

BC Hydro: Fleet Greening Strategy

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Presented By:

Steve Boyle

BC Hydro 

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Overview

The purpose of this presentation is to provide a summary of BC Hydro's Fleet Greening strategy and the key steps in its development.

1. Analysis:

- Carbon Neutral program
- Define fleet emission sources

2. Strategy Evaluation:

- Develop and evaluate strategies
- Define the costs and benefits of strategies

3. BC Hydro's Fleet Greening Strategy Overview:

- Outline Fleet Greening strategy
- Highlight new vehicle technologies



BC Hydro's Carbon Neutral Commitment

As a Crown Corporation BC Hydro is required to become carbon neutral starting in 2010. As part of the carbon neutral program BC Hydro is required to actively seek emission reductions and purchase offsets.

The carbon neutral program includes GHG emissions produced by:

- The vehicle fleet
- Heating, cooling and lighting our buildings
- Paper use

BC Hydro is committed to first reducing emissions wherever it makes sound business sense and then purchasing high-quality offsets from the Pacific Carbon Trust, currently \$25/tonne.

In F10 Carbon Neutral program GHG emissions were 30,000 tonnes.

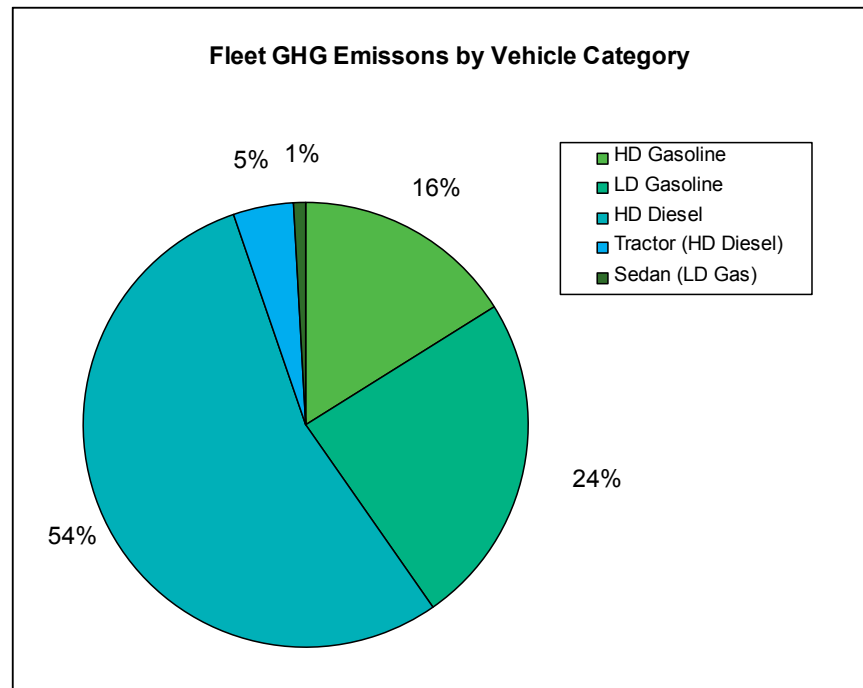
Fleet is the largest contributor to Carbon Neutral program emissions accounting for 23,000 tonnes.



Analysis of Fleet Emissions













As a first step to developing a Fleet Greening Strategy, BC Hydro performed analysis of its vehicle fleet to gain a better understanding of the source of GHG emissions.

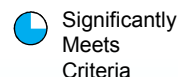
- Over 70% of fleet emissions are generated by our Heavy Duty Gasoline and Diesel trucks
- Twelve tractor units account for 5% of the total emissions
- Only 1% of emissions are generated by sedans



Fleet Greening Strategy Comparison

Several strategies were analyzed in order to evaluate emission reductions and costs. BC Hydro is pursuing a strategy which results in a reduction of our fleet emissions and demonstrates BC Hydro's ongoing commitment towards leadership and environmental sustainability.

	Business as Usual	Behaviour Change & Biodiesel (B20)	Add New Technology	Add Aggressive New Tech.
Projected F20 Initiative Savings	n/a	6%	12%	18%
Estimated 10 yr Financial Impact	\$XX	\$XX	\$XX	-\$XX
Leadership				
Learning				
Engagement				



Fleet Greening Strategy Summary

BC Hydro's Fleet Greening Strategy adopts the following approach supported by continuous monitoring of results and new technology developments.

1. **Support Business Groups for Work Planning:**
 - Encourage teleconferencing, carpooling, and route optimization
2. **Idle-free and Driver Training Programs:**
 - Support with equipment such as cab-heaters, telematics
3. **Improve Fleet Efficiency:**
 - Continue to replace vehicles with newer, more efficient models
 - Right sizing where possible
4. **Biodiesel (B20) Implementation:**
 - Limited by manufacturers warranty coverage
5. **Deploy New Technology Vehicles:**
 - Place hybrid vehicles where appropriate
 - Evaluate new technologies, Electric Vehicles (EV's), Plug-in Electric Vehicles (PHEV's)



New Technology Vehicles

BC Hydro has worked to incorporate new vehicle technologies where appropriate for fleet operations. Monitoring results, evaluating performance and soliciting driver feedback are required to optimize results.



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Hybrid Line Truck:

- In service: January 2009
- International DuraStarHybrid equipped with an Altec TA41 Aerial Device
- 2nd truck to enter service early in 2011

BCH Results:

- Fuel consumption reduction
- Reduced noise pollution with Electronic Power Take-Off (EPTO)
- Has different driving feel

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Plugin Prius:

- 3 vehicles in service: Spring 2009
- Converted to PHEV
- 15 vehicle pilot program with the Provincial Government and City of Vancouver

BCH Results:

- Vehicles capable of consistently achieving 3.0 l/100km (90+ mpg)
- Driver behaviour and use very influential on performance



New Technology Vehicles

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Mitsubishi iMiev:

- 2 vehicles in service: November 2009
- Fully Electric Vehicle (EV)
- Capable of highway speeds
- 120 km range
- Capable of Level 1, 2 and 3 charging

BCH Results:

- Insight into internal charging infrastructure
- Placement within fleet will be key
- Has turned EV skeptics into supporters

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EPRI Trouble Truck:

- 2 vehicles in service: Summer 2011
- Ford F550 chassis converted to PHEV with Eaton Powertrain and Altec AT-37 aerial
- Capable of upto 5 hours e-PTO operation
- 15 km's EV range
- Level 1 and 2 charging

BCH Results:

- Take learnings from Hybrid Line truck and PHEV Prius to place vehicle in fleet effectively



Questions?

Steve Boyle
Engineer, Fleet Services
BC Hydro
604-590-8951
Steve.Boyle@bchydro.com

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SAVE THE ENVIRONMENT

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