

# Smart Grid Innovation in BC

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## Who is BC Hydro?



- Crown Corporation
- 1.8 Million Customers
- 51,000 GWh Domestic Load
- 11,300 MW Generation
- Serve 95% of British Columbia
- Triple Bottom Line Performance



## The BC Energy Plan

A Vision for Clean Energy Leadership

***The BC Energy Plan of 2007 provided the foundational direction for our Smart Grid Strategy.***

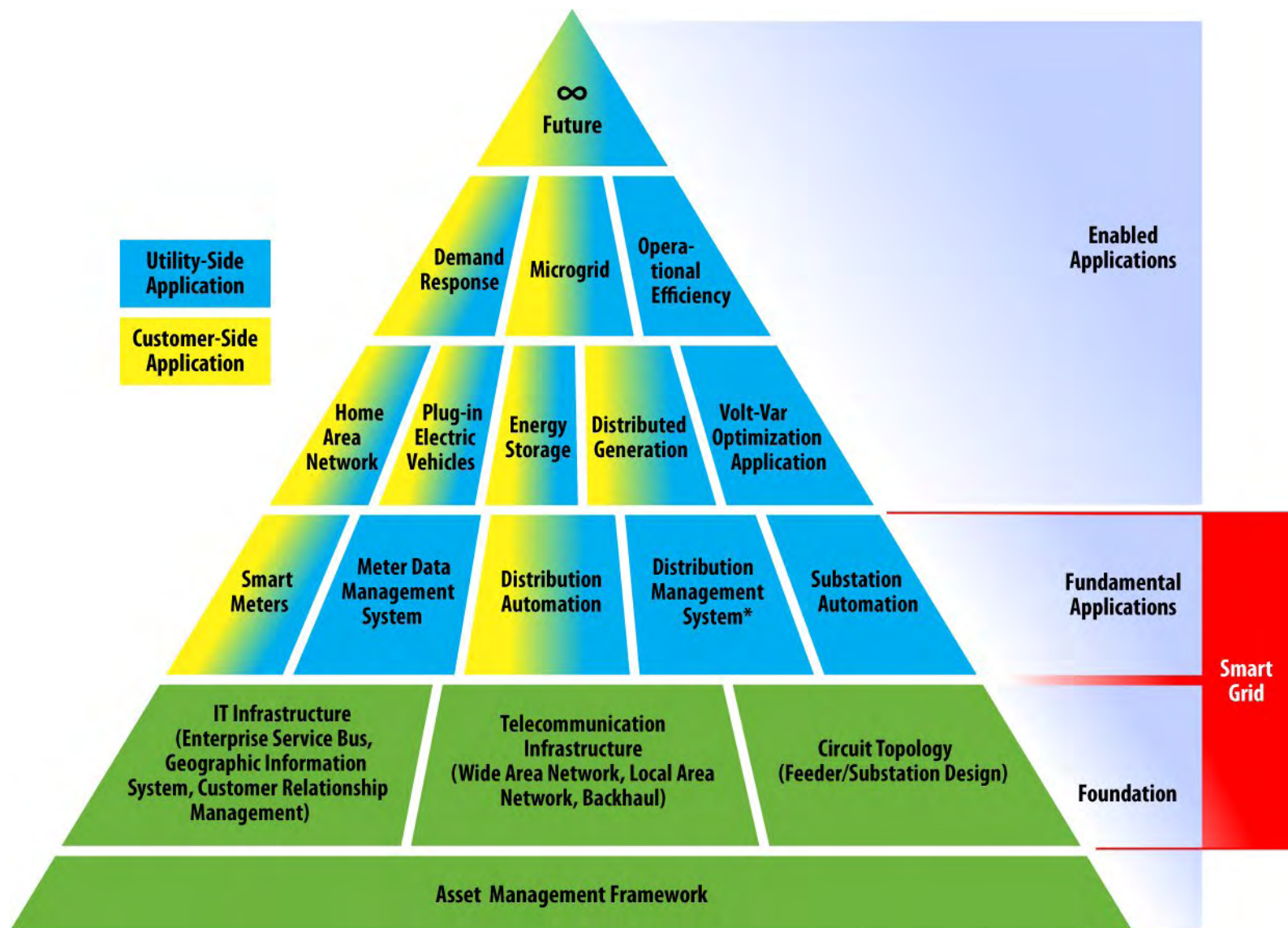
- Achieve energy self sufficiency by 2016
- All new electric generation will be net zero GHG or will offset GHG emissions
- 50% of incremental resource needs through conservation by 2020 (10,000 GWh)
- Smart Meters to support conservation
- Net metering to allow customers to sell power back to the utility
- Standing offer for green power up 10MW

***The Clean Energy Act Of 2010 strengthened the BC Energy goals !***

- Increase conservation target from 50% to 66% by 2020
- Increased renewable electricity generation target of 93%; FiT
- A commitment to BC Hydro's Smart Metering and Smart Grid Programs



# BC Hydro's Smart Grid Framework



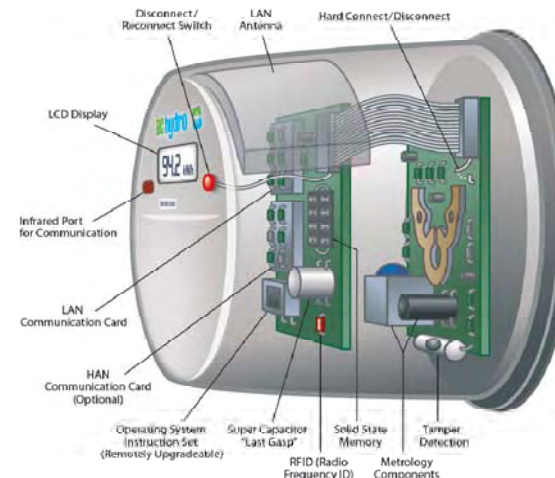
\*includes Energy Management System

# Smart Grid Programs Underway

- 2010 Olympic Venues
  - Smart Metering Program
  - Distribution Management System (DMS)
  - Downtown Vancouver Supply
  - Volt Var Optimization (VVO)
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- Smart Neighborhoods
  - Microgrids
  - Distributed Generation
  - Theft Detection
  - Electric Vehicles
  - Energy Storage

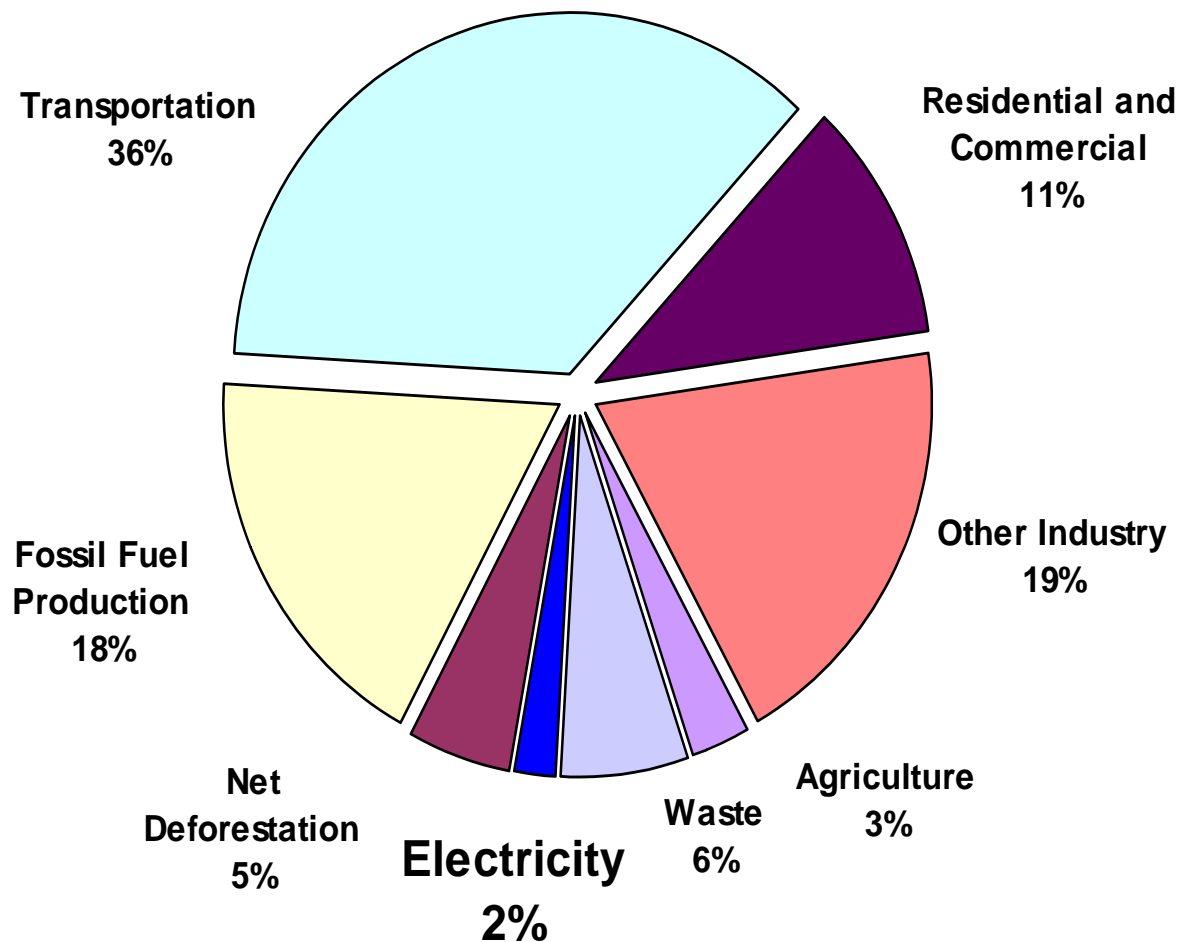


Balls Gap  
Feb 2009



# Electric Vehicle Program

- Low Electricity Price
- High gas prices
- Carbon tax
- Greenest city (Vancouver)





# West Coast Opportunities



- Hydrogen Highway
- Clean Transportation Corridor
- Western Interconnect Synchronphasor Project
- Smart Neighbourhood
- BC Net



# Engaging Consumers

## BCIT Microgrid

- Metering lab, IT centre of excellence, DG, DR, PEV demos etc.



Students at BCIT participated in a two week conservation challenge using smart meters. BC Hydro will use this information to better understand the ability to motivate customers to use their smart meters.

