



How to accelerate energy efficiency in BC's buildings: new report

British Columbia could significantly speed up progress on achieving energy-efficient buildings and homes by adopting the more stringent approaches used by the “green leader” states of California (CA) and Massachusetts (MA), according to research out today from the University of Victoria-led Pacific Institute for Climate Solutions (PICS).

Buildings account for 29 per cent of energy used in BC and about 12 per cent of GHG emissions.

The report – *Accelerating Energy Efficiency in BC's Built Environment – Lessons from Massachusetts and California* is the latest white paper from PICS, a collaboration of BC's research-intensive universities. [Click here](#) to read the report, which compares the policy framework for advancing building energy efficiency in BC with MA and CA—which respectively rank number one and two for energy efficiency by the American Council for an Energy Efficient Economy.

The report found many policy similarities between the three jurisdictions including ambitious legislated greenhouse gas (GHG) emission reduction goals, a commitment to achieve super-efficient or zero net energy buildings through retrofits or construction, specific energy intensity targets for buildings, and a requirement that energy utilities use measures such as incentives and education to encourage consumers to use less energy, rather than simply increasing supply.

However, the report author Tom Berkhout says while MA and CA are successfully achieving a sustained market transformation toward super energy-efficient buildings, BC is lagging behind.

“BC has no procedures in place to regularly track and publicly report on its progress, while both states have monitoring, oversight and public accountability conducted by the utilities themselves and by outside agencies and stakeholders,” he says. “These states also have climate policies that specify the amount of carbon reduction that will come from making buildings energy efficient, therefore reinforcing the accountability of these watchdogs to ensure this process keeps moving forward.”

Berkhout says BC's 2008 Energy Efficient Buildings Strategy was a good start, but believes a lack of follow-up reporting and the sharp decline in programs to support the strategy has rendered it inert. He says MA and CA are now achieving energy bill savings for customers, despite rate increases, due to their more efficient buildings, and BC should use their model as a template.

Other factors cited for the states' success include the updating of building code energy efficiency standards every three years, not every five like in BC; subsidized whole-building energy audit and incentive programs; and “stretch building codes” that allow municipalities to adopt greater efficiency measures than the standard building code. Currently only the City of Vancouver has this option in BC.

The report offers **five** sets of recommendations to accelerate a building sector transformation in BC.

1. Revisit and expand the existing BC-wide energy efficiency vision for the built environment.

2. Create multiple institutional triggers to ensure that energy efficiency objectives are kept on track.
3. Appoint an expert, permanent and broad stakeholder representative Energy Efficiency Advisory Council to work with the province to develop, implement and ensure the delivery of an ambitious 20-year building energy efficiency strategy.
4. Empower local communities via legislative changes to become niches for super-efficient buildings.
5. Establish a transparent, deliberative process for setting utility energy savings targets that align with the province’s mitigation and market transformation goals.

Editors note: See below for an at-a-glance comparison of BC, MA and CA climate and energy policies, building energy performance standards, and utility-led energy efficiency programs.

Stay tuned for two additional new PICS reports in June on reducing the carbon intensity of BC’s buildings.

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PICS is hosted and led by the University of Victoria in collaboration with the University of British Columbia, Simon Fraser University and the University of Northern British Columbia.

BACKGROUND:

At-a-glance comparisons of policy impacting building energy efficiency in BC, CA and MA

Comparison of building energy performance standards

Energy efficiency building standards	BC	MA	CA
Adopted energy efficiency requirements for new buildings	✓	✓	✓
Energy efficiency building codes are required to be among the most stringent in their country	✓	✓	✓
Energy efficiency building codes must be updated every three to five years.	✓	✓	✓
The stated market transformation objective is to standardize net-zero energy buildings		✓	✓
Beyond-code energy efficiency is explicitly required for all state-owned buildings		✓	✓
Local governments are permitted to adopt standardized “stretch” energy efficiency building requirements		✓	✓

Comparison of jurisdiction-wide climate and energy efficiency policies.

Jurisdiction-wide climate change & energy efficiency objectives	BC	MA	CA
Ambitious, legislated jurisdiction-wide greenhouse gas reduction targets for 2020 and 2050.	✓	✓	✓
Specific renewable energy requirements	✓	✓	✓
Climate plan includes specific amounts of GHG reductions to come from energy efficiency measures.		✓	✓
Jurisdiction-wide energy efficiency strategic plan developed and updated regularly.		✓	✓
Energy efficiency measures of state-wide GHG plans formally overseen by a blend of government interests and public utilities commission processes.		✓	✓

Comparison of utility-administered energy efficiency programs

Utility administered energy efficiency programs	BC	MA	CA
The vast majority of energy efficiency programs are administered by energy utilities.	✓	✓	✓
Utility energy efficiency plans are required to be updated on a regular basis	✓	✓	✓
Utility supply and demand revenues are decoupled	✓	✓	✓
Utilities are legislated to pursue all cost-effective energy efficiency	✓	✓	✓
Energy efficiency is legislated to be the first priority for fulfilling a projected energy supply gap.	✓	✓	✓
Broad public benefits are attributed to energy efficiency	✓	✓	✓
Special rules exist for demand-side measures (e.g., education, training, technology innovation, and codes and standards research) that indirectly support the goals of reducing building energy intensity.	✓	✓	✓
An independent efficiency potential study is conducted every planning cycle by a non-utility interest		✓	✓
The amount of “all cost-effective” energy efficiency that utilities are required to pursue is established through deliberative transparent public processes which are in part focused on achieving state-wide market transformation objectives		✓	✓
A portion of energy efficiency resources is used to support the ongoing development of state-wide energy efficiency plans.		✓	✓
Jurisdiction-wide utility programs are coordinated with “stretch” requirements to incent adoption		✓	✓
A utility-funded and jurisdiction-wide, whole-home audit and incentive program for existing buildings.		✓	✓
Multi-year commitments made to pilot projects to give local markets time to mature (e.g., financing, building labelling)		✓	✓
The use of rate-payer funded DSM to pursue non-utility, public-benefits is generally supported.		✓	✓