ICBC GHG Operational Emissions Reductions

Jason Scultety
Manager, Energy Programs
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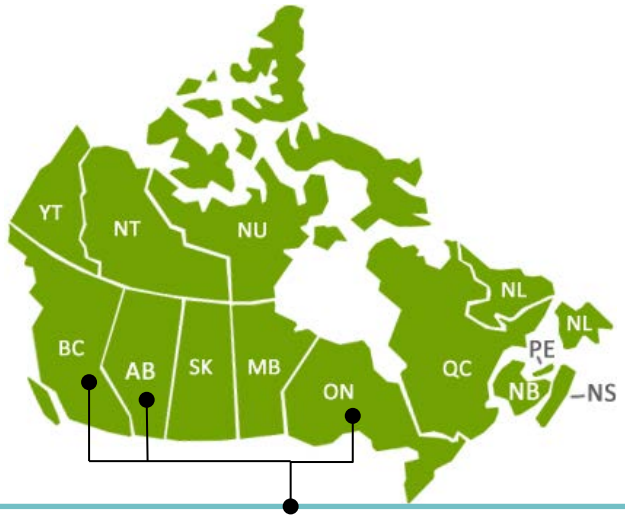
2015 CANADA'S GREENEST EMPLOYERS

2014 POWER SMART LEADER | BC hydro powersmart

ICBC GHG Emission Sources



ICBC Operations Footprint

~100 Facilities Claim Centres, Drivers Licensing, Offices, Salvage

Paper

Fleet Vehicles

2014: 4,514tCO_2e

ICBC Investment Properties Footprint

Mix of retail, industrial, office real estate

2014: 17,952tCO_2e

Operational Carbon Footprint

Our Commitment: Cut our greenhouse gas emissions by 33% by 2020.

	Electricity	Fleet	Paper	Natural gas	
2014 GHG (tCO_2e)	194	527	964	2829	**4514**
2014 v 2007	-479	-655	-381	-540	**-2055**
2014 v 2007	-71%	-55%	-28%	-16%	**-31%**

Fleet and Natural Gas – largest reductions since 2007

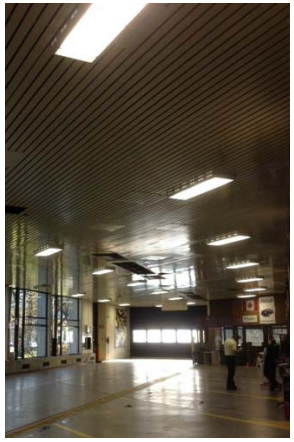
Collaboration and Leadership

- Environmental Sustainability Team
- Executive Environment Committee
- Partnerships with BC Hydro and FortisBC
- Collaboration with Facilities Teams and other departments
- BC Hydro Workplace Conservation Awareness (WCA)
- External recognition

Electricity Reductions

Electricity	2007	2014	Reduction
Consumption (GWh)	30GWh	20GWh	-34%
Intensity (kWh/m^2)	223	145	-35%

- +60 lighting and lighting controls projects in last 5 years
- Projects are evaluated for reduction opportunities beyond replacement technology
- Incentive funds are re-invested in ECMs only
- Other measures include HVAC controls, speed drives, IT upgrades



Natural Gas Reductions

Electricity	2007	2014	Reduction
Consumption (GJ)	67,000	57,000	-15%
Intensity (GJ/m^2)	0.49	0.41	-20%

- 14 boiler replacements in last three years
- Head Office heat recovery chiller and solar thermal systems
- Destratification fans
- Other measures include HVAC controls, IR heater improvements

Building Controls

Employees play a role in ICBC's green progress

Nov 12, 2013 | Dawkins, Fred

Year over year, ICBC continues to make progress on our carbon reduction targets.

It's a process driven mainly by the Environmental Sustainability and Facilities teams, through building retrofits and new technology. But individual employees across the company have also been contributing their energy and ideas to help reduce our carbon footprint.

As detailed in our annual Carbon Neutral Report (pdf), ICBC is halfway to our goal of reducing carbon emissions from operations by 33% (from 2007 levels) by 2020. As of last year our emissions were down by 16%.

Facilities Ops Technician Bill Coles at "climate control central" in Victoria

"Along with meeting our corporate commitment to being environmentally responsible, reducing our emissions also helps reduce our operating costs," points out Andrea Price, Manager Environmental Sustainability. "I'm grateful for the degree of engagement by ICBC employees who are helping in all kinds of ways to reduce our environmental impact.

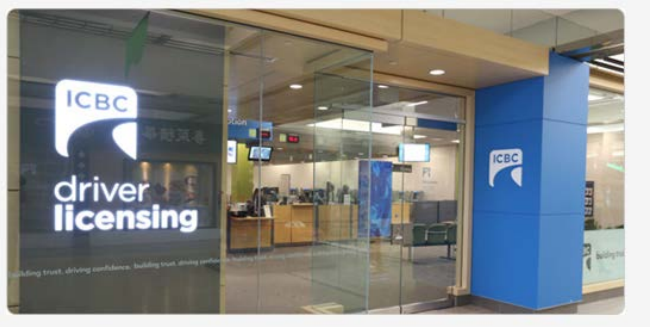
"Since 2008 we have received more than 1,400 employee suggestions," she adds "We track these and do our best to make them happen."

Figure 1: ICBC ground floor with zooning information.

- Majority of facilities have now been upgraded to our standard controls package.
- Commissioning of these systems identified many equipment inefficiencies that were resolved.
- Next phase: optimization

LEED Gold Major Renovations / Tenant Improvements

Certification Requirement
LEED Commercial Interiors (CI) Gold Certification required *Renovations must include all minimum program requirements within the LEED Green Building Rating System for New Construction or Commercial Interiors.*



- First project – Richmond Driver Licensing Office (Lansdowne Mall)
- De-coupled from mall systems to remove natural gas heating and replaced with high-efficiency VRF HRV system
- LED lighting, compliant office materials, low-flow water fixtures
- Educational display for customers
- Certification pending

Conservation Pays

Exterior lighting –LED
Building controls (DDC)
Destratrification fans (estimating bay)

Combined:
NPV $170K
2020 cumulative savings of ~$250K

Now LED Office lighting (Dec 2015)

Our total cumulative savings from projects implemented to date will be $2.4M by 2020.

What's Next?

- Natural gas will be our priority for future GHG reductions
- Electricity will be our priority for future operational cost reductions
- Paper – reductions through print management solutions and new technology platforms.
- Fleet – minor reductions, exploring adjustment of vehicle standards
- Exploring opportunities with ICBC partners to reduce provincial emissions and improve sustainability.

Thank You!

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