

Charting a Course to Energy Independence

Providence, RI
August 9-12, 2009

Sustainability and Greening Initiatives for Canadian Federal Buildings





Outline

- 1) Canadian Government's Budget 2009 investments in federal buildings
- 2) Canadian federal climate change commitments, past and present
- 3) Structure of Canadian departmental responsibilities
- 4) Public Works and Government Services Canada's Office of Greening Government Operations
- 5) Canadian Federal Sustainable Development Strategy
- 6) Natural Resources Canada's programs
 - 1) ecoACTION programs
 - 2) Federal Buildings Initiative
- 7) Wrap-up: Near term focus of Canadian federal building sustainability efforts



1) Canadian Government's Budget 2009 Investments in federal buildings

- Under Canada's Budget 2009 Economic Action Plan, \$12 Billion targeted for federal infrastructure funding
- Total of \$760 million targeted for federal buildings:
 - \$323 million to restore federal buildings
 - \$250 million for deferred maintenance at federal laboratories
 - \$237 million for various research facilities, and building expansions and improvements (including border facility upgrades)



2) Past Canadian climate change commitments

“Federal House in Order” Initiative: 2001-2006 - Canadian government’s response to 1997 Kyoto Protocol

- ‘Leadership’ program aimed at reducing emissions in federal facilities
- Target: 31% below 1990 emission levels by 2010
- Efficiency improvements to buildings and green power purchases
- Improvements funded from existing reference (budget) levels
- Some funding for green power purchases, demonstration projects and data collection
- Results: achieved 28% below 1990 by 2004/05



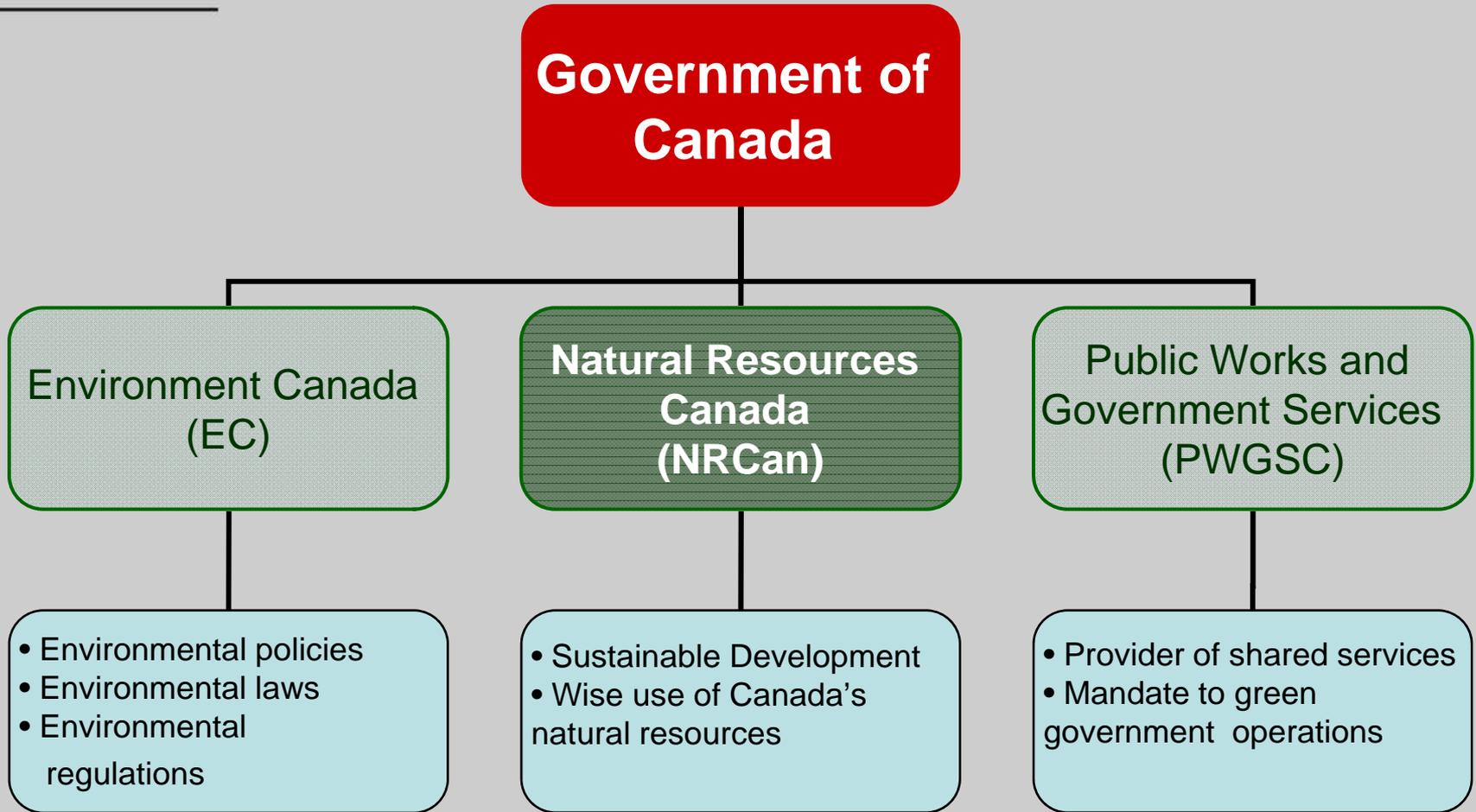
2) Current Canadian climate change commitment

“Turning the Corner” – 2006/07

- 20% below 2006 emission levels by 2020
- Canadian ecoACTION Plan



3) Structure of Canadian departmental sustainability responsibilities





4) PWGSC's

Office of Greening Government Operations

- The Office of Greening Government Operations (OGGO) provides policy leadership on environmental issues for PWGSC operations
- PWGSC, represented by OGGO, leads greening operations across the federal government. Key issues include:
 - green procurement
 - sustainable buildings
 - electronic waste



4) Greening Government Operations: Sustainable Office Buildings

- New federal office buildings required to meet LEED Gold level
- Renovations of existing office buildings required to meet LEED Silver level
- All existing federal office buildings (approximately 375) to be assessed under the BOMA BESt program by March 2010



4) Sustainable Office Buildings Example: PWGSC's Greenstone Building, constructed 2005



- 4 storey, federal office building in Yellowknife, North West Territories
- LEED Gold Certification in 2007

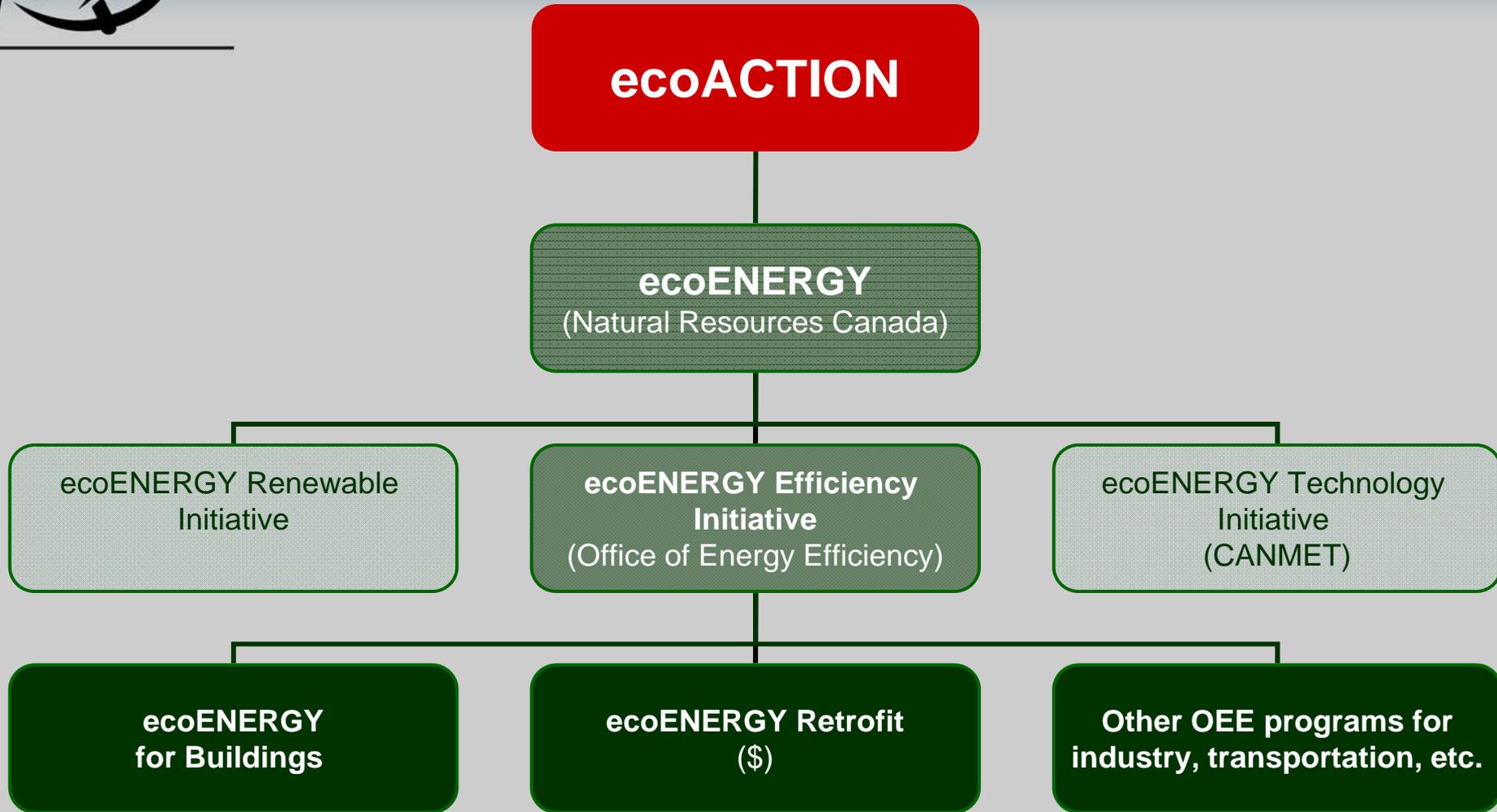


5) Canadian Federal Sustainable Development Strategy

- First Federal Sustainable Development Strategy to be tabled in Canadian Parliament no later than June 2010.
- All major departments & agencies must table Sustainable Development Strategies in Parliament every three years.



6) NRCan's ecoACTION programs





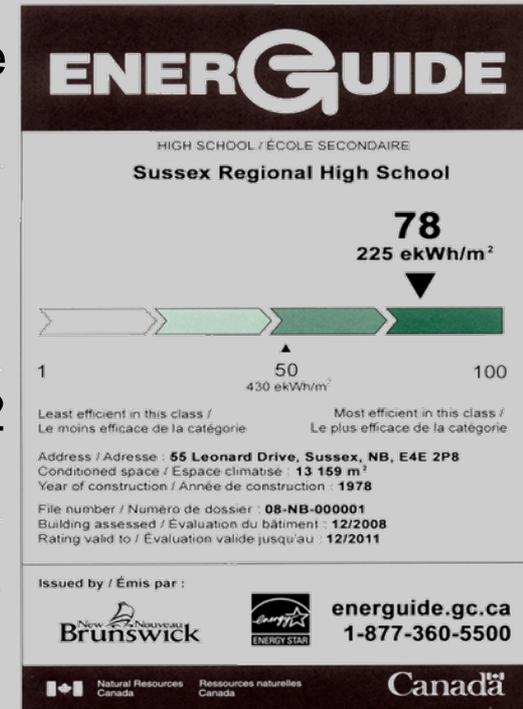
6) ecoAction Tools for Green Buildings

- Structure the environment
 - Codes – equipment, lighting standards, Model National Energy Code update
 - Labelling system for buildings
- Information
- Publications, newsletters
- Training
 - Dollars to \$ense, Building optimization
- Services
 - Validation of new building design
- Financial
 - Retrofit incentive for (non-federal) small, medium buildings



6) ecoAction Tools: Buildings Codes, Labeling and Building Optimization

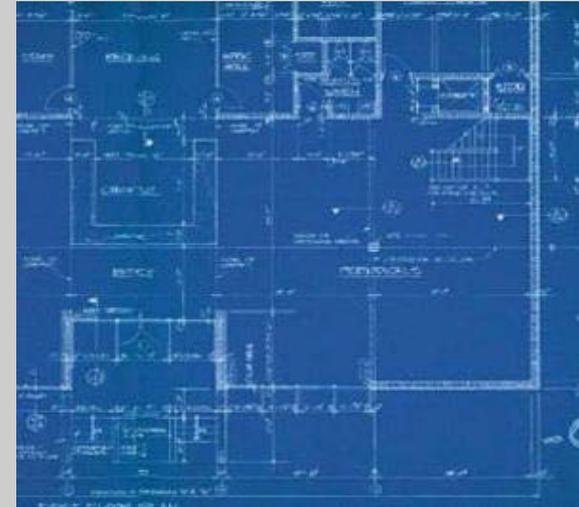
- Building Codes:
 - Updating the Model National Energy Code for Buildings (MNECB)
- Energy Labelling/Benchmarking/Rating:
 - Pilot projects for new energy rating and labelling system
 - Proposed roll out of rating system by 2012
- Building Optimization Initiative





6) ecoAction Tools: Validation of Building Design

- ☐ Confirms design performance is at least 25 percent better than 1997 MNECB requirement
- ☐ Shows compliance with utility incentive programs or provincial, territorial and/or municipal requirements
- ☐ Satisfies LEED Canada New Construction energy efficiency prerequisite
- ☐ Developing building energy simulation tool, CanQUEST





6) NRCan's Federal Buildings Initiative

- Program existing since early 90's to support retrofits of Canadian federal buildings
- Federal organizations authorized to use private sector funding (Energy Performance Contracting – “EPC”) to finance improvements
- Natural Resources Canada provides ‘services’ to assist organizations
- Monthly savings in utility (energy & water) costs pay for project costs
- The contractor (or energy service company – “ESCO”) typically guarantees savings stream
- Client organizations retain efficiency investments and future energy savings



6) FBI Program Results to date

- Approximately 90 comprehensive federal EPC projects since 1991
- Attracted \$320 million of private sector investments
- \$43 million in annual energy savings
- 285 kilotonnes per year of greenhouse gas (GHG) reductions
- On average projects demonstrate 15 - 20% energy savings
- More than 1/3 of federally-owned floor area addressed by Program



6) The FBI: What do we do?

- 'Pre-qualify' Energy Services Companies
- Promote to prospective federal clients
- Assess potential opportunities within federal organizations
- Provide model request for proposal (RFP) & contract documents; and assist in customizing to clients' needs
- Assist clients in evaluating proposals received
- Arrange for training needs assessment of organization
- Provide advice on contract negotiations & project follow-up



6) The FBI: Qualified Bidders

List June 2009

- ☐ Ameresco Canada Inc.
- ☐ Direct Energy Business Services Limited
- ☐ Ecosystem
- ☐ Honeywell Limited
- ☐ Johnson Controls L.P.
- ☐ MCW Custom Energy Solutions Ltd.
- ☐ Optimira Energy
- ☐ Siemens Building Technologies Ltd.
- ☐ Wabco Standard Trane Co.



7) Wrap-up: Near term focus of Canadian federal building sustainability efforts

Federal Infrastructure Funding

- Sustainability efforts focused on deferred maintenance of labs and general building upgrade

ecoAction

- Continue to develop ecoAction tools for Green Buildings, including building optimization training
- New energy rating and labelling system for buildings
- New Commissioning/Recommissioning initiative

Federal Buildings Initiative

- Implementing a new Marketing Plan
- Developing new tools and approaches to stimulate FBI projects.
- Supporting federal efforts to resume and improve GHG tracking



FBI Program Website and Buildings Division Contact Info

- <http://oee.nrcan.gc.ca/communities-government/buildings/federal/federal-buildings-initiative.cfm>
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