

Seattle City Light Greenhouse Gas Inventory

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Overview

- Why do an inventory?
- How we did it
- Challenges
- Results
- Reductions and Offsets

Why do an Inventory?

- To reduce our emissions
- To meet our environmental commitments
- To meet policy direction from the Mayor and City Council
 - Meet all load growth with conservation and renewables
 - Achieve zero net GHG emissions

Process

- Started before there were established registries such as the California Climate Action Registry and The Climate Registry
- Studied protocols developed by NGOs such as WRI and the World Business Council for Sustainable Development
- Convened an Advisory Committee in 2001

Process, Cont.

- Included climate scientists from the UW, technical experts such as ILEA/Tellus, experts on conservation and renewables, climate change organizations, other City Departments
- Prepared strategy based on Committee recommendations
- Had strategy approved by Mayor and City Council

Participation in Registries

- Joined the CA Climate Action Registry in 2006
- Reported 2007 emissions to CCAR
- Close to finishing verification
- City is Founding member of The Climate Registry
- Participating in TCR's Electric Power Sector workgroup

Challenges

- Owned power – hydro
- Sold ownership of Centralia coal plant in 2000
- Wanted to account for all the power that goes into serving SCL’s retail load
- How do handle contract purchase power from BPA?
- Other contracts?
- Market Power purchases?
- Upstream emissions?
- Surplus conditions?

Results

- Emissions are primarily from purchased power
- Other sources are less than 10% of inventory
- Includes vehicle use, natural gas for building heat, airline travel, and SF6 losses
- Made a change in our inventory due to CCAR rules

2005 Greenhouse Gas Inventory

<u>Source</u>	<u>Amount (Metric Tons CO₂e)</u>
Klamath Natural Gas Plant	177,053
Bonneville Power "Block"	52,990
Exchange (SMUD)	0
BC Hydro	3,945
 Transmission and Distribution Losses	 0
 Non-Power (vehicles, building heat, airline travel, SF6)	 6,079
 <u>Stateline Credit</u>	 <u>-16,009</u>
 TOTAL	 224,058

2007 Greenhouse Gas Inventory

<u>Source</u>	<u>Amount (Metric Tons CO2e)</u>
Klamath Natural Gas Plant	0
Bonneville Power "Block"	51,596
Exchange (SMUD)	220
BC Hydro	3,639
Transmission and Distribution Losses	45,482
Non-Power (vehicles, building heat, airline travel, SF6)	6,406
<u>Stateline Credit</u>	<u>-29,867</u>
TOTAL	77,474

Reductions in Emissions

- Conservation first
- Replacing fossil fuel with renewables such as wind

Energy Conservation



Renewables



Offsets

- Encouraged new technologies –
- Worked with Port, EPA, Princess and Holland America to bring shore power to cruise ships
- Supporting plug-in car demonstration project
- Supporting biodiesel in city vehicles, solid waste trucks, metro buses, and state ferries
- Replacement of raw materials with waste materials in cement manufacturing
- Destruction of potent GHG
- Using agricultural methane to generate electricity

Shore Power

Cruise Ship



Cruise Ship Connection



Greenhouse Gas Mitigation








