North American Power Generation by Fuel Type

MW (000’s)


History  Forecast

Gas
Coal
Nuclear
Hydro + Other
Power Assets

- 19 plants
- 10,900 MW
- Diversified portfolio primarily consists of low-cost, baseload generation

- Gas (52%)
- Nuclear (23%)
- Coal (15%)
- Hydro (5%)
- Wind (5%)
Portlands Energy Centre

A high-efficiency 550 MW combined cycle natural gas-fired generation facility to deliver 25% of central Toronto’s energy needs

Schedule:

2006
• Construction began

2008
• 340 MW simple cycle started on time in late May 2008
• Construction of combined cycle facility

2009
• 550 MW combined cycle facility to be in service Q1/09
Halton Hills

A state of the art 683 MW combined cycle facility with low emissions technology will bring greater stability to GTA West

Schedule:

2006 - 2007
• Field studies and permitting
• Engineering and procurement

2008
• Construction began

2010
• 683 MW in service
Ravenswood Generating Station

- 2,480 MW facility
- US$2.8 billion, 100% TransCanada
- High quality asset in a critical market region
- Platform for future growth through expansions and re-powering
Bruce Power

- TransCanada’s interest
  - 48.7% in Bruce A
  - 31.6% in Bruce B
- Long-term agreement with OPA to:
  - restart Units A1 & A2
  - refurbish Units A3 & A4
- TransCanada to invest approx. $3 billion

Bruce A and Bruce B
- Units 3-8 produce 4,700 MW
- Units 1-2 will add 1,500 MW

% of Total GHG Emissions (CO₂e)

- 100%
- 90%
- 80%
- 70%
- 60%
- 50%
- 40%
- 30%
- 20%
- 10%
- 0%

Canada

- Commercial/Other
- Residential
- Agricultural
- Electricity
- Oil & Gas
- Transportation

U.S.
North America’s Energy Infrastructure Challenge

- Energy sector challenges
  - Energy supply
  - Energy transmission
  - Demand side management

- Maturity of conventional gas . . . and the emergence of unconventional gas

- Public demands: lower prices, less greenhouse gas

- Public interest vs NIMBY, NUMBY, NAMBY, NIMEY, ...

- Economic impact
  - New infrastructure
  - GHG compliance
North American Energy Infrastructure Investment Over $5.3 Trillion US$ from 2007-2030

Annual Average
2007-2030 $44 $73 $115 $232

Billion Real 2007 $US

North America’s Energy Infrastructure Challenge

Regulatory Process Burden

Very Little  Appropriate and Cost Effective  Onerous and Expensive  Cannot Get Anything Done
Mackenzie Valley Pipeline Cost Overruns

$Millions

Comparative Project Regulatory Cost
Protracted MVP Regulatory Process
Cost of Capital on Regulatory Costs
Inflation During Expected Delay Period
Aggregate Impact on MVP Regulatory Process
Thank you

Hal Kvisle
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