



# Smart Regulation/Smart Grid

ENERCOM 2009

Toronto, Ontario  
March 10, 2009

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# Outline

- Background on CAMPUT
  - Discussion of smart regulation
  - Smart grid initiatives in Canada
  - Smart grid regulatory issues
  - Cooperation opportunities
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## Canadian Association of Members of Public Utility Tribunals

- Association comprising 14 regulatory agencies:
    - Alberta Utilities Commission
    - British Columbia Utilities Commission
    - Island Regulatory and Appeals Commission
    - Manitoba Public Utilities Board
    - National Energy Board
    - New Brunswick Energy and Utilities Board
    - Newfoundland and Labrador Board of Commissioners of Public Utilities
    - Northwest Territories Public Utilities Board
    - Nova Scotia Utility and Review Board
    - Nunavut Utility Rate Review Council
    - Ontario Energy Board
    - Régie de l'énergie du Québec
    - Saskatchewan Rate Review Panel
    - Yukon Utilities Board
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## Canadian Association of Members of Public Utility Tribunals

- 10 Associate Member Boards
    - Bureau d'audiences publiques sur l'environnement (Québec)
    - Canada-Newfoundland and Labrador Offshore Petroleum Bd.
    - Canada-Nova Scotia Offshore Petroleum Board
    - Canadian Environmental Assessment Agency
    - Canadian Nuclear Safety Commission
    - Comisión Reguladora de Energía (Mexico)
    - Efficiency NB
    - Energy Resources Conservation Board (Alberta)
    - Federal Energy Regulatory Commission (USA)
    - Oil and Gas Commission (BC)
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## The purposes of CAMPUT

- *to improve public utility regulation in Canada; and*
  - *to improve the education and training of commissioners and staff of public utility tribunals.*
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## CAMPUT works by:

- ❑ providing communications services;
  - ❑ providing training for commissioners and staff;
  - ❑ building closer linkages among boards/commissions;
  - ❑ establishing contacts and improving relationships with parallel regulatory organizations, especially internationally;
  - ❑ undertaking research initiatives to further regulation; and
  - ❑ organizing an important annual conference
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Smart Regulation

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Smart Grid

... and vice versa

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Smart regulation (or *smarter regulation*) has been evolving for some time.

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## Federal smart regulation initiatives

- various federal government initiatives and reviews since the 1970s, all aimed at making regulation smarter
  
  - Most recently:
    - 1999 GOC Regulatory Policy
    - 2005 Plan for Smart Regulation
    - 2007 Cabinet Directive on Streamlining Regulation
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## Smart regulation initiatives:

- Measurement of regulatory performance
    - application “cycle times”
    - regulatory outcomes (e.g. safety; complaints resolved)
    - regulatory costs
    - performance vs. stated goals
    - “quality” measurement (e.g. successful appeals)
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## Smart regulation initiatives:

- Goal-based (rather than prescriptive) regulation
    - streamlined processing for “routine” applications
    - audit-based risk management approaches
    - simplified procedures for small generation projects
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## Smart regulation initiatives:

- Harmonization of regulation
    - joint boards/joint hearings
    - harmonization of energy and environmental regulation
    - electricity/gas harmonization
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# Regulation and the smart grid in Canada

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## Ontario

- ❑ Ontario Government smart meter initiative (2004) -- 800,000 by Dec. 31, 2007 and all customers by end of 2010
  - ❑ OEB Pilot projects
  - ❑ Smart Grid Forum
  - ❑ Proposed *Green Energy Act*, Feb. 2009
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## Ontario (from proposed *Green Energy Act*)

- ❑ ... the smart grid means the advanced information exchange systems and equipment that when utilized together improve the flexibility, security, reliability, efficiency and safety of the integrated power system and distribution systems, particularly for the purposes of,
  - ❑ (a) enabling the increased use of renewable energy sources and technology, including generation facilities connected to the distribution system;
  - ❑ (b) expanding opportunities to provide demand response, price information and load control to electricity customers;
  - ❑ (c) accommodating the use of emerging, innovative and energy-saving technologies and system control applications; or
  - ❑ (d) supporting other objectives that may be prescribed by regulation.
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## British Columbia

- BC Energy Plan 2007
    - Achieving electricity self-sufficiency by 2016
    - Offsetting 50% of new electricity needs through conservation by 2020
  
  - Bill 15 was passed in April 2008 legislating the installation of smart meters across B.C. Hydro by the end of calendar 2012.
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## British Columbia

- ❑ Dec. 2007 – FortisBC applied to BCUC to replace existing meters with AMI meters throughout its service territory, to begin in 2008 and be completed by 2010.
  - ❑ March 2008 – amended application for additional functionality
  - ❑ November 2008 – BCUC denied FortisBC application
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## British Columbia

- ❑ BCUC acknowledged FortisBC's initiative; however, considered application incomplete and premature.
  - ❑ FortisBC encouraged to explore coordinating meter technology selection with BC Hydro
  - ❑ Risk of exposure to unknown future costs outweighs value of savings of current project.
  - ❑ Insufficient evidence with respect to life expectancy of meters & infrastructure.
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## Alberta

- Energy Strategy 2008 – wise energy use and support upgrades to the electricity system
  - Goal – Home Area Network
  - AUC participating in initial technical work towards a smart grid program.
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# Québec

- ❑ Government has doubled the annual target for energy savings
  - ❑ Hydro-Québec undertaking smart meter pilot projects
  - ❑ Special rates for consumers using dual energy (since around 80% of homes are heated by electricity)
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# Nova Scotia

## 2009 Energy Strategy

- Help the UARB identify policy tools to reduce demand
  - Encourage small scale producers of green electricity
  - Support smart meter pilot projects
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- In general, governments set policy and regulators work within the policy
  - Experience in Canada suggests that this is the case for smart meters/  
smart grids
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## Possible regulatory issues:

- Operational savings\*
- Resource cost savings\*
- Service improvements\*
- Useful life of equipment
- Use of proprietary technology/software
- Coordination among utilities
- Provision of service – utility vs other entities
- Reasonableness of rates

\* for a discussion of these, see “Advanced Metering Infrastructure: What Regulators Need to Know About Its Value to Residential Customers”, Nancy Brockway, NRRRI paper, February 13, 2008

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## Current coordination initiatives

- NEB-FERC MOU in existence for several years
  - US-Canada coordination within NERC
  - Wholesale and RTO level coordination
  - Within Canada, CAMPUT provides information generation and exchange
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## Potential coordination initiatives

- CAMPUT available to undertake more coordination (within CAMPUT) if members desire it
  - FERC/NARUC Collaborative on Smart Grid
  - Increasing interest in NARUC and CAMPUT working together
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[www.camput.org](http://www.camput.org)

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