Building on Strengths
Canada's Energy Policy Framework

Insights from the Canadian Energy Forums

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Energy Council of Canada
Conseil canadien de l'énergie

WORLD ENERGY COUNCIL
CONSEIL MONDIAL DE L'ÉNERGIE
For sustainable energy.

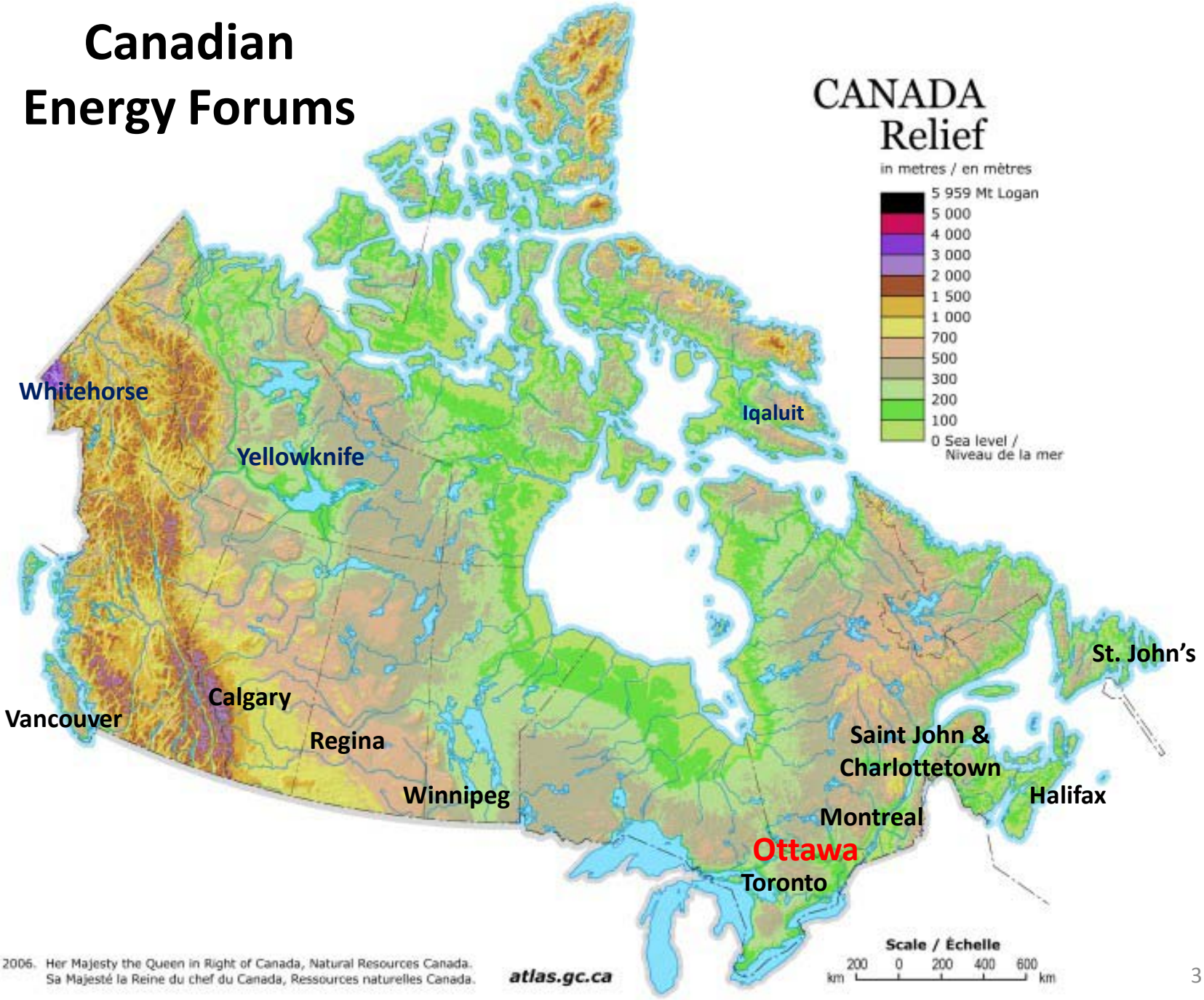
The Canadian Energy Forums

- The Energy Council of Canada held a series of Canadian Energy Forums across Canada leading up to Canada hosting the *World Energy Congress - MONTRÉAL 2010* in September.
- Strategic and policy oriented and addressing the challenges being faced by the energy industry in global and national contexts.
  - define the opportunities and challenges in our “14” jurisdictions
  - define similarities, differences and synergies between our diverse provinces and territories
- The cross-Canada Forums focused upon specific regions of Canada and obtained, from governments, industry and other stakeholders, perspectives and planned policy actions to address present and future energy challenges.

Building on Strengths

Canada’s Energy Policy Framework

Canadian Energy Forums



Elements of Canada's Energy Policy Framework

The Forums have revealed core values shared across Canada:

- Energy as an economic driver in every Canadian region
- Canada as a North American and Global energy supplier
  - Accessibility, Availability, Affordability, Accountability
- Climate Change mitigation – towards a clean environment

Paths to Our Shared Objectives: How Are We Getting There?

- Multi-jurisdictional laws, policies and regulations that work
- Sustained investment in our technology and innovation leadership
- Efficiency in our end uses of energy: finding transformative opportunities
- Toward the energy system grids of the future
- Growing our supply of sustainable fossil fuels

The Energy Supply Challenge

- Enormous changes taking place in the energy sector
- Driven by three dominant factors:
  - the need for more energy production;
  - the need to make our society more energy efficient; and
  - the need to make real progress in reducing impacts from greenhouse gases.
- Canada has a rich endowment of energy resources
  - important for driving Canada's economic growth
  - one of its dominant exports, especially to the US

The Environmental Challenge

- Canada and the United States have a major challenge to achieve progress reducing greenhouse gases and associated climate change impact
- Balancing energy supply and environmental challenges in a period of rapid change is required for Canada to maintain its global competitiveness
- The Energy Council of Canada - ***Canadian Energy Forums***
  - define the opportunities and challenges in our “14” jurisdictions
  - define similarities, differences and synergies between our diverse provinces and territories
- Following is a cross-Canada “tour” of these opportunities and challenges…

Towards an Energy Framework for Canada

Newfoundland and Labrador

- Major contributor to the North American energy supply
- Vast supply of both non-renewable and renewable energy resources
  - Hydro electricity
  - Oil & Gas - offshore
- The key electricity challenge is the development of transmission and other infrastructure needed for new projects to proceed
- Becoming a leader in the development of energy resources in harsh environments
- Gateway to the Arctic - technology developed offshore - natural centre of excellence

Nova Scotia

- Nova Scotia's plan is to reduce GHGs and reduce price volatility - it is an "away from oil" approach.
- Nova Scotia is currently very carbon dependent for electricity generation with a system designed to reduce volatility of energy prices
- Nova Scotia is currently essentially an energy island
- Oil and gas production in Nova Scotia – expansion potential
- Opportunities for regional wind generation and natural gas production
- Tidal power is being showcased - unique opportunity for Atlantic Canada
- Potential route for transmission from Lower Churchill Falls
- Technology is critical - there is a need for more development
- Atlantic region cooperation is imperative…

New Brunswick and Prince Edward Island

- There is significant potential for growth in Atlantic Canada's energy sector with Regional integration seen as leading to economic and environment benefits.
- Energy will continue to be a driver of the economy, however, reliance on fossil fuels means that the transition towards diversified cleaner energy will take time.
  - Maintaining and/or lowering electricity prices will pose a significant challenge.
- Challenges with the shift from oil to natural gas in the Region.
- Atlantic Canada and the Northeast United States have great potential for renewable energy, particularly for wind power, nuclear and biomass.
- Integrated Smart Grids present a great opportunity for the region - including green jobs supported by universities and colleges to develop the skills needed by the energy industry.

Quebec

- Quebec electricity sector is essentially greenhouse gas free – hydro and nuclear generation predominate
- Considerable hydro growth underway with significant future potential
- Exports of electricity key part of the Quebec strategy – USA and other Canadian provinces
- Natural gas becoming more important
  - Quebec shale gas potential
  - Natural gas as a transportation fuel
- Transportation electrification and alternative fuels being implemented
  - Hydro Quebec plan
  - Mitsubishi Electric Vehicle introduction
  - Bombardier rail and mass transit technology leader

Ontario

- Ontario benefits from a very diverse power generation:
  - Nuclear
  - Hydro
  - Natural Gas
  - Wind
  - Solar
- Electricity drives energy sector policies (e.g. Green Energy Act)
- Conservation & demand management
- Smart Grid
- Transmission – interprovincial and USA interconnects
- Electrification of the economy

Manitoba

- One of the lowest cost and lowest emitting electricity grids in Canada/North America - plans to grow.
- Need for upgrades to electricity transmission
- Market access - particularly to the US
- Overall GHG emissions are relatively low - reductions must come from outside the electricity generation sector.
  - electrifying transportation: low-cost clean electricity, pre-existing recharging infrastructure, short commuting distances of 10-20 miles within Winnipeg, and a single utility to facilitate roll-out.
  - home heating (heat pumps)
  - switch energy usage to make greater use of their clean hydroelectricity generation (e.g. electrify pipelines)

Saskatchewan

- Vast energy resources
  - Oil
  - Natural Gas
  - Uranium
  - (Potash – Diamonds)
- Highest greenhouse gas emissions per capita
- Energy efficiency and conservation
- Carbon Capture and Storage – Weyburn & Boundary Dam
- Bakken Oil – 400 billion barrels resource - light crude
  - 2 to 4 billion barrels commercial today
- Technology / Innovation leadership

Alberta

- Vast energy resources
  - Oil sands
  - Natural Gas – conventional and unconventional (shale gas)
  - Coal
- Canada – US energy trade
- Renewable Energy – wind
- Technology investment
  - Carbon Tax
  - Climate Change and Emissions Management Corporation
  - Carbon Capture and Storage

British Columbia

- A leading jurisdiction on energy and climate change policies in Canada - broad-based carbon tax.
- The BC advantage:
  - Endowment of renewable energy and natural gas
  - Shale gas
  - Significant remaining hydro potential
  - Large bio-energy growth
- Leader in energy efficiency and conservation
- First Nation communities and infrastructure facilitated shale gas development
- Northern Energy Corridor
- Gateway to Asia
- Transmission infrastructure development

Assessment of Global Energy and Climate Policies