

CARBON EMISSIONS REDUCTION TASKFORCE

Meeting 2:

*May 15, 2014, Thursday, 10:00 am – (NLT) 1:00 pm
SEIU Healthcare 775 NW
215 Columbia Street, Seattle, WA*

AGENDA

Welcome and Introductions

United Kingdom presentation on emissions trading and market mechanisms

Break

Discussion with UK team

Review of briefing materials

- tools to address emissions from key sectors
- comparing carbon market designs
- foundation for Taskforce deliberations (decision criteria?)

Next meeting: June 24, 10 am, Seattle (location TBA)

- initial policy design options and economic analysis – scope and methods
- information requests/key discussion topics?

Carbon Emissions Reduction Taskforce

Notes from April 29, 2014 Meeting

Introductions and Taskforce Charge. The Governor and the Taskforce members discussed the scope of the group's work. The Governor is asking for recommendations on how to use market mechanisms to achieve the state's greenhouse gas emission limits. The Governor underscored his interest in hearing the conclusions of the Taskforce as a whole, as well as any additional advice from each of the members.

Schedule of Taskforce Meetings. Based on a show hands, there appear to be relatively few conflicts with the proposed meeting dates. As a result, the proposed meeting dates were left unchanged. A doodle poll will be used to identify a date during the week of Nov 17 where most, if not all, of the members could meet with the Governor, for their final meeting.

Taskforce Process. The draft process was reviewed and briefly discussed. No changes were requested.

Background Information. Documents distributed in advance and at the meeting were briefly presented. Suggestions were made for additional information, as noted below.

Comments from Taskforce Members.

1. Provide additional information to define the "core problem:"
 - Which sectors contribute the most to the state's greenhouse gas emissions, after considering all existing (and proposed?) emission reduction policies?
 - What are the top strategies or tools for reducing emissions from transportation, electricity and buildings?
 - The solution to transportation emissions will require more than technology (vehicles, fuels) – it will also require addressing land use. What can we learn from past or other efforts on addressing transportation emissions?
 - What attention does the electricity sector need, considering the separate work being done on emissions from coal-fired power plants?
2. Establish a set of "criteria" for the decisions of the Taskforce.
3. Compile and provide a "library" of relevant reference materials to allow Taskforce members to learn more about past efforts and related programs in other jurisdictions.
4. The recommended program should provide a "just transition" for the workforce.
5. How do we relate to, and help, communities with their immediate problems (e.g., jobs, income, etc.), and engage them in the longer-term challenges (and opportunities) of climate change?
6. Provide information that would be helpful to the broader constituents represented by the Taskforce members.

CARBON EMISSIONS REDUCTION TASKFORCE

MEETING DATES

(Subject to change by Taskforce)

April 29th, 2014	Organization; discuss charge; background information
May 15th	United Kingdom presentation on emissions trading and market mechanisms. Discuss key carbon market design elements
June 24th	Discuss initial policy design options. Discuss scope and methods for economic analysis
July 29th	Discuss preferred policy design options for economic analysis. Discuss baseline scenario
September 9th	Review economic analysis results. Discuss revisions to policy design
October 28th	Discuss draft report on Taskforce recommendations and advice.
Week of Nov. 17	Present final report, recommendations and advice to the Governor

Carbon Emissions Reduction Taskforce

Tools & Strategies for Achieving Reductions in the Transportation, Buildings, and Electricity Emission Source Areas for Washington

The information below provides greater detail on some of the policies, programs, and practices available to Washington to achieve sector-based reductions. This summary is based on the work of the Climate and Legislative Executive Workgroup (CLEW).¹ Results are presented relative to both the gap analysis prepared by the CLEW consultant, and to the emissions forecast data prepared by Ecology, so that CERT members can better understand what policies were accounted for in emissions forecast data and what policies are considered additional.

Building & Electricity Policies

On-site building energy (21% in recent years) and emissions associated with electricity use (20%) contribute significantly to Washington's greenhouse gas emissions. Strategies for reducing emissions in the building and electricity areas broadly fall under the following categories:²

Increased Efficiency of Power Plants and Fuel Switching	Increasing efficiency of existing power plants by using advanced technologies or substituting fuels that combust more efficiently.
Renewable Energy	Using renewable energy sources rather than fossil fuel to generate electricity.
Increased Energy Efficiency (end-use)	Reducing energy demand by increasing efficiency and conservation in homes, businesses, and industry.
Nuclear Energy	Generating electricity from nuclear processes rather than the combustion of fossil fuels.
Carbon Capture Sequestration and Storage (CCS)	Capturing CO ₂ as a by-product of fossil fuel combustion before it enters the atmosphere and then transferring the CO ₂ to a long-term storage area, such as an underground geologic formation.
Refrigeration	Reducing leakage from refrigeration equipment. Using refrigerants with lower Global Warming Potentials.

Existing policies (i.e., those in place already) comprise most of the reductions in this area. The potential new policies that were quantified as part of the CLEW process would contribute relatively small additional reductions:

¹ Leidos, Inc., *Evaluation of Approaches to Reduce Greenhouse Gas Emissions in Washington State –Final Report*, October 14, 2013, Prepared for State of Washington Climate Legislative and Executive Workgroup (CLEW).

² <http://www.epa.gov/climatechange/ghgemissions/sources/electricity.html>,

<http://www.epa.gov/climatechange/ghgemissions/sources/commercialresidential.html>

The role of existing and potential policies for buildings and electricity from the CLEW analysis in meeting Washington's emission limits		Million Metric Tons CO ₂ e		
		2020	2035	2050
Included in Forecast	Energy Independence Act (I-937)	7.9	10.9	10.9
Forecast for Electricity, Net Consumption-based ("Electricity") (Oct 2013)		18.4	20.4	22.1
Forecast for Residential/ Commercial/ Industrial ("Buildings") (Oct 2013)		21.7	20.8	20.1
Combined Forecast, Buildings & Electricity (Oct 2013)		40.1	41.2	42.2
Additional to Forecast <i>(policies in italics are potential new policies)</i>	Washington State Energy Code	0.9	5.1	11
	GHG Emissions Performance Standards	0	2.9	2.9
	Energy Efficiency and Energy Consumption Programs for Public Buildings	0.03	0.04	0.04
	<i>Public Benefit Fund</i>	<i>0.6</i>	<i>2.9</i>	<i>2.9</i>
	<i>Property Assessed Clean Energy</i> ³	<i>0.02</i>	<i>0.05</i>	<i>0.6</i>
	<i>Appliance Standards</i>	<i>0.4</i>	<i>0.6</i>	<i>0.6</i>
	<i>Feed-in-Tariff, 375 MW Cap</i>	<i>0.5</i>	<i>0.5</i>	<i>0.5</i>
Forecast without accounting for policy interactions		37.65	29.11	23.66
Policy Interaction Overlap Factor ⁴ (rough estimate)		0.01	0.08	0.07
Estimated Forecast for Buildings & Electricity, with estimated interactive effects of policies incorporated		37.27	26.78	22.00

Transportation Policies

Transportation greenhouse gas emissions are the largest source for Washington (typically around 45% in recent years). Strategies for reducing greenhouse gas emissions in the transportation sector fall into these categories:⁵

Fuel Switching	Using fuels that emit less CO ₂ than fuels currently being used. Alternative sources can include biofuels; hydrogen; electricity from low-carbon sources; or fossil fuels that are less CO ₂ -intensive than the fuels they replace.
Improving Fuel Efficiency with Advanced Design, Materials, and Technologies	Using advanced technologies, design, and materials to develop more fuel-efficient vehicles.
Improving Operating Practices	Adopting practices that minimize fuel use. Improving driving practices and vehicle maintenance.
Reducing Travel Demand	Employing urban planning to reduce the number of miles that people drive each day. Reducing the need for driving through travel efficiency measures such as commuter, biking, and pedestrian programs.

³ These programs allow owners to pay for energy improvements over time with a property tax-like assessment.

⁴ Leidos does not break out policy interaction effects by policy or sector so this is a rough approximation.

⁵ <http://www.epa.gov/climatechange/ghgemissions/sources/transportation.html>

In contrast to buildings and electricity, the CLEW process noted new policies that could make substantial progress in achieving emission reductions:

The role of existing and potential policies for transportation from the CLEW analysis in meeting Washington’s emission limits		Million Metric Tons CO ₂ e		
		2020	2035	2050
Included in Forecast	Purchasing of Clean Cars (Pavley/LEV II)	5	5	5
	Federal RFS	1.4	1.6	1.6
	State Renewable Fuel (Diesel) Standard	0.03	0.04	0.05
Forecast for Transportation (October 2013)		43.6	43.5	49.1
Additional to Forecast <i>(policies in italics are potential new policies)</i>	Purchasing of Advanced Clean Cars (LEV III)	0.5	5	6.7
	Conversion of Public Fleet to Clean Fuels	0.03	0.04	0.05
	Growth Management Act	1.6	2.4	2.6
	<i>Low Carbon Fuel Standard</i>	<i>1</i>	<i>3.9</i>	<i>4</i>
	<i>Zero Emissions Vehicle Mandate</i>	<i>0.1</i>	<i>2</i>	<i>2.6</i>
	<i>5% Renewable Fuel Standard(incremental)</i>	<i>0.2</i>	<i>0.4</i>	<i>0.4</i>
Forecast without accounting for policy interactions		40.17	29.76	32.75
Policy Interaction Overlap Factor (rough estimate, see footnote 4)		0.01	0.08	0.07
Estimated Forecast for Transportation, with estimated interactive effects of policies incorporated		39.76	27.37	30.45

Contribution of Potential Sector Policies to Meeting Greenhouse Gas Emissions Limits

Based on the CLEW analysis, if all proposed policies were implemented on top of the emission reduction measures already in place, the state would be roughly halfway to achieving the 2050 limits. In order for Washington meet its statutory greenhouse gas emission limits, a broader reaching, economy-wide carbon reduction program will be necessary to ensure the necessary reductions⁶, as the CERT is currently contemplating.

	Greenhouse Gas Emissions (MMTCO ₂ e)		
	2020	2035	2050
Projected GHG emissions with federal and state policy	97.9	97.5	100.1
Greenhouse gas emissions target	88.4	66.3	44.2
Additional reductions required to meet target (gap)	9.5	31.2	55.9
<i>Reductions from potential buildings & electricity policies</i>	<i>1.5</i>	<i>4.1</i>	<i>4.6</i>
<i>Reductions from potential transportation policies</i>	<i>1.3</i>	<i>6.3</i>	<i>7.0</i>
Remaining reductions required to meet target (new gap)	6.7	20.9	44.3

⁶ A market-based carbon reduction mechanism layered on top of sector-focused policies will have substantial interaction effects. The CLEW modeled these effects under hypothetical scenarios. See the report for details.

Carbon Emission Reduction Taskforce

DRAFT for Discussion: Foundations for Taskforce Deliberation

The Taskforce is asked to develop recommendations and advice on the design and implementation of a carbon emission limits and market mechanisms program for Washington. The Taskforce input will inform the Governor's request legislation for action by the 2015 state legislature. As noted in the Taskforce Process outline:

- Agreement will be pursued, where possible, but will not be required.
- The Taskforce will not be asked to vote on any proposal.
- The Taskforce report will note where agreement is reached, and will capture the advice of all members, where agreement is not reached.

Criteria that guide the Taskforce were provided in the Governor's Executive Order – the recommendations and advice by the Taskforce should:

- Maximize the benefits and minimize the implementation costs, considering our emissions and energy sources, and our businesses and jobs.
- Be in the best interests of both current and future citizens of the State.
- Help offset any cost impacts to consumers and workers.
- Help protect low-income households.
- Assist energy-intensive, trade-exposed businesses in their transition away from carbon-based fuels.
- Address how best to provide oversight and regulation of markets created or impacted by the program.
- Be fair in allocating responsibility to emission sources.
- Minimize shifting of emissions and jobs to out-of-state locations (“leakage”).
- Provide clear accountability for, along with appropriate flexibility in, compliance.
- Provide for ongoing monitoring, evaluation, and adjustment of the program, as needed to secure benefits and minimize unintended consequences.

These base criteria provide a framework for the Taskforce deliberations on the key questions posed by the Governor. Though some of these criteria are in tension with others, there is no specific formula or presumed weighting. Because the Governor is asking to hear from all members, the Taskforce will likely not require a formal decision making tool to reconcile differing views among the members. Rather, the Taskforce members are asked to bring their expertise and judgment to bear on the deliberations.