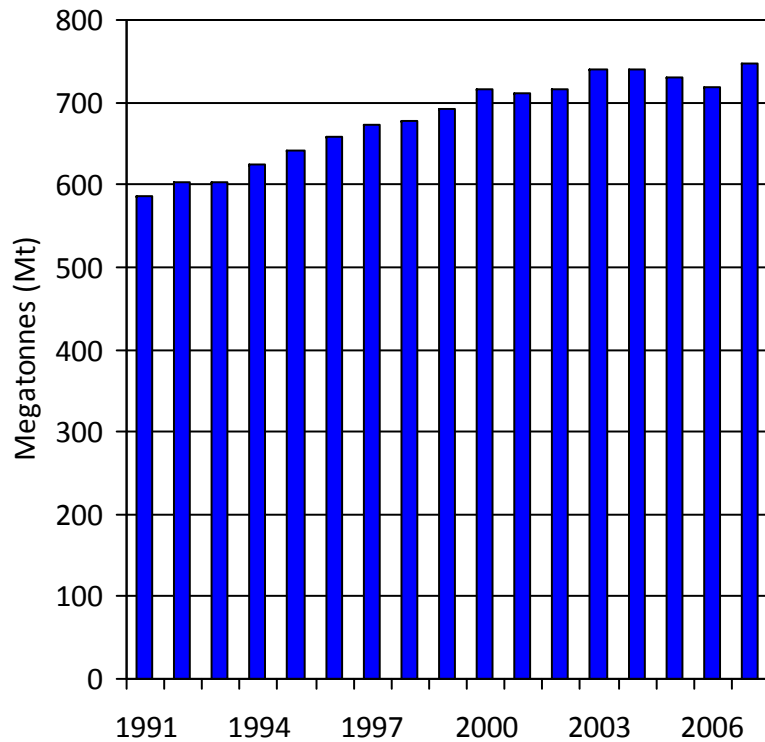
# International and Interprovincial Transfers of Electricity 2008 (GWh)



Source: *Canadian Energy Overview 2008*, National Energy Board of Canada.

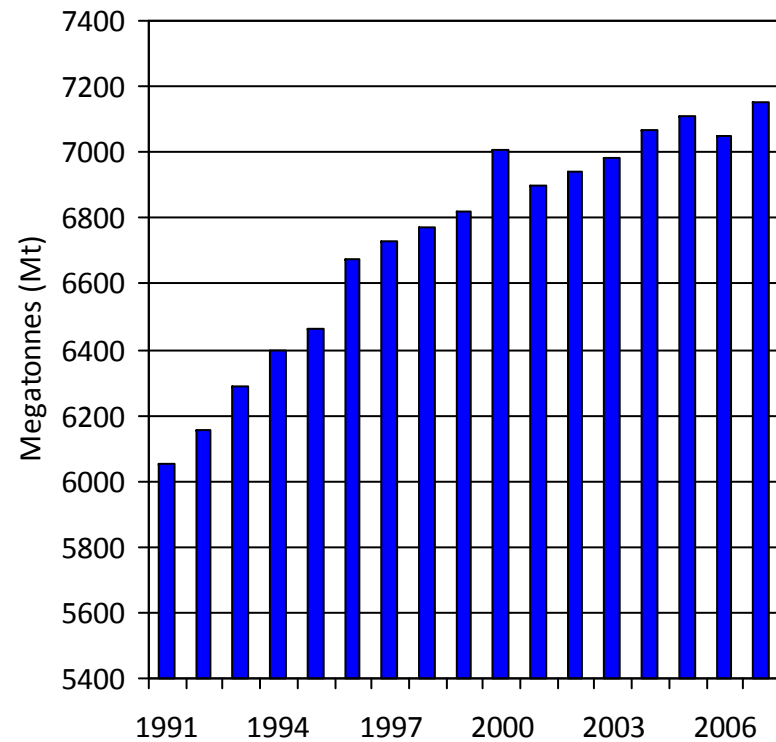
# National Greenhouse Gas Emissions, 1990-2007

## Canada



Source: National Inventory Report 2009, Canada

## United States



Source: National Inventory Report 2009, United States

# Undeveloped Hydropower Potential in Canada

Province/ Territory	Technical Potential in megawatts (MW) <sup>1</sup>
Quebec	44,100
British Columbia	33,137
Yukon	17,664
Alberta	11,775
Northwest Territories	11,524
Ontario	10,270
Manitoba	8,785
Newfoundland & Labrador	8,540
Nova Scotia	8,499
Nunavut	4,307
Saskatchewan	3,955
New Brunswick	614
Prince Edward Island	3
<b>Canada</b>	<b>163,173</b>

Source: *Hydropower in Canada: Past Present and Future*, 2008, Canadian Hydropower Association

**Thank you.  
Questions?**