
Washington Climate Change Challenge

Climate Advisory Team

Summary of Third Meeting

Tuesday, August 7, 8:30 a.m. – 5:00 p.m.

Washington State Convention and Trade Center, Seattle, WA

Meeting documents are available on the Washington Climate Change website:

www.ecy.wa.gov/climatechange/cat_documents.htm

Overview of the Washington Climate Change Challenge

Governor Chris Gregoire declared Washington's commitment to address climate change on February 7, 2007, by signing Executive Order No. 07-02. The Executive Order establishes goals for reducing greenhouse gas emissions (GHGs), increasing clean energy jobs, and reducing expenditures on imported fuel. It also specifies objectives for preparing for climate change impacts, coordinating regionally and nationally, and advancing public outreach and awareness. The Executive Order directs the Washington Departments of Ecology (Ecology) and Department of Community, Trade and Economic Development (CTED) to lead the Washington Climate Change Challenge, a process that will engage business, community and environmental leaders in considering the full range of policies and strategies that may be adopted to achieve the goals established by Governor Gregoire.

Ecology and CTED have formed the Washington Climate Advisory Team (CAT) to assist with the development of specific action-oriented recommendations for climate change mitigation and GHG reduction policies for Washington. This broad-based group of Washington leaders is charged with developing a comprehensive set of state-level policy recommendations to deliver to Ecology and CTED by January 2008.

The Makeup of the Climate Advisory Team

The Climate Advisory Team includes: co-chairs Jay Manning (Ecology) and Juli Wilkerson (CTED); and members Rod Brown (Washington Environmental Council), Reverend Alexander J. Brunett (Archbishop of Seattle), Vicky Carwein (WSU Tri Cities), Representative Doug Ericksen (Washington State Legislature, ex-officio), KC Golden (Climate Solutions), Dennis Hession (City of Spokane), Sara Kendall (Weyerhaeuser), Bill Kidd (BP), Mike Kreidler (Office of the Insurance Commissioner), Jim Lopez (King County), Dennis McLerran (Puget Sound Clean Air Agency), Representative Kelly Linville (Washington State Legislature, ex-officio), Bill Messenger (Washington State Labor Council), Debora Moore (Agriculture/Eastern Washington), Steve Nicholas (City of Seattle), Larry Paulson (Port of Vancouver), Senator Larry Pridemore (Washington State Legislature, ex-officio), Michael Rawding (Microsoft), Aaron Reardon (Snohomish County), Steve Reynolds (Puget Sound Energy), Rich Riazzi (Chelan County PUD), Mike Rousseau (Alcoa), Doug Sutherland (Department of Natural Resources), Kirk Thomson (Boeing), Terry Uhling (Simplot), and Terry Williams (Tulalip Tribe).

Each caucus of the House and the Senate have named liaisons to the CAT. Representative Doug Ericksen and Senator Jerome Delvin have been appointed to represent the Republican Caucus, and Representative Kelli Linville and Senator Craig Pridemore have been appointed to represent the Democratic Caucus.

Project management for the CAT is being provided by Janice Adair (Ecology) and Tony Usibelli (CTED).

Meeting Objectives and Attendance

The Climate Advisory Team (CAT) held its third meeting on August 7, 2007, at the Washington State Trade and Convention Center in Seattle, WA. The meeting was open to the public.

All members were present at the third meeting except Rev. Alexander J. Brunett (Sister Sharon Park, alternate), Vicky Carwein, KC Golden (Paul Horton, alternate), Dennis Hession, Bill Kidd (Ralph Moran, alternate), Larry Paulson (Burr Stewart, alternate), Kirk Thomson (Steve LaFond, alternate), Terry Uhling (Craig Smith, alternate) and Terry Williams. Members of the public and interested stakeholders in attendance included private citizens and representatives from the Technical Working Groups, Preparation and Adaptation Working Groups, American Institute of Architects, Cascade Land Conservancy, coolmoms.org, Earth Ministry, Environment Washington, Horizon Wind Energy, ICLEI, League of Women Voters, Northwest Energy Coalition, Physicians for Social Responsibility, Republicans for Environmental Protection, Sierra Club, Transportation Choices Coalition, Washington State University King County Extension Program, Washington Policy Council, Department of Ecology, Department of Natural Resources, Washington House of Representatives, and the Governor's Office.

There were six objectives for the meeting:

1. Provide updates on recent regional climate activities, the educational tutorials of the ad hoc market-based mechanisms group, and the activities of the preparation and adaptation working groups, and highlight connections to the CAT.
2. Review updates to the draft Washington emissions inventory and forecast.
3. Review the climate mitigation actions accomplished in Washington to date and the impact these actions have on achieving the Washington Climate Change Challenge goals.
4. Consider key components of the economic analysis related to the CAT's efforts and recommendations, including 1) a description of the analysis to be accomplished on each major strategy in light of time and resources available through the TWG process, 2) a description of how contributions to clean energy job creation will be estimated, and 3) a proposal to reach out to the investment and entrepreneurial community for ideas on enhancing clean energy investments.
5. Discuss recent Technical Working Group (TWG) activities, and review and affirm the priority mitigation options for analysis and selected straw proposals.
6. Provide members with the specific details about what will happen next in the process.

Welcome and Introductions

The CAT Co-Chairs thanked the CAT members for their participation and expressed confidence in their ability to get through the work ahead. The Co-Chairs also thanked the TWG members for developing a substantive agenda to inform the CAT's deliberations.

Connectivity with Regional Climate Activities

Update on the Western Regional Climate Action Initiative

Janice Adair (Ecology) provided an update on the Western Regional Climate Action Initiative (WCI). In addition to the five original U.S. State members (AZ, CA, NM, OR, and WA), British Columbia, Utah, and Manitoba have joined the WCI as full partners, and four U.S. States (CO, KS, NV, and WY), three Canadian Provinces (Ontario, Quebec, and Saskatchewan), and the Mexican State of Sonora have joined as official observers. The WCI met in Vancouver, B.C. from July 28–30, 2007, and established five sub-committees to more closely examine various aspects of the regional program. The five subcommittees are: Reporting, Scope, Electricity, Allocations, and Offsets. Each subcommittee will establish a work plan and process for obtaining input into these issues. The WCI also created a rotating chair position, and Janice was elected to this position.

The regional goal will be announced August 22, and a stakeholder call will be scheduled to discuss the regional goal. WCI has also launched a website, with a link from the Washington climate website.

Janice will provide an update on The Climate Registry at the October 4 CAT meeting.

Coordination of the Climate Advisory Team and WCI

The CAT discussed the challenge that asymmetric schedules present in connecting the CAT work with the WCI process. The CAT is scheduled to complete its work by February 2008, and the WCI is scheduled to complete its work by August 2008. While much of what can be done to reduce emissions in Washington is not dependent on the multi-sector market-based mechanism being designed through the WCI, a market-based mechanism will likely figure prominently in allowing Washington to reach its emissions reduction goals. Both the top-down approach of a market-based mechanism and the bottom-up individual policy strategies will be necessary for reaching the needed emissions reductions in Washington. The CAT will develop recommendations that complement a market-based mechanism.

Ad Hoc Market-Based Mechanism Webinars

As one strategy to accommodate the timing differences between the state-wide CAT process and the regional WCI process, the CAT established an ad hoc committee of the whole to examine issues of market-based mechanisms. The ad hoc committee has sponsored a series of webinars to enable joint learning and illuminate issues Washington specifically should consider related to market-based mechanism design and implementation. The first webinar provided an introduction to market-based mechanisms, and the second identified key principles emerging from other efforts. The last two webinars will focus on critical issues the CAT wants to consider

more closely. The third webinar is oriented towards key aspects of a market-based approach that are most germane for Washington to consider, and the last will be an opportunity for the CAT to consider Washington-based perspectives that are beginning to emerge.

The CAT proposed topics to explore in the third tutorial and perspectives to consider in the fourth tutorial, including allocation approaches such as auctioning, grandfathering, and hybrid systems; load-based vs. consumption-based system design; issues related to hydro and recycling; the pros and cons of safety valves; what categories of emissions present challenges when included in cap and trade; what should be done with revenues; the role of Washington forests in sequestration; how transportation can be considered in a cap and trade system; how a mandatory cap drives innovation and investment; and options being considered in D.C. where Washington is advantaged and disadvantaged. The remaining two webinars will be organized to consider as many of these ideas as possible.

Preparation and Adaptation Working Groups

Janice Adair (Ecology) briefed the CAT on the activities of the preparation and adaptation working groups (PAWGs). While the CAT is not responsible for the PAWG process and products, the CAT will be kept apprised of the progress of the PAWGs. PAWGs have been formed across five impact sectors: Forest Resources, Agriculture, Human Health, Water Resources and Quality (Freshwater) and Coastal/Infrastructure. Each PAWG has met at least once since the second CAT meeting, and has a liaison from the University of Washington's Climate Impacts Group (CIG). The PAWGs are focusing on developing strategies that integrate climate impacts into future decision-making in straightforward and meaningful ways. Since analysis of emissions reduction strategies have been developed more frequently to date than adaptation strategies, the outcome of the PAWG effort will likely be several recommendations around critical research needs and approaches for filling information gaps.

Janice acknowledged in particular the Department of Agriculture, the Department of Health, and the Department of Natural Resources for their contributions in chairing three of the five PAWGs.

Washington Emissions Inventory and Forecast, and Assessment of Recent Actions

Washington Draft Emissions Inventory and Forecast

Michael Lazarus of the Center for Climate Strategies (CCS) provided a brief overview of the updated draft emissions inventory and forecast for Washington, which will be the basis for evaluating progress towards the Executive Order goals. The inventory and forecast is a joint effort between Ecology and CTED with assistance from CCS. Updates contained in the revised draft include consumption-based electric sector emissions, which reflect ongoing efforts to refine the historical 1990 emissions, as well as the incorporation of waste management emissions, marine industry emissions, and motor gasoline data sources from the Department of Licensing.

While the consumption-based emissions revisions generated in July compared to the estimates generated in April demonstrate little change, the 1990 values have decreased about five million metric tons, which is important given the goal of returning to 1990 emissions levels by 2020. The current estimates indicate that the actual 2020 target may be between the reduction targets estimated in April and those estimated in July. These estimates exclude forestry and soil sequestration since the goal for Washington State is estimated on a gross basis, which does not include how carbon storage above and below ground changes over time. The inventory draft document contains details on the estimates, and the sector-based sources for projected emission increases. For example, transportation emission projections are based on projections from the Washington Department of Transportation, and electricity emission projections are based on individual utility projections for load growth.

The draft emissions inventory and forecast for Washington will undergo continual refinement. For purposes of the CAT process, a revised and updated draft will be posted in October, and will include further elucidation of the goal targets.

Assessment of Recent Actions

Michael Lazarus (CCS) briefed the CAT on the climate mitigation actions accomplished in Washington to date, and the impact of these actions on achieving the Washington Climate Challenge goals. The projections in the inventory and forecast imply business as usual, but since Washington has already accomplished several recent actions, the state is closer towards achieving its emissions reductions goals.

CTED, Ecology and CCS jointly analyzed nine recent actions for their contributions to reduced emissions. These included transportation-related actions (emission tailpipe standards for automobiles, biofuels, state fleet efficiency, and the Cleaner Energy Act); residential, commercial and industrial-related actions (the state green building standard, building codes, appliance standards, and efficiency measures in the Energy Independence Act); and energy supply-related actions (renewable portfolio standards in the Energy Independence Act and the ESSB 6001 GHG emission performance standard). Preliminary estimates based on the current inventory and forecast, and a simple analysis methodology, indicate that these recent actions contribute to achieving slightly over 50 percent of the 2020 emissions goal.

As estimates are further refined, and with improvements to the load-based estimates, this contribution may be closer to the 60 percent estimate contained in Executive Order 07-02.

Impacts of Federal Legislation

There was no recently enacted federal energy legislation when the CAT process began. The CAT proposed an assessment of how developing federal legislation might impact the process through a cross-walk that identifies whether elements of the House and Senate energy bill proposals might impact specific CAT recommendations.

While interested in monitoring the impacts, the CAT discussed that uncertainties around how much federal and regional efforts will impact Washington, and assumptions underlying the degree to which recent actions will be implemented, suggest that the best approach for the CAT will be to achieve as much as possible through the state action plan so that Washington is in a

better position when other external approaches fall into place. The CAT also noted that federal policies are being informed and impacted through the design of local solutions.

Key Components of Economic Analysis in the CAT's Efforts and Recommendations

Estimating the Clean Energy Jobs Goal

Executive Order 07-02 established a goal to increase the number of jobs in the clean energy sector to 25,000 by 2020, up from the 8,400 jobs in 2004. Tony Usibelli (CTED) presented the approach for estimating this goal. The baseline for the clean energy jobs goal was derived from an analysis conducted by CTED, *A 2005 Look at the Renewable Energy, Energy Efficiency, and Smart Energy Industry in Washington State*. Primary jobs which are included in the employment areas defined in this report will be used to measure achievement of the jobs creation goal. Jobs which may arise from a lower-carbon economy in other industries and sectors (e.g. agriculture or forestry) will be included in the final report to the extent they can be quantified, but will not be credited towards the 2020 goal of a state-wide three-fold increase in clean-energy jobs.

The jobs analysis will yield an overall estimate of 2020 clean energy jobs, taking into account the collective impact of the full suite of CAT actions as well as the actions recently approved and underway in Washington. Contributions to the clean energy job creation goal will be estimated, once policy options are further defined. TWG and CAT members will be asked for their input and advice on methodological inputs to this assessment. Job creation potential will be considered qualitatively in the design of individual policy actions. CTED plans to regularly conduct studies on a periodic basis to determine ongoing progress towards the jobs goal.

Business Climate for Clean Energy and Low-Carbon Investments

CAT member Michael Rawding (Microsoft) presented a proposal to reach out to the investment and entrepreneurial communities to solicit input on how best to enhance investments that reduce carbon and spur technological innovation throughout the economy. Entrepreneurs, early-stage angel investors, and venture capitalists will be brought together to address 1) policy signals from the State that the financial community looks for when investing in clean energy/low carbon technologies, and 2) any specific areas of interest to the financial community which connect with strategies under consideration in the Climate Challenge process. There is a lot of work already underway in the investment community that the CAT may be in a position to support.

The CAT affirmed the outreach effort. In addition to Michael Rawding, interested CAT members who volunteered to participate (or were nominated by their alternate) included Rod Brown, KC Golden, Sara Kendall, Jim Lopez, Bill Messenger, Larry Paulson, and Terry Uhling. The group will aim to meet with representatives of the investment community in September, and report back to the full CAT at the October 4 meeting.

Economic Analysis of Greenhouse Gas Reduction Strategies

Michael Lazarus (CCS) provided an explanation of the economic analysis that will be performed on each priority TWG recommendation. Recommendations for greenhouse gas reduction strategies from the TWGs will include both quantified and non-quantified actions. Greenhouse gas emission reduction potential and cost or cost-savings (net present value through 2020, and expressed in dollars per ton of carbon equivalent avoided or removed) will be quantified for as many recommendations as possible. Quantification related to important co-benefits will be evaluated on a case-by-case basis pending CAT input and available resources. Estimates of job creation and fuel import savings will be conducted on an aggregate basis.

The cost assessment conducted will be a social cost or cost effectiveness assessment. Costs will be quantitatively assessed on a statewide basis. The approach will emphasize consistency and transparency in the measurements across actions and sectors. Where costs or benefits are borne disproportionately by specific actors, this can be noted by the TWGs to allow the CAT to ensure an equitable distribution of impacts. Resources and methods will be identified so that the results are easily replicated. Overlap and interactions will also be captured when the options are added together. Conducting a broader macro-economic analysis that examines indirect costs and repercussions from policy options across the economy requires that the options already be identified, and hence can not be conducted in the timeframe available for the CAT process.

Several members requested additional economic information, including a broader cost-benefit analysis, and suggested that this may be an additional activity proposed by the CAT as part of its recommendations. Other members emphasized that given limited time to address climate change, and given that either path—addressing climate change or continuing to follow a business-as-usual trajectory—will be expensive, CAT decision-making will need to proceed with incomplete economic information in order to not cause further delays for more analysis. There will be a legislative analysis of costs for any recommendations that result in legislative actions and are sent through appropriations.

One member noted that the separation between adaptation and emissions reductions in this process is awkward, given the avoided costs of climate impacts, and recommended a back-of-the-envelope calculation to weave together the costs of actions, the economic development opportunities created by actions, and the avoided costs. Another member noted that there is a strong connection between climate solutions and economic growth, and that addressing climate change now, aligning Washington's goals with emerging venues like WCI and other opportunities, and acting sooner, will be best for Washington's economy.

Briefings on the Technical Working Groups

Introduction to the TWG Proposals

In June, the CAT reviewed, amended, and approved complete policy option catalogs for each TWG. The TWGs then identified a preliminary set of priority options for analysis through a balloting process and discussions. The TWGs sorted and combined these priorities into the lists of recommended priority options for further analysis being presented to the CAT for affirmation.

In June and July, the TWGs also began developing “straw proposals”, or initial policy option design proposals, for selected priority options. In August and September, the TWGs will develop straw proposals for the remaining priority options. For those initial straw proposals that the CAT reviewed and affirmed below, the TWGs will further develop the options and begun conducting initial analysis and quantification.

Residential, Commercial and Industrial Technical Working Group Briefing

David Von Hippel of CCS, facilitator for the RCI TWG, provided an overview of the eleven total recommended RCI priority options for further analysis, two of which are shared with the Energy Supply TWG. After some discussion and clarifying questions, the CAT voted to affirm the complete RCI list of priority options.

The RCI TWG developed straw proposals for the first four options that were ready for CAT review; straw proposals for the remaining seven options were either not yet developed or in progress. David provided additional detail about the four proposals, and CAT members provided comments and suggestions:

RCI-1: Demand-Side Management (DSM) Energy Efficiency Programs, Funds, or Goals for Natural Gas, Propane, and Fuel Oil (originally 1.2)

- Broaden the focus to include opportunities on the electricity side, consider amplifying the incentives and policies in I-927, and give greater emphasis to software and smart metering strategies aimed at commercial and industrial sectors.
- Measure both conservation and more efficient use.

RCI-2: Targeted Financial Incentives and Instruments to Encourage Energy Efficiency Improvements (Business Energy Tax Credit and Private/Public Efficiency Funds) (originally 1.3 and 1.5)

- Clarify language that the business energy tax credits cover all projects.

RCI-3: Promotion and Incentives for Improved Community Planning and Improved Design and Construction (e.g. LEED, NAHB, Green Globes, Architecture 2030, and other guidelines) in the Private Sector (originally 2.2 and 2.4)

- Link this option explicitly to complementary transportation options.
- Provide local governments with flexibility and a toolkit, hold them accountable to meeting goals, and encourage leveraging transportation and design opportunities across a region within community planning processes.
- Consider implications of square footage on energy consumption (e.g. base building codes on square footage).
- Point out the co-benefits to health and connection to equity issues.

RCI-4: Energy Efficiency Improvement in Existing Buildings, with Emphasis on Building Operations (originally 2.6)

- Provide a sense of the effectiveness of reference models developed and used in other states.

Transportation Technical Working Group Briefing

Jeff Ang-Olson of CCS, facilitator for the Transportation TWG, provided an overview of the twelve total recommended transportation priority options for further analysis. The CAT then reviewed and discussed the options. CAT members of the Transportation TWG noted that many of the strategies will require funding, and some of the current funding sources have constraints on their use (such as the 18th amendment). Given the importance of transportation to Washington's emissions footprint, the members suggested a strategy to identify what new and more flexible funding sources for transportation strategies. The TWG will consider specific pricing on city or regional areas, carsheds, and use of revenues. The CAT also noted that strategies will need to focus on tonnage reductions, address potential disparities between urban and rural impacts, and assess interdependencies and unintended consequences of proposals. After this discussion and clarification, the CAT voted to affirm the complete Transportation TWG list of priority options.

The Transportation TWG developed straw proposals for eight of the options, which were ready for CAT review. Jeff provided additional detail about the eight proposals, and CAT members provided comments and suggestions:

T-2: State, Regional, and Local VMT and GHG Reduction Goals and Standards (originally 4.4 and 5.10)

- Consider the potential for water-borne transportation vehicles on the Puget Sound and navigable rivers, to move goods and people. This would include so-called "short-sea shipping."
- One member expressed skepticism about the efficacy of the approach outlined for this option.

T-4: Promote Compact and Transit-Oriented Development (originally 4.1)

- Since the TWG is still deciding on language for the goal, the CAT asked the TWG to keep developing the option and bring recommended language back to the CAT.

T-5: Quantification of GHG Impacts of Transportation Plans, Programs, and Projects (originally 5.11)

- Clarify categorical exemptions in SEPA, and ensure that greenhouse gas considerations occur during planning as well as project development phases.

T-6: Improvements to Freight Railroads and Intercity Passenger Railroads (originally 6.1 and 6.2)

- Consider what the State can do with what has traditionally been under the federal purview, and suggest how the strategies can be accomplished given this dynamic.

- Consider whether there is a way to incentivize railroads to accept refrigerated agricultural freight.

T-7: Diesel Engine Emission Reductions and Fuel Efficiency Improvements (originally 1.3 and 1.4)

- Examine the potential overlap with the low carbon fuel standard, and the potential conflict with the lower greenhouse gas emissions stemming from improved drive train efficiency of diesel engines.

T-8: Local Transportation Financing Tools and Bicycle and Pedestrian Infrastructure Improvements (originally 5.4 and 5.5)

- Clarify language to include new financing for transit.

T-11: Low Carbon Fuel Standard (originally 3.1)

- One member noted that a well-designed low-carbon standard might have better results than a biofuels standard.

T-12: Zero Emission Vehicle Standards

- One member noted that this measure will serve as a stop-gap against the loss of substantial anticipated reductions in the transportation sector if EPA does not grant a waiver for California's tailpipe emissions standard.

Forestry Technical Working Group Briefing

Steve Roe of CCS, co-facilitator for the Forestry TWG, provided an overview of the seven total recommended forestry priority options for further analysis. The Forestry TWG has not yet developed straw proposals for any options. The options are all in progress, and given the overlap and linkages between the options, the TWG decided to present all of the straw proposals together at the next CAT meeting. A CAT member of the Forestry TWG emphasized that while there are conflicts among some of the goal statements that the CAT will need to reconcile, the members of the TWG have worked hard to develop detailed individual strategies.

The CAT asked the Forestry TWG to develop a strategy around urban forestry and increasing the amount of forestry within municipalities. The CAT also asked the TWG to examine barriers that might currently exist to fulfilling some of the options (e.g. conversion and the tax burden motivation). As the TWG develops implementation mechanisms, the TWG will identify where linkages to emissions registries or consideration within cap and trade programs need to be included.

After this discussion and clarification, the CAT voted to affirm the Forestry TWG list of priority options.

Agriculture Technical Working Group Briefing

Steve Roe of CCS, also co-facilitator for the Agriculture TWG, provided an overview of the seven total recommended agriculture priority options for further analysis. CAT members on the Agriculture TWG observed that participation on the Agricultural TWG has been excellent, and commended in particular the assistance of Washington State University. In response to a question about whether the transportation component of moving agricultural products is covered in any of the options, Steve noted that the TWG has had a number of conversations about programs to support local buying, but has not considered the transportation elements which underlie movement of agriculture products from production to processing to market explicitly. The CAT discussed the complexities of examining the transportation components of highly industrialized often transnational food systems, and asked the Agriculture TWG to develop a strategy that integrates support for local production with regional food production practices and transportation. After this discussion, the CAT affirmed the complete Agriculture TWG list of priority options.

The Agriculture TWG developed straw proposals for three of the options, which were ready for CAT review. Steve provided detail about the three proposals, and CAT members provided comments and suggestions:

AW-1: Manure Digesters/Other Waste Energy Utilization (originally 1.4)

- When asked for clarification about the cost analysis associated with this option, Steve noted that in the quantification phase, the TWG will assess the present cost per ton of anaerobic digestion for both fuel and electricity so that the CAT can see the overall cost and emissions reductions for the total combined package. In the next phase the TWG will also determine and describe an implementation mechanism.

AW-3 Significantly Expand Source Reduction, Reuse, Recycling and Composting (originally 6.1, including 6.4 and 6.5)

- The CAT had no comments on this option.

AW-4 Agricultural Carbon Management (combines original options 2.3, 3.1, 3.3, 3.4, 4.1, 5.2)

- The CAT discussed labeling as a potential implementation mechanism and to translate the carbon benefits of these management practices into credit.

Energy Supply Technical Working Group Briefing

Alison Bailie of CCS, co-facilitator for the Energy Supply TWG, provided an overview of the seven total recommended energy supply priority options for further analysis. The TWG originally identified eight high priority options, but ES-8 has since been consolidated within ES-5. To inform discussions about targeting financing of technology, the CAT asked the TWG to explicitly identify where near-term technologies are available, but require commercialization. Another CAT member asked whether the TWG considered nuclear power and current coal technology to bridge anticipated load growth. The inventory and forecast includes projections of a business as usual mix of renewable resources and fossil resources, including some coal

growth. Nuclear was one option reviewed by the TWG, but members determined it was not a priority in the 2020 timeline. After this discussion, the CAT affirmed the complete Energy Supply TWG list of priority options.

The Energy Supply TWG developed straw proposals for five of the options, which are ready for CAT review. Alison provided detail about these proposals, and CAT members provided comments and suggestions:

ES-1: Grid-based renewable energy incentives and/or barrier removal (originally 2.2)

- Alison clarified that combined heat and power was originally included in this option, but has been moved as a separate issue to ES-7, which is still under development.
- Clarify income stream issues from language in the Renewable Portfolio Standard targets that allow utilities to use excess revenues to purchase additional fuel rather than offset future income.

ES-2: Distributed renewable energy incentives and/or barrier removal (originally 2.3)

- Identify what the costs to rate payers might be as a result of increasing utility rates of return.

ES-3: Efficiency improvements at existing renewable and power plants (originally 2.9 and 3.3)

- A CAT member noted that the timing of efficiency improvements for hydro under I-937 are under dispute and being studied, and will likely be a heated discussion.

ES-4: Technology Research & Development, plus Technology-Focused Initiatives (originally 1.6, 2.8, and 3.4)

- Identify opportunities for biofuels to be used as industrial process fuels.

ES-5: Carbon Capture, Storage and Re-use Incentives (including pre and post-combustion) incentives, requirements and/or enabling policies plus R&D (originally 5.1, 5.2, and 3.1a and b)

- Reference sequestration rule requirements in Senate Bill 6001 and the US Department of Energy Blue Skies Initiative. While TWGs will not be involved in rule-making, the TWG can note that since the regulatory and legal infrastructure is being addressed, the TWG can focus on other barrier removal or incentive strategies.

Summary and Next Steps

The CAT commended the work of the TWGs and commented that the development of individual strategies is progressing well. The CAT noted that there is a need for the CAT to begin addressing overarching elements, such as funding, equity impacts on vulnerable populations, training the workforce for the clean-energy sector, and specifics related to market-based mechanisms, such as the binding limits that will drive cap and trade beyond regulatory signals. Members also mentioned the need to begin looking at the interaction across strategies and elucidating cross-cutting themes, and noted the role of the CAT in threading together the individual options as they emerge to determine what themes will form the recommendations of the final report. The outcome of the CAT will be directional, based on both a bottom-up

approach of recommended individual TWG strategies, and a top-down approach of recommendations for a carbon-reduction policy framework.

The TWGs will continue developing straw proposals for remaining policy options, and further elaborate on the straw proposals already reviewed by the CAT. The TWGs will also begin to quantify reviewed proposals by identifying quantification procedures for initial options, including proposed data sources, methods and assumptions.

In order to maximize opportunities for CAT deliberations and establish opportunities for public outreach on substantive CAT recommendations, the CAT agreed to move to a monthly meeting schedule. In October the CAT will discuss cross-cutting issues. In November, the CAT will review the comprehensive TWG work. In December, the CAT will prepare a set of recommendations for public review and comment. In January, the CAT will consider public feedback and finalize recommendations.

The next CAT meeting will be a conference call on September 7, from 2:30 – 5:00 p.m., to review and affirm remaining TWG-suggested straw proposals for policy design for remaining options. The next in-person CAT meeting will be on October 4 at WSU Tri-Cities, to discuss proposals to improve the business climate for clean energy investments, discuss quantification principles and guidelines, and review analysis results for initial options,

Public Comment

Several members of the public in attendance provided comments to the CAT at the conclusion of the meeting.

Michael McFay from Wenatchee addressed the CAT to let them know about a project he has been working on for more than nine years to develop a renewable process of farming trees for ethanol.

Alex Ramble of ICLEI thanked the CAT for their work, and commended Governor Gregoire and the Departments of Ecology and CTED for convening the CAT. ICLEI works with twenty-three local governments across Washington and three hundred local governments across the country on local sustainability issues, and in partnership with the Mayor's Climate Protection Campaign begun by Seattle Mayor Greg Nickels. Mr. Ramble noted that local governments have been working on climate change, are central to developing solutions, and are excited about reaping dividends from the growth of the clean-energy economy. ICLEI looks forward to participating in synergistic partnerships as statewide actions support local governments in achieving their climate goals.

Bob Agner of the Sierra Club thanked the CAT for taking time to listen to the public and applauded their efforts. Mr. Agner is retired and from Whatcom County. His father was born in 1901 and died in 1991, and while Mr. Agner can imagine the many changes his father saw in his lifetime, he imagines the changes his grandsons will see will be much greater. He noted there is not much time to address climate change, and that it is important to start now and make smart

transportation and energy choices to reduce emissions and increase the health of Washington communities. Mr. Agner noted that he is proud to have voted for the Governor and legislators who have passed climate legislation, and is proud to watch the CAT in action. He supports real action and making Washington a “cool” state.

Tim Gould, volunteer for the transportation committee of the Sierra Club Cascade Chapter, thanked the CAT for the opportunity to speak. Mr. Gould noted that climate change is the preeminent issue of the twenty-first century, and while it will be difficult issue to deal with, many people realize the need to take action. Mr. Gould presented a banner to the CAT with some of the comments submitted by people across the state, and noted that throughout the course of the CAT meeting, 150 people videotaped comments to the CAT in an adjacent room. Given that the majority of emissions come from the transportation sector, Mr. Gould commented that policies need to be implemented that ensure transportation prices are based on use. Approaches like congestion pricing and dynamic tolling would shift costs from being fixed to variable, so that when people are using the highway they see the costs. Other approaches include shifting to lower polluting modes of transportation, reducing vehicle miles traveled, and promoting pedestrian and transit-oriented development. Mr. Gould encouraged the CAT to recommend GHG analysis for transportation projects to determine how those projects will affect emissions over the life of the project.

Brad Gaolach, director of WSU King County Extension Program, noted the unique role WSU plays as a four-year land grant university. WSU has infrastructure that can help the CAT achieve some of its goals. The expertise WSU is bringing to the Agriculture TWG can be applied across all five of the TWG sectors and all five of the PAWG sectors. WSU has world-class experts in social marketing who can help with the larger public outreach efforts, and significant amounts of volunteer trainings. Individual county programs are already looking at adapting their training to incorporate climate change issues at the local level. WSU has a great willingness to be part of the effort. In May, WSU formed a Climate Change Action Team to bring together researchers, public education professionals, and others that has been meeting monthly. WSU has expertise and looks forward to working with the CAT.

Yolanda Odobe works with the Catholic Church, and addressed the CAT on behalf of poor people. She requested that the CAT remember that climate change will greatly impact poor people and third world countries, and Ms. Odobe asked the CAT to remember to represent the poorest people. She commented that the Catholic Church is doing a lot to protect the poor. Ms. Odobe shared her experiences working in Ecuador with migrant workers, and the challenge faced by poor people to obtain clean drinking water. She asked the CAT to remember that they are doing this work for people.

Loretta Jancoski, former dean of Seattle University, part of the steering committee that worked on the Seattle Bishop’s letter and currently on the Board of Earth Ministry, stated that she is convinced global warming is the primary issue threatening creation. Global warming threatens three tenets of Ms. Jancoski’s faith: 1) justice, because global warming affects all of us, but mostly the poor; 2) a lack of caring for and reverence for creation and 3) disregard for God’s intention that creation be ongoing and sustained for future generations. Ms. Jancoski noted that individuals must do their part, but that global warming is bigger than what individuals can do, and members of the faith community beg the CAT to reduce greenhouse gas emissions not just

by 15 or 20 percent, but by the 80 percent by 2050 that science says must be done. Ms. Jancoski concluded that the future of her two-year-old grandson depends on the decisions made by the CAT.

Sarah Patton, executive director of the NW Energy Coalition which supports energy efficiency, thanked the CAT for the opportunity to make public comment. The NW Energy Coalition is strongly identified with policies like Initiative 937. The threat posed by global warming makes reaching these goals harder. Another issue the NW Energy Coalition is concerned with is protecting the pocketbook of consumers. Ms. Patton noted that some CAT members think that consumers will suffer if the state takes step to address global warming. Ms. Patton stated that doing nothing costs more. The costs of insufficient action are real. The dwindling snow pack will reduce the ability of the hydroelectric system to produce electricity, and someone will have to pay for damage to coastlines and damage from fires and storms. Ms. Patton asked the CAT to consult the 2006 economic report to CTED and Ecology on the costs of doing nothing, and on the international front, to consult the cost of doing nothing as outlined in the Stern Report published last October. Ms. Patton noted that on the other hand, real solutions are bargains. The Stern Report found that the cost of taking action can be limited to 1 percent of global GDP. Some of the new sources of renewable energy are as cheap as other new sources. Ms. Patton asked members of the CAT to not just do what is easiest and only tweak the status quo, but to fulfill their tremendous responsibility.

Marsha Kendall, on the Board of Northwest Physicians for Social Responsibility, is pleased to see a PAWG examining the negative health impacts of climate change. Ms. Kendal expressed hope that not only the bad news related to health, but also health co-benefits, are discussed. Many TWG proposals have health benefits, such as community planning and increased bicycle infrastructure. Washington could have less air pollution, more exercise, less obesity and increased social cohesion. The EU and King County are beginning to assess health impacts, and evaluate projects with regards to their impacts on the health of populations. Ms. Kendall urged the CAT to consider the positive health impacts of the proposals being put forward along with the impacts on jobs, the economy, and the environment.

Jack, with an Olympia Grassroots group, thanked the CAT for its efforts and the great work members have done. To a person, he feels that CAT members are trying to do the right thing. He noted three things that came up that he thought were weaknesses and made three suggestions to the CAT. 1) Add a "buy local" campaign to the agriculture recommendations. The argument that the issue is too complex and difficult is not a good or compelling argument for not studying this issue, and noted that sustainable agriculture organizations in Bellingham have had success. 2) Build community and emphasize good community planning so people do not feel they must travel so much to reach their friends and relatives. 3) Encourage education within universities and K-12 education. Climate change is an issue that will be with us a long time, so consider long-term planning. He finished by noting that is it exciting to see Washington as part of the leadership on the issue of climate change, and commended Governor Gregoire for her leadership.

Mike Cooper, president of the Board of Directors of the Transportation Choices Coalition, stated that most emissions come from transportation, so the need to focus on transportation choices is real. Mr. Cooper and thanked the Governor and state legislature for focusing on this important

issue, and offered some policy opportunities that Washington has. 1) Develop policies that encourage people to drive less, and put in place opportunities that connect people's workplaces, schools, and churches. 2) Encourage stronger sustainable land use policies. 3) Price the transportation infrastructure in a way that raises money and discourages single occupancy vehicles. Mr. Cooper thanked the CAT for its work, and emphasized that now is the time for the CAT to forward strong, progressive policies for the Governor and legislature to consider.

Tom Pearce, representing Community Transit in Snohomish County, commented that Community Transit was the first transit agency in the state to switch to low-sulfur fuel in 2003, and outfit vehicles with particulate traps. Community Transit has reduced emissions by 90 percent, and every vehicle in the fleet meets California low-emissions standards. Community Transit has also taken other steps to increase ridership like providing clean, comfortable buses. Last year, Community Transit had a record 9.9 million passengers, and is on pace to beat that record this year. Community Transit also offers the third largest van pool, and sponsors bike commuting days. In 2009, Community Transit will introduce "Swift", a new service that will operate along Highway 99. Community Transit is considering hybrid vehicles as well as commuter service, but will need help from the State. Mr. Pearce ended his comments by stating that Community Transit will continue to look for environmentally friendly options, and to offer outstanding service.

John Howell, former chair of the Cascade Land Conservancy (CLC), noted that two years ago the CLC released its hundred-year plan for the Cascade Region to increase land space and create vibrant, liveable communities. Mr. Howell shared a few things the CLC learned from that process. 1) Keep people focused on the long term; the appetite for a one-hundred-year vision for this region was insatiable. 2) Be as clear as possible about the consequences of inaction. 3) Strategies that combine market action and government action have tremendous public appeal. Mr. Howell asked the CAT to consider ways in which growth occurs across the landscape, the implications for our quality of life, and to focus on three things: 1) address transportation; 2) encourage more efficient building design; and 3) consider responsible growth to conserve forests and farmland, which sequesters carbon. Mr. Howell applauded the work of the CAT, and encouraged the Governor to take strong action.

Todd Myers, of the Washington Policy Center, a market-oriented think tank, noted three opportunities that the CAT has. 1) Incentives provided to encourage people to do good things generate a return. It is possible to buy voluntary green energy credits in Washington State, but utilities are prohibited from getting a better rate of return. When Oregon removed this prohibition, the percentage of the customer base voluntarily buying credits went from 1 percent to 6 percent. Allocating increased costs across the rate base is regressive, but when it's a voluntary rate base, those who can afford to pay, pay, which is a progressive approach. 2) Forestry sequestration for carbon is an advantage Washington has over the rest of the world. Forestry is counted as a negative by the IPCC. In Washington, 90 percent of the timber harvested is used for building, so Washington has an opportunity others do not. 3) When jobs and economic impacts are analyzed, either do it all or don't do it, but do not do it half way. It is important to count both inputs and outputs, and to count credits and debits.

Elizabeth Davis, chair of the Natural Resources Committee for the League of Women Voters of Washington, thanked the members and the Governor for their work in combating climate

change. She commented that transportation is the challenge, and opportunities exist to reduce single occupancy vehicles, and increase the use of alternative fuels and alternative forms of transportation. Ms. Davis asked the CAT to adopt energy conservation principles with programs and goals that involve all Washingtonians, and replace coal with renewables. Ms. Davis noted that there are several excellent options from the TWGs which, if implemented today, would put Washington in a strong position. Ms. Davis expressed disappointment that the forestry options were not ready for CAT review. Looking forward, she expressed two concerns. 1) Given the process for adopting options is long and complicated, there are several opportunities to water them down or eliminate them, which must not happen. 2) Executive summaries for these proposals should be considered to facilitate public understanding. There needs to be ways for the public to be involved, and to act decisively in order to leave a better world for future generations.

Christie Royce of coolmoms.org spoke on behalf of the group of mothers in Washington State who really care about climate change and could not be present because they have young children. She wanted to let the CAT know that moms are talking about climate change, are making changes, and want change to happen. People want to make changes, and need clear direction on what to do. Ms. Royce emphasized to the CAT that their work is important, and that everyone with little children thanks them for their effort.

Jim DiPeso, policy director of Republicans for Environmental Protection, commented that climate change is a great moral issue, devilishly complicated, and provides opportunities. Mr. DiPeso offered three principles for addressing climate change. 1) Provide certainty by establishing clear rules, provide incentives that are easy to take advantage of, and make sure that policies are backed by high quality data. 2) Leave no good idea behind. As there is no way of knowing which combination of technologies or policies will do the trick, create a framework that attracts capital towards the range of opportunities. 3) Make climate change real for people. The public has become convinced that climate change is an issue, but a significant percentage are not sure what they can do. Wrap policies in language that allows the public to know what they can do, and make a connections between the policies and the public.

Dana Peck, of Horizon Wind Energy, thanked the CAT and noted that Washington has an industry that is ready to participate on the renewable energy side of the equation, and that predictability is the key. Incentives are nice, but more exciting is the creation of urban-rural partnerships. Rural ranching families have a renewed future because urban residents are willing to make investments in renewable energy. People are coming together across the state to deal with climate change, bringing all of Washington into a future that all will find desirable.

Olivia Jackson, a citizen, noted that eighty percent of people say that there is no problem with global warming, so education is the first need. Ms. Jackson reminded the CAT of the image of earth hanging in space, and the fact that by consuming the equivalent of five planet earths, people are destroying the one we have. Ms. Jackson encouraged the CAT to consider that image of earth in space, and to think cosmically, but act locally.

David Miller, chair of the Committee on the Environment for the American Institute of Architects, spoke about the role of buildings in addressing at climate change. The State of Washington has been a leader in sustainable design, and it is imperative that Washington maintain and advance

that leadership with the work of the CAT. The high performance public building law that was recently passed accomplishes a lot, but reaching LEED silver certification for buildings is not enough. Even LEED platinum certification will not necessarily achieve desired reductions. Mr. Miller stated that strategies need to go beyond public buildings, and include all buildings across the board. Washington has a perfect climate for natural strategies. Washington also needs to save and renovate buildings. Significant buildings should be given new life rather than being torn down and replaced. Mr. Miller noted that we need to create beautiful buildings that are part of our culture and provide beauty to the local environment. The ultimate goal should be to make buildings energy producers rather than energy users, which can be accomplished through design.

Jonathan Billig thanked the CAT and noted that the goals and initiatives are very interesting. Expressing his views as a citizen, he noted that the ideas may seem to go against the ideals of rugged American individualism, but that we need to make sure we have fewer people. This might be an unpopular strategy, but it would lower emissions. He also noted that we need to change our culture of consumption, stating that current consumption levels are disgraceful, and the CAT has an opportunity to change that.

Robin Hamilton and Ryan Jarvis, with Environment Washington, a citizen-based advocacy group, have been working on a campaign to influence climate change policies. Ms. Hamilton and Mr. Jarvis commented that the CAT has an awesome and unique opportunity to make change and shape how climate change is addressed. They collected comments from thousands of people across the state, and were amazed at how much understanding people have about the urgency and need to do something. They presented 15,000 postcards of support to the CAT. They have also talked with over fifty businesses around the state that are pushing to reduce emissions 80 percent by 2050, and left the CAT letters from these businesses. They thanked the CAT for their work.

The 15,000 postcards presented to the CAT had the following messages:

1) Dear Climate Advisory Team Member:

I am concerned about what global warming will mean for the health and well-being of future generations. We are already seeing impacts on our economy and our environment. While we have made some important changes in policy, emissions continue to increase. The longer we wait to reduce global warming policy, the worse the problem will get.

I urge you to recommend to the Governor and the legislature a binding, economy-wide cap on emissions produced in Washington state. We must follow the consensus recommendations of scientists to reduce our emissions 80 percent by 2050. This means cutting emissions from manufacturing, power generation and transportation. Because most of our emissions come from cars, we must improve vehicle and fuel technologies while also spending less on new roads and more on public transportation.

Sincerely, _____

2) Be Cool! Protect Washington's Climate and Communities

*Harness wind and solar power *Save on gas and energy bills *Reduce global warming pollution*

Dear Governor Gregoire: Thank you for leading on this critical issue and establishing a task force to develop a state climate action plan. Dramatically reducing global warming emissions can help the economy, save and create jobs, reduce pollution that affects our communities' health, and help prevent our water supply from further decreases. We urge you to consider, as part of the plan:

- A legally binding commitment to reduce global warming pollution 60-80 percent of current levels by 2050.
- Reduce the use of coal and other fossil fuels in our electricity generation.
- Evaluate and assess all state-funded projects – particularly transportation projects – to ensure they are helping us reduce global warming pollution.

I pledge to personally make choices to help reduce greenhouse gas pollution. _____

3) Be Cool! Protect Washington's Climate and Communities

Reduce Global Warming Pollution

Dear Governor Gregoire: Thank you for establishing the Climate Advisory Team to develop a state climate action plan. Dramatically reducing global warming emissions can help the economy, produce jobs, reduce pollution that affects our communities' health, and help protect our water supply. As part of the plan, we urge you to consider:

- Smart Transportation Solutions: Reduce vehicle miles traveled, promote transit-oriented community planning with more transportation options, and expand highway pricing.
- Clean & Efficient Electricity: Invest in conservation, efficiency, and renewable power – the least expensive, economically viable energy sources – instead of fossil fuels like coal and gas.
- Evaluate and assess all state-funded projects – particularly transportation projects – to ensure they reduce global warming pollution.

I pledge to personally make choices to help reduce greenhouse gas pollution. _____

4) Be Cool! Protect Washington's Climate and Communities

Using smart energy solutions IS COOL!

Harnessing wind and solar power, practicing energy efficiency, and working to reduce our global warming "footprint" IS COOL!

Governor Gregoire, I am asking you to help the economy, save and create jobs, dramatically reduce pollution that affects our communities' health, and commit to decreasing the global warming pollution that is impacting our water supply by committing our state to the following standards:

- A legally binding commitment of our state to reduce global warming pollution 60–80% by 2050.
- Set a carbon dioxide performance standard.

- Evaluate and assess all proposed state-funded projects (particularly transportation projects) to ensure they are contributing to the reduction of global warming pollution.

Your leadership on this, Governor, will make Washington a really COOL place to live. The protection of our climate, our communities, and economy can happen if you lead the way for all Washingtonians.

Sincerely, _____

5) Dear Governor Gregoire,

Thank you so much for the actions you have taken on climate change in the state by implementing solar tax breaks, clean cars, and high standards for efficiency. I support the mission of your Climate Change Challenge and encourage you to embrace even bolder strategies to help stop and ultimately reverse global warming. Investments in clean energy and clean affordable mobility that reduces our use of automobiles are great for Washington's economy and the environment!

As a participant in Step It Up, I am taking a personal pledge to take steps to reach the 80 percent by 2050 goal set by scientists to ward off the worst damage from global warming. That's just an average of 2 percent per year! Washington State should lead the country in attaining that goal.

Thank you for taking steps to begin taking us in that direction.

Sincerely, _____

The meeting adjourned at 5:00 pm.

Document Appendix

The following materials were distributed to CAT members at the meeting (these materials can also be found on the Washington Climate Change website and at the links provided below).

August 7, 2007 CAT Meeting Agenda

(www.ecy.wa.gov/climatechange/CATdocs/80707CATagenda.pdf)

August 7, 2007 CAT Meeting Presentation

(www.ecy.wa.gov/climatechange/CATdocs/080707CATpresentation.pdf)

Priorities for Analysis and Initial Set of Straw Proposals for each TWG:

- Residential, Commercial & Industrial TWG
(www.ecy.wa.gov/climatechange/CATdocs/80707RCIPolicyOptions.pdf)
- Transportation TWG
(www.ecy.wa.gov/climatechange/CATdocs/80707TransMitigationOptions.pdf)
- Forestry TWG
(www.ecy.wa.gov/climatechange/CATdocs/80707FPolicyOptions.pdf)
- Agriculture TWG
(www.ecy.wa.gov/climatechange/CATdocs/80707AWPolicyOptions.pdf)
- Energy Supply TWG
(www.ecy.wa.gov/climatechange/CATdocs/80707ESPolicyOptions.pdf)

Contributions of Recent Actions to Washington State GHG Mitigation Memo

(www.ecy.wa.gov/climatechange/CATdocs/80707RecentActionsMemo.pdf)

Revisions to the Washington State Inventory and Forecast Memo

(www.ecy.wa.gov/climatechange/CATdocs/80707InventoryRevisionsMemo.pdf)