Electricity Policy and Regulatory Trends: Markets, Mandates and Mandarins

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Jurisdictional responsibilities in Canada are anything but straightforward

Provincial Governments

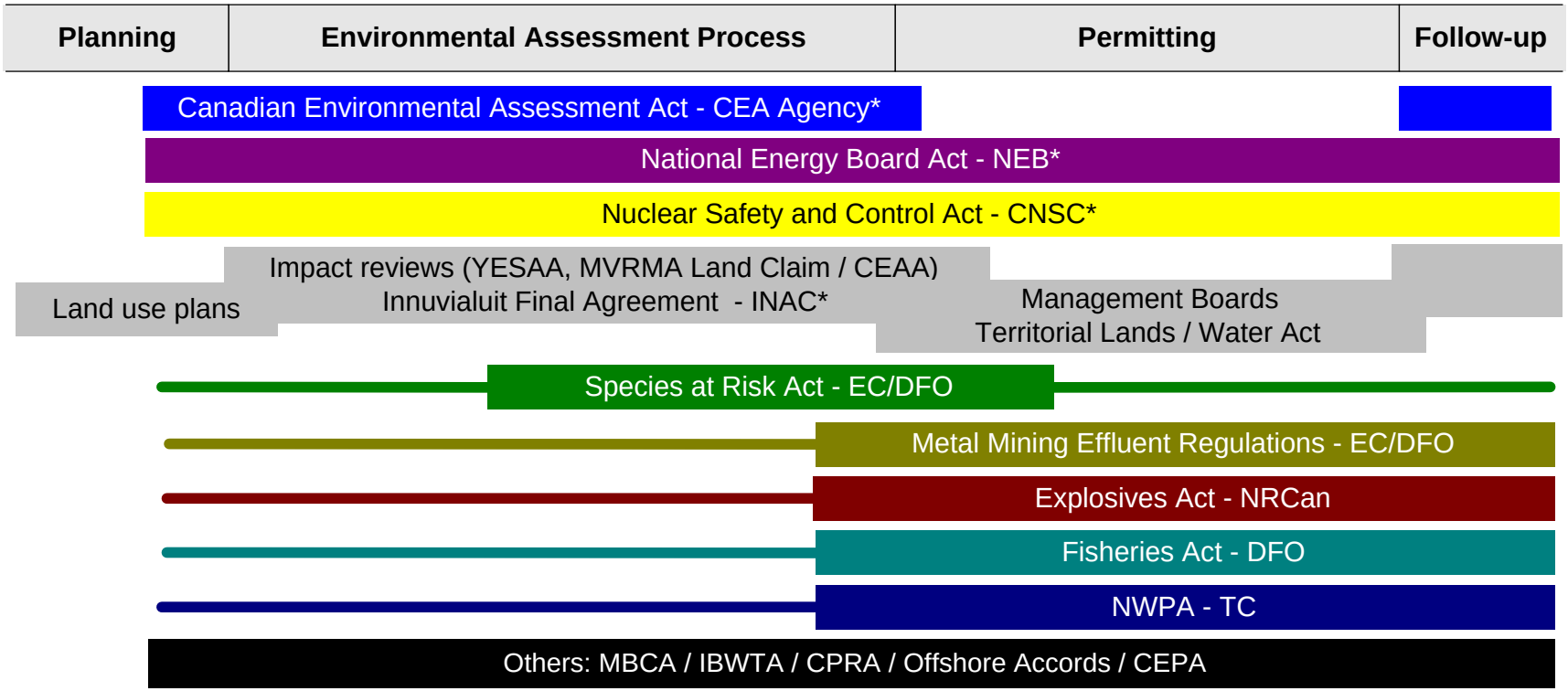
- Development and management of resources within provincial boundaries.
- Property and civil rights within the province, i.e. environment, health, safety, land use, consumer protection, etc.
- Regulation and legislative framework for electricity and natural gas, including in many cases ownership of Crown corporations engaged in these activities.
- Secure appropriate economic rent as resource owner from Crown mineral rights.
- Policies in the provincial interests, such as economic development, and energy science and technology.
- Intra-provincial trade.

Federal Government

- Uranium/nuclear power.
- Inter-provincial/international trade and commerce.
- Inter-provincial and international works and undertakings.
- Transboundary environmental impacts.
- Policies and legislation in the national interest:
  - Economic development.
  - Energy security.
  - Federal energy R&D.

Source: IEA

The federal process for large projects is complex



*Permits required under other Acts trigger CEAA OGD participants
Illustrative – some components would not apply to same project
NWPA – Navigable Waters Protection Act / YESAA – Yukon Environmental and Socio-Economic Assessment Act
MVRMA – Mackenzie Valley Resource Management Act / MBCA - Migratory Birds Convention Act /
IBWTA – International Boundary Waters Treaty Act / CPRA – Canadian Petroleum Resource Act /
Offshore Accords – Canada - NS and NFLD Offshore Accords / CEPA – Canadian Environmental Protection Act

Source: Natural Resources Canada

Aggressive federal clean air targets

Timeframe	Targets	General Approach
2010 - 2015	**GHG Emissions - Existing Facilities** 18% from 2006 emissions intensity levels in 2010 followed by a 2% annual improvement to 2020 **GHG Emissions - New Facilities** 3 year grace period followed by a 2% annual improvement. Clean fuel standard – To be determined but likely a fuel specific standard **GHG Emissions – National Targets**	Intensity for GHG's
2020	20% national mid-term target	
2050	60-70% national long-term target	
2012 – 2015	**Air Pollutants – National Caps** / **Air Pollutants – Electricity caps (tonnes)** NO_X- 600,000 tonnes — 105,000 (59% reduction from 2006) SO_2 – 840,000 tonnes — 206,000 (60% reduction from 2006) VOCs – 360,000 tonnes — N/A PM – 160,000 tonnes — 15,000 (55% reduction from 2006) Mercury — 1.078 (48% reduction from 2006)	Caps for pollutants

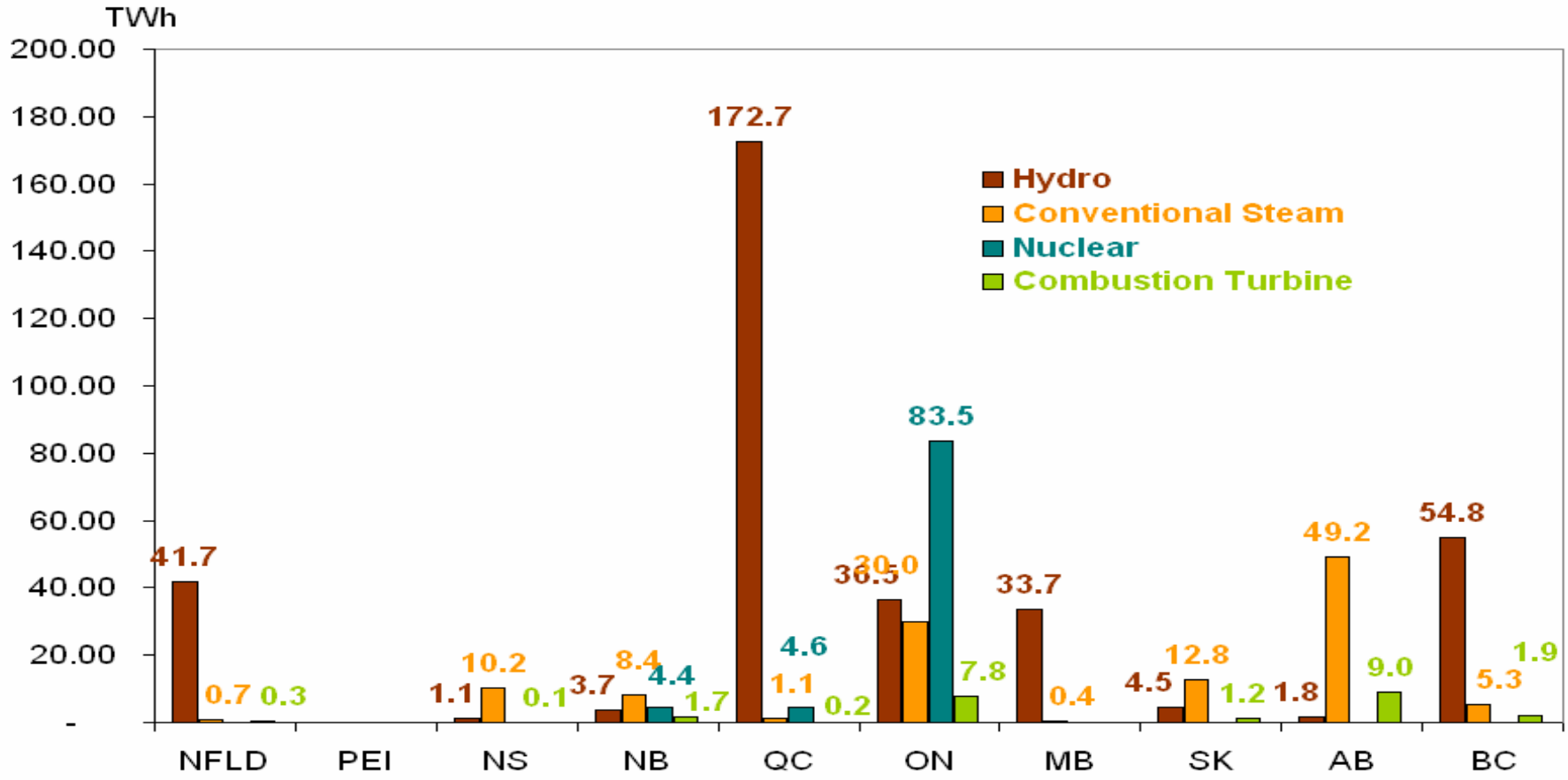
Provincial role in electricity

Several driving forces shape energy policy at provincial levels:

- Provinces and territories have significantly different primary resource endowments from each other.
- Provinces and territories are owners of their ground resources (apart from resources located in aboriginal lands and national parks) and have primary responsibilities in shaping policies implemented in their jurisdictions.
- Energy plays a large role in some of the provinces' creation of wealth (*e.g.* Alberta, Québec or Saskatchewan, Newfoundland and Labrador).
- For most provinces, the share of external energy trade they carry out with bordering US states is often larger than with Canadian neighbouring provinces

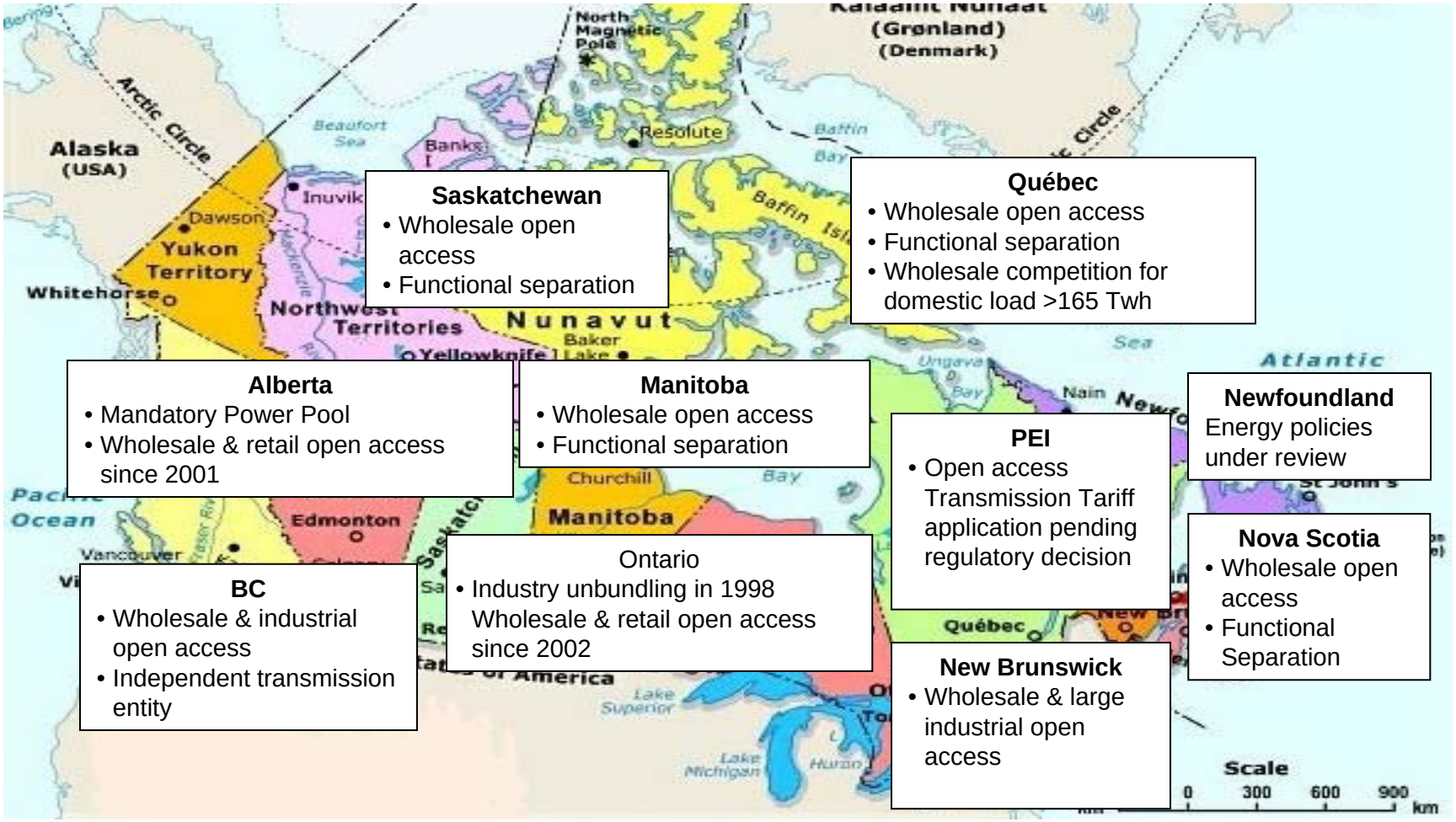
Source: IEA

Canadian electricity generation by region and fuel type, 2006



Source: Statistics Canada, *Survey 2151*

Status of Market Restructuring, End of 2006



Provincial role in electricity (cont.)

- Crown mandates aimed at benefit to ratepayers (Crowns tend to be focused on own geography).

- Private companies are demonstrating a willingness to invest outside their territories.

The Policy dilemma

- No national energy/electricity policy.
- Attempts by energy industry to move government to enunciate energy policy.
  - Political reluctance (how to balance parochial self interests of the provinces within a flexible national framework).
  - Provinces have developed own energy policies.
- Big challenge facing Canada is investment and infrastructure build.

The infrastructure challenge

- Investment is required to meet rising demand and to replace aging assets.
- Between 1990 and 2005, overall electricity demand in Canada increased by 24%.
- Demand continues to grow (1 to 1.5 % annually) despite EE gains.
- Issues of volatile natural gas prices, the future of clean coal and nuclear generation, the accessibility of new hydro and the potential of intermittent renewables such as wind are key to new generating capacity.
- Challenges of siting new transmission and modernizing distribution systems must also be overcome.
- All must be accomplished while meeting climate change/air quality objectives & customers expectations for affordable and reliable power.

Massive investment required

- The electricity industry is in the midst of an upswing in its capital investment programs ($13.1B in 2006).

- According to a projection by the IEA, approximately $190 billion (US) of electricity infrastructure investment will be needed in Canada from 2005 to 2030:
  - Generation $95 billion
  - Transmission $27 billion
  - Distribution $63 billion.

The road ahead

- Federal & provincial action required to improve climate for investment.
  - Enhanced policy and regulatory coherence.
  - More efficient, coordinated and timely regulatory processes.
  - Competitive ROI and depreciation rates within NA market.
  - Government support for technology should reflect the sector's contribution to the economy.

- Well informed public key to broad community acceptance.
- Public must understand:
  - Importance of robust electricity system as the backbone of the Canadian economy.
  - How they can contribute to lower energy demand growth cost effectively by optimizing lifestyle, equipment choices and behaviour.

CEA Five Point Plan

- Establish an investment climate to ensure future electricity supply
- Move government and industry towards efficient and effective regulation
- Work to ensure a sustainable future for the next generation
- Foster innovation and accelerate skills development
- Build on the strengths of an integrated North American system to maximize opportunity for Canadians

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