

Overview of BC Hydro's Support on Energy Efficiency Codes & Standards

presented to
BC Building Envelope Council

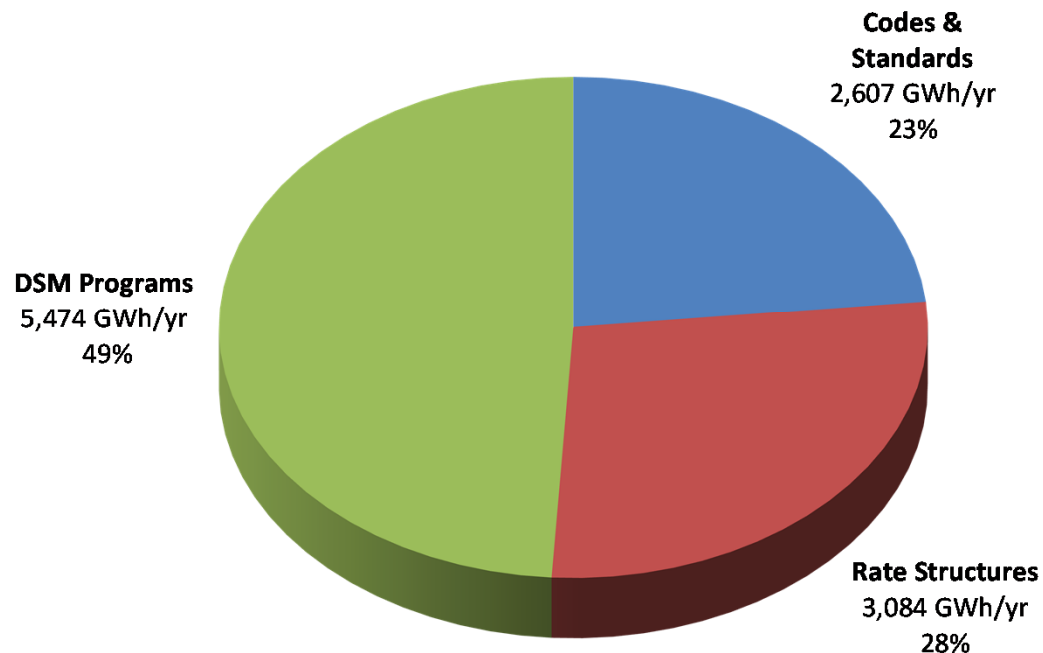
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BC Hydro's DSM Savings Target

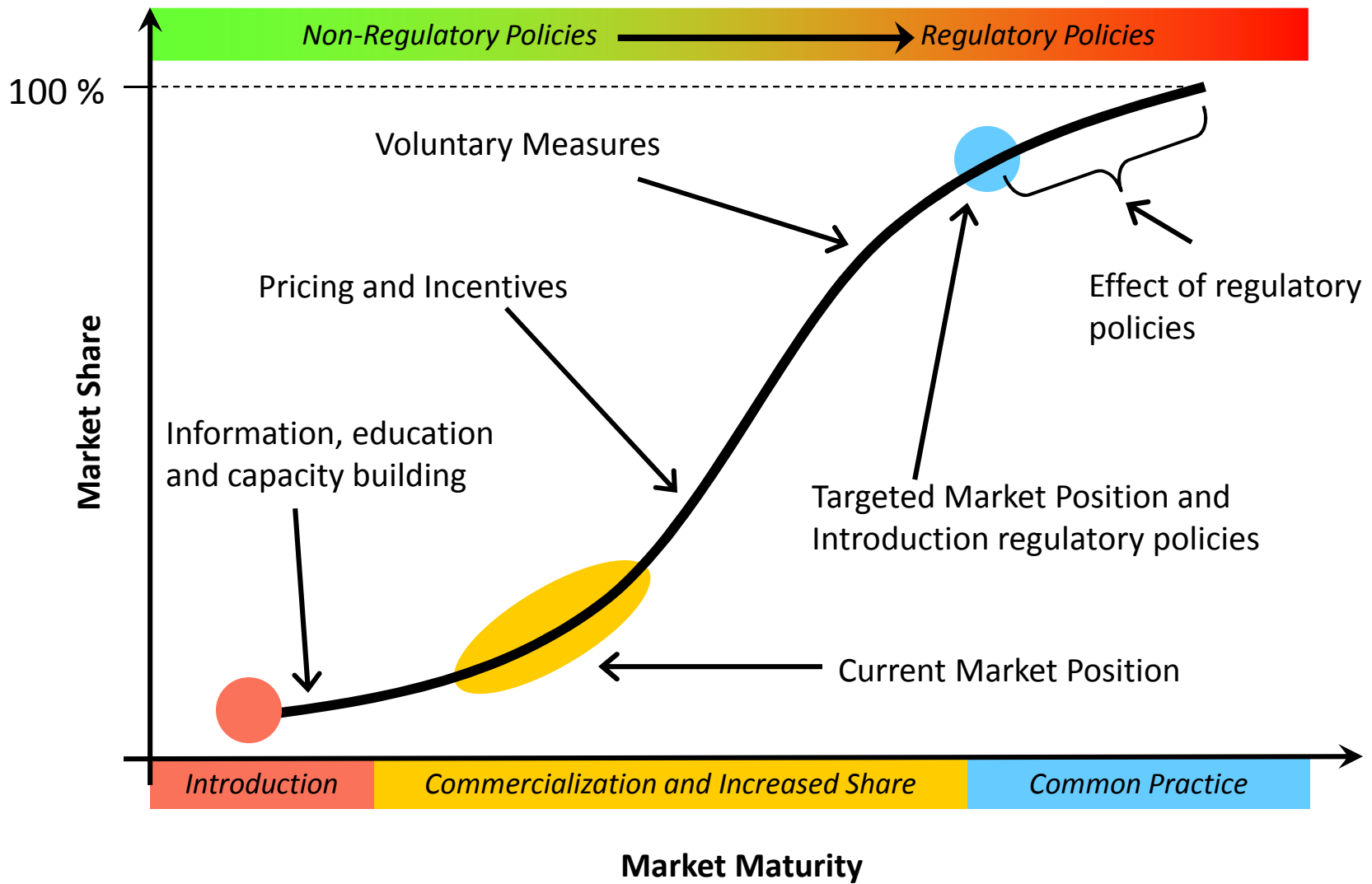
- In 2007, the BC Energy Plan mandated BC Hydro to meet 50% of the future load growth by DSM in 2020
- The 2010 Clean Energy Act mandates BC Hydro to save at least 66% of new load through DSM

F2020 DSM Energy Savings



Information from BC Hydro's amended RRA F12-14 filed with BCUC in 2012

Market Transformation Approach to advancing government policies



- Research and advocate the adoption of cost-effective energy efficiency (ee) policies, codes and standards
- Identify and propose potential ee regulatory opportunities to governments
- Provide technical and funding support for the development and implementation of ee standards and policies
- Partner with key stakeholders to support governments to adopt cost-effective ee policies
- Ensure alignment and co-ordination with BC Hydro DSM programs to support regulations

Estimated Electrical C&S Savings from Enacted Codes and Regulations

Enacted Codes & Regulations

- BC Building Code updated in 2008
- CoV Building By-law updated in 2008
- Federal Amendment 10 in 2008
- Federal Amendment 11 in 2011
- Federal Amendment 12 in 2011
- Provincial Amendment 2 in 2008
- Provincial Amendment 3 in 2009
- Provincial Amendment 4 in 2011

Total Estimated Savings: 2,000 GWh/yr in F20

Residential Battery Chargers



~145 GWh/y by F20

Major Household Appliances

~185 GWh/y by F20





General Fluorescent Lamps



Incandescent Reflector Lamps



Packaged Terminal A/C



Mercury Vapour Ballasts

- **New Product Regulations**

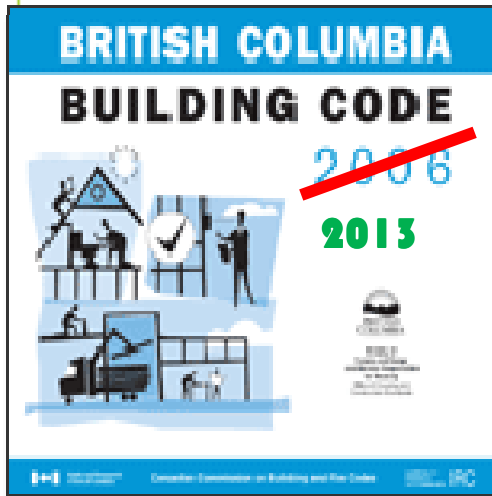
- BC EE Act:
 - Amendment 5
- Federal EE Act:
 - Amendment 13

- **Product regulation compliance:**

- Monitor and report compliance rates

- **CSA Standards**

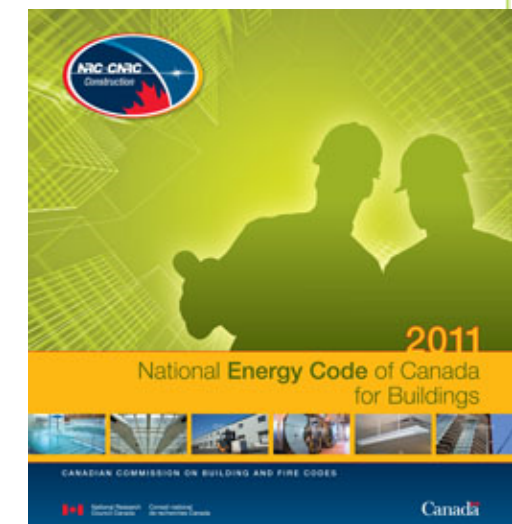
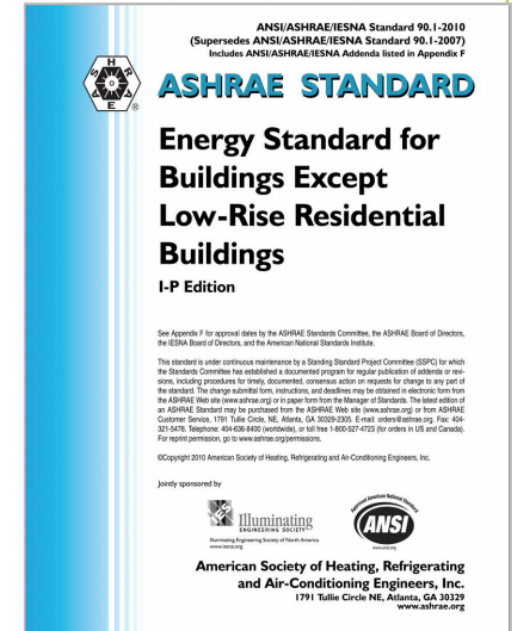
- Participate in about 30 active standard development committees;
- Research and identify new technologies / products for future standards;
- Updates existing / outdated standards as needed



**Part 3 Buildings:
ASHRAE 90.1-2010 or
NECB 2011**
Effective Dec 20, 2013 (BC);
Jan 21, 2014 (Vancouver)

**Residential/Non-Residential
(Part 9):**
Effective Dec 19, 2014 (BC);
March 1, 2014 (Vancouver)

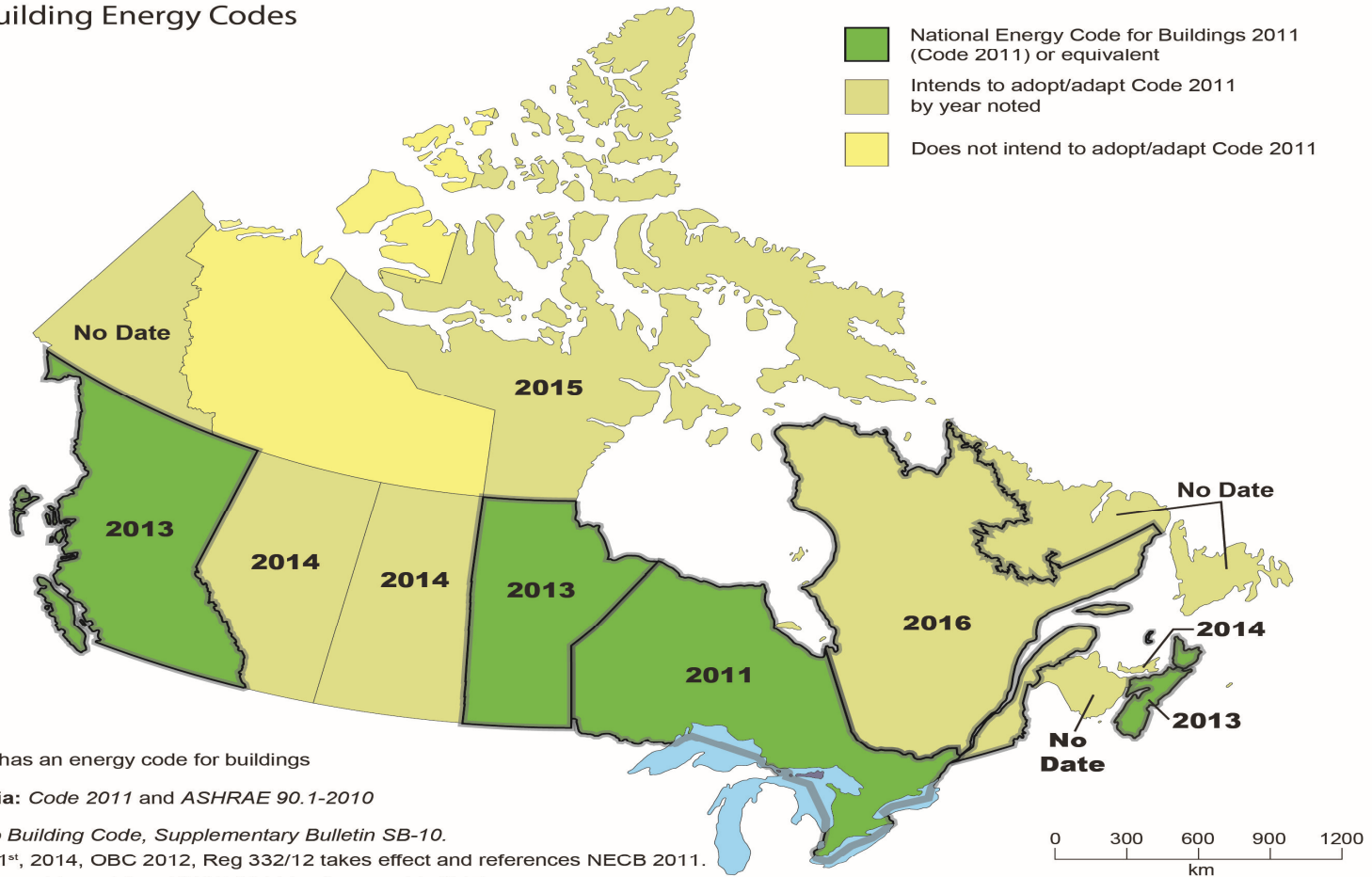
Total estimated energy
impact in 2020:
115 GWh/y



NECB 2011 Adoption Map

Status of Building Energy Codes in Canada

June 2014



— Currently has an energy code for buildings

British-Columbia: Code 2011 and ASHRAE 90.1-2010

Ontario: Ontario Building Code, Supplementary Bulletin SB-10.

As of January 1st, 2014, OBC 2012, Reg 332/12 takes effect and references NECB 2011.

Will be 13% more stringent than NECB 2011 by January 1st, 2017.

Quebec: Regulation respecting energy conservation in new buildings

Estimated Energy Efficiency Improvements:

- ASHRAE 90.1-2010 vs. 2004 – approx. 18%;
- NECB 2011 vs. ASHRAE 90.1-2004 – approx. 20%.

Code Compliance Impact:

- BC Hydro Evaluation Report 2009 – min. compliance of 63% (a conservative estimate for houses)
- Prompted BC Hydro's interest in supporting code compliance enhancement

- **Building Energy Codes Training for Part 3 and Part 9 Buildings:**
 - The BC Building Code;
 - City of Vancouver Building By-law;
- **Outcome-based Code (OBC):**
 - Support development of OBC
- **National Building Energy Codes:**
 - Support the development of the future NECB code updates (NECB 2015 and potential interim code in 2016/17)
- **Code Compliance Enhancement:**
 - Professional Practice Guides
 - Compliance assurance and check-lists

Questions?

BChydro 

