

LEADING THE WAY: IMPLEMENTING PRACTICAL SOLUTIONS TO THE CLIMATE CHANGE CHALLENGE

As it always has, and yet like never before, our future quality of life depends on the choices we make today. Deliberate, thoughtful and bold action is needed now, and for years to come, to reduce the impacts and costs of climate change and, at the same time, build a healthier and more prosperous economy. The current global economic situation – and its root causes – reinforce the need for leadership to transform our economy, expand our choices and protect the environment. Through innovative policies and strategic investments like those recommended here, Washington can reduce greenhouse gas (GHG) emissions, create business opportunities and jobs, and reduce dependence on imported fuels.

This report contains “most promising” strategies and opportunities to reduce GHG emissions identified in 2008 by Washington’s Climate Action Team (CAT) for the Governor and the Legislature. Led by its Co-Chairs,¹ the CAT focused its efforts in four areas; transportation, the built environment, reducing the waste stream, and the role of the State Environmental Policy Act (SEPA) in climate change. The recommended actions build a future in which citizens and goods move more efficiently with less pollution; infrastructure investments and good planning create transportation choices and sustainable communities; buildings are constructed and operated with less energy; energy is produced and used more efficiently and with less carbon; natural ecological systems are healthier and store carbon more effectively; the impact of development on the environment is analyzed to maximize effectiveness and avoid needless litigation; and government, business, labor and environmental advocates work together to support entrepreneurial creativity and economic opportunities for all.

2007: Articulating the Comprehensive Climate Approach

These final recommendations build off the CAT’s 2007 interim report, *Leading the Way: A Comprehensive Approach to Reducing Greenhouse Gases in Washington State*.² The Washington Departments of Ecology (Ecology) and Community, Trade and Economic Development (CTED) formed the CAT in 2007 to advise the Directors of Ecology and CTED on the full range of policies and strategies that should be considered in order to achieve the goals specified in Executive Order 07-02 by Washington Governor Christine Gregoire in February 2007.³ The Executive Order established goals for reducing GHG emissions to 1990 levels by 2020 and 50 percent below 1990 levels by 2050; increasing clean energy sector jobs to 25,000; and reducing expenditures on fuel imported into the State by 20 percent by 2020.

The CAT, a broad-based group of Washington business, academic, tribal, State and local government, labor, religious, and environmental leaders, worked throughout 2007 to develop a comprehensive set of state-level policy recommendations to meet these goals. The CAT created the “Comprehensive Climate Approach”, defining 12 targeted areas and 45 sets of mitigation strategies encompassing a significant range of policies and programs that Washington could undertake to reduce GHG emissions efficiently and effectively. This Comprehensive Climate Approach, if implemented in a complete and timely manner along with actions already taken by the State, would set Washington upon a path to achieve its goals by 2020, and on a path of declining GHG emissions over the long term (refer to the 2007 interim CAT report

¹Juli Wilkerson, Director of Community, Trade and Economic Development, and Jay Manning, Director of the Department of Ecology

²www.ecy.wa.gov/climatechange/CATdocs/020708_InterimCATreport_final.pdf

³www.governor.wa.gov/execorders/eo_07-02.pdf

for additional information about the CAT, including greater detail behind the CAT’s complete suite of recommendations and its “Comprehensive Climate Approach”).

2008: Recommending “Most Promising” Climate Strategies

In 2008, the Legislature called for Washington to continue playing a leadership role in addressing climate change. ESSHB 2815, *Creating a framework to reduce GHG emissions in Washington State*,⁴ directed the CAT to continue its work and recommend “most promising actions to reduce emissions of greenhouse gases or otherwise respond to climate change.” ESSHB 2815 codified the GHG reduction goals of Executive Order 07-02, and also added a fourth requirement commensurate with achieving the GHG reduction targets: decrease the annual per capita vehicle miles travelled (VMT) 18 percent by 2020, 30 percent by 2035, and 50 percent by 2050.

As in 2007, the 2008 CAT recommendations build off the base of recent actions already taken by State government. These recent actions are expected to make significant contributions toward achieving the GHG emission reductions. Key among these actions are the vehicle tailpipe emissions standards enacted by the Legislature in 2005; I-937, which targets conservation and use of clean and renewable energy; several legislative and executive initiatives to promote biofuel production and use; green building and fleet efficiency standards for State buildings; building code enhancements; improved energy efficiency standards for appliances; and renewable energy and energy efficiency requirements established by the federal Energy Independence Act. The final report from the State in response to ESSHB 2815 (which this CAT report will be incorporated into) will contain a full accounting of the GHG emissions reductions potential not only for the actions recommended here by the CAT, but also the actions already implemented in Washington, and reductions from any additional actions the State might take, but which the CAT has not focused on.

The 2008 CAT consisted of those 2007 members interested in continuing to serve on the CAT, and additional members who were identified by Ecology and CTED to meet membership requirements specified in the Executive Order and legislation. Members were appointed to provide specific expertise in the topic areas of the IWGs, and/or to otherwise round out and deepen the membership of the 2008 CAT. The Department of Transportation (WSDOT), the Department of Agriculture (DOA), and the Department of Natural Resources (DNR) joined the partnership of the CAT by becoming CAT members, convening workgroups, and dedicating staff and resources to this effort.

Transformational Change is Needed

Reducing GHG emissions, minimizing expenditures on imported fuel and furthering the Clean Economy requires transformation. We need to challenge ourselves, our communities, and our leaders to pursue those fundamental changes which will enable Washington to meet its targets and seize the far-reaching opportunities that this transformation represents. The recommendations developed by the 2008 CAT move us towards seeing the world differently and set in motion those foundational investments that will bring about long-term change while achieving near-term GHG emission reductions.

The CAT has looked for opportunities to encourage the type of systemic, transformations needed to develop our communities and a Clean Economy that is far less ‘carbon-dependent’. Many of the CAT’s recommendations in specific areas can be sequenced to ensure successful implementation in both the short and long term. For example, optimizing the solid waste collection system in order to address the

⁴ <http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/House%20Passed%20Legislature/2815-S2.PL.pdf>

“other 50 percent” of the waste stream not currently recycled can accomplish both short-term GHG emission reductions benefits and establish commitments to the longer-term structural shifts necessary to achieve Washington’s long-range goals.

Washington must continue its practical focus on doing what is possible now, while changing what is possible to do in the future. For example, the CAT recommends “doing what is possible now” in Washington’s built environment by revising the existing Washington State Energy Code to achieve greater reductions in building energy through the application of existing remodeling, retrofit and equipment replacement practices; and “changing what is possible to do” by establishing a long-term strategy for code revisions that will create the “Net Zero Carbon New Building sector” by 2030. This approach provides for near-term, achievable advances in the energy code, and longer-term technical standards that anticipate and stimulate development of building requirements and power systems to ensure that future buildings are essentially carbon free.

To accomplish this transformation across all sectors of our society, we must all see ourselves as part of the solution. We are all in this together; to effectively address the challenge of climate change requires a true partnership at all levels of government and all sectors of society. While several of these recommendations highlight actions that the Executive Branch and Legislature can take, coordinated efforts between local, regional, and state government, and the creativity and contribution of every citizen in Washington will be required to address these problems effectively. Actions taken to address climate change also need to be consistent with and complementary of other policy objectives. Climate change activities should recognize and be designed to reinforce the priorities of local governments to pursue local economic activity, expand transportation choices, and revitalize city centers. Finally, actions should also drive the behavioral changes that will shift production and consumption patterns towards lifestyles and development that is renewable and sustainable

The CAT has identified a number of tactical approaches that can be used to implement these transformational actions:

- *Leverage existing systems and processes wherever possible to advance climate solutions rather than create new programs or procedures.* Many of the existing ways of ‘doing business’ can be improved to produce significant GHG emissions reductions. For example, one of the CAT recommendations calls for an Executive Order that establishes an intergovernmental work group designed to evaluate and recommend revisions to State purchasing practices to ensure that government has the lowest possible environmental and carbon footprint. This is an opportunity to leverage the State’s ongoing buying power to achieve GHG emission reductions and to influence other government, business and individual consumers. Several of the recommended transportation strategies provide additional examples to expand the existing transit, rideshare, and commuter choice services available to the public by leveraging existing systems.
- *Tailor policy interventions and decision-making to be more efficient and cost-effective.* Strategic action to re-direct resources, implement system improvements, and make the critical investments necessary to address climate change should be taken where they can most efficiently and cost-effectively shape governmental, business and consumer choice. Several recommendations move action “up the decision stream” to where it makes the most sense. The recommended Product Stewardship Framework, for example, provides incentives and a system for designing products with less waste and fewer GHG emissions earlier and throughout the life cycle of the products. Recommendations for “leveraging SEPA” to encourage “climate friendly” development moves SEPA up the decision-chain, and “upfront” SEPA analysis of plans reduces subsequent project specific analysis and provides exemptions based on this earlier planning. Recommendations for compact and transit oriented development are also designed to make it easier for people to make “climate friendly” lifestyle choices, increasing the choices and options available.

- *Design and structure programs so that direct users and beneficiaries pay for their choices and receive the benefits.* Many of the CAT's recommendations are also designed so that the direct users and beneficiaries pay for their choices, which serves to reduce the net social costs of these strategies while ensuring that any benefits also go to those who pay for the initial investment and/or choice. For example, one of the CAT's recommendations is to expand implementation of distributed energy, Combined Heat and Power (CHP), and renewable energy. Cost savings for those who make the investment for CHP implementation alone is estimated to be \$317 million dollars between 2008-2012 on a net present value basis. In addition, CHP projects developed in compliance with the renewable energy targets in I-937 would get double credit for all projects. Several of the transportation pricing recommendations are also based on the idea that those who use the transportation services directly pay for their choices. Recommendations to move SEPA planning allows for cities and counties to recover the upfront planning costs from developers who pursue subsequent developments that are exempt from SEPA.
- *Reprioritize and develop resources to adequately fund climate solutions.* Accepting the urgency to tackle climate change requires reprioritizing budgets, raising revenues, and/or appropriating the funding necessary to stimulate both government and business to respond meaningfully and successfully. There is a critical need for adequate financial resources to enable local and tribal governments to fulfill the responsibilities associated with these recommendations, since many of these actions require local implementation or site-specific attention to be successful. The State must also be allocated sufficient resources to remain a leader regionally and nationally, and to fulfill its responsibility in implementing these emission reduction strategies.⁵

Furthering the Clean Economy Is Critical to Reducing Greenhouse Gases

Significant action to address the current and future impacts of climate change must continue to be a critical priority for Washington. The recommendations in this report come from the CAT's vision to move Washington toward a low-carbon future through economic opportunities, and reflect the bold and thoughtful action needed to build the foundation by which Washington can meet the 2020 GHG emission and VMT reduction requirements established in ESSHB 2815. This report is being written as Washington begins to experience the effects of a national and global economic crisis. These economic challenges are the toughest Washington has faced in recent memory, and understandably, Washington's leaders and citizens will focus on the immediate need to address our current economic situation. The temptation to delay action on climate change in light of these other challenges may be very real; but in fact, the impacts from climate change will only exacerbate economic disruption into the foreseeable future, while the opportunities associated with responding to climate change remain vibrant and, if pursued diligently, can create jobs that are vital to both economic recovery and future vitality. The current financial situation demonstrates the folly of 'waiting until too late' to fix the stresses and excesses that lead to collapse. The same is true concerning why now, more than ever, linking climate solutions with long-term economic development is the prudent way to proceed.

Washington's leaders and citizens must work together to invest in Clean Economy jobs and minimize expenditures on imported fuel. The CAT's recommendations help us accomplish this by building upon the strategic, competitive advantage of Washington by supporting our forests and farmlands, protecting and restoring our natural environment that attracts and retains our citizenry, utilizes our high-tech

⁵ This reaffirms the 2007 CAT "Headline" (#12): "Allocate sufficient State resources to maintain Washington's leadership role regionally and nationally and to fulfill its responsibilities for structuring and guiding implementation of emission reduction strategies."

information industry, and promotes our international trade leadership. They reinforce our tradition of progressive land use and energy efficiency policies. These are precisely the activities we should be pursuing to strengthen our economy. By investing in infrastructure, higher education, and workforce training, Washington can develop the physical and human infrastructure capable of generating innovations in clean technology and economic recovery.

Building Compact Communities and Providing Lower-Carbon Transportation Choices is Critical to Reducing Greenhouse Gases

The CAT recommendations emphasize the importance of land use decisions, transportation choices, and development patterns working together to achieve the GHG emission and VMT reduction targets specified in ESSHB 2815. This imperative is apparent within and across a number of the strategies recommended by the CAT, as well as recommendations emerging from several other efforts. Land use policies that reduce GHG emissions and VMT also support key infrastructure investments and transportation improvements, which are critical to attract and retain economic development to Washington.

Broadly, these various efforts share the goal of promoting denser development in urban areas. This can be accomplished by encouraging well planned density/infill, providing housing in close proximity to jobs and services, establishing necessary infrastructure and essential public facilities for a high quality of life, and maximizing access to affordable public transportation and other mobility options. The many benefits to be realized from compact urban development include VMT and GHG emissions reductions, reduced dependence on imported fuel, and increased carbon retention from retaining working farms, and from conservation of working forestland.

The CAT has recommended several strategies that support climate-oriented land use and development through its Transportation, EEGB and SEPA IWGs. (For details, see the specific recommendations for each area, below.) Several other recent efforts underway have also addressed key elements of the implications of land use and development patterns on climate, and have recommended measures that shape these policies and investments to advance climate-oriented goals. This includes both the Agriculture Carbon Market Workgroup and the Forest Carbon Market Workgroup chartered under the direction of ESSHB 2815 (for more information, see the State's final ESSHB 2815 report), which have developed recommendations on avoiding conversions of farm and forest land. CTED's Land Use and Climate Change Advisory Committee (LUCC), chartered under ESSB 6580⁶, is recommending a number of actions that will emphasize planning for and supporting compact urban development, multi-modal transportation and avoiding land conversion through use of tools such as Transfer Development Rights (TDRs). The work of CTED's TDR Policy Advisory Committee⁷ to develop a central Puget Sound TDR program is also contributing ideas on how to accomplish this.

The objectives of these various strategies and recommendations resonate across and reinforce a number of other significant public policy initiatives in Washington, such as the Puget Sound Partnership, a community effort of citizens, governments, tribes, scientists and businesses working together to restore and protect Puget Sound. In working towards a clean and healthy Puget Sound ecosystem and a thriving Puget Sound economy, the Puget Sound Partnership has identified current land use patterns as a significant stressor on the Puget Sound, and the need to build denser, livable communities, to stop

⁶ For more information, see the State's final report for ESSB 6580, *An Act Relating to mitigation the impacts of climate change through the growth management act*. The full text of ESSB 6580 is available at <http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/Senate%20Passed%20Legislature/6580-S.PL.pdf>.

⁷ Under RCW 43.362.020, CTED has sponsored a process to develop a regional TDR program that comports with chapter 36.70A RCW. More information is available at <http://apps.leg.wa.gov/rcw/supdefault.aspx?cite=43.362.020>

conversion of working forests and farms and to protect and restore natural ecological systems as critical elements for restoring Puget Sound. *[If correct and verifiable by the time the CAT's report is completed, the following sentence would be inserted:]* The PSP's land use-related recommendations are consistent with the recommendations from the CAT concerning transportation choices and the use of SEPA to promote well-planned urban development.

Many CAT members have been active participants in these other efforts, and the CAT as a whole is cognizant of their efforts. The CAT believes that the recommendations and decisions coming from these other efforts also represent opportunities to reduce climate impacts and reinforce the CAT's own recommendations in these crucial areas. The CAT recommends that the State recognize the importance of incorporating climate considerations into land use planning, development patterns, and transportation-related decisions, and believes that the State should integrate the results from these efforts that are all providing similar recommendations at the same time into a cogent policy framework capable of promoting effective, coordinated and focused action to accomplish this critical objective.

Local Governments Have a Critical Role in Reducing GHG Emissions and Will Need State Support

Many of the CAT recommendations will need some form of Legislative authorization. Several of these changes in State law are needed in order to enable local governments to play a vital role in implementing the recommendations, duties which many local governments are eager to perform. It is essential that the State provide sufficient technical and financial support for the cities and counties of Washington to participate successfully. Almost all of the CAT's recommendations contain a vibrant and crucial role for local government leadership and engagement. For example, expanding the municipal collection services to collect more recyclables is crucial to meeting the goal of recycling 80 percent of Washington's overall solid waste stream by 2020. Likewise, linking transportation choices, including reliable transit options, with land use planning to create compact livable communities, will be accomplished in large part by local governments. Even amending the energy code to create more energy efficient buildings means local government building departments will need training and resource to support implementation of this new code. Opportunities to make progress in reducing GHG emissions should not be missed because of "unfunded mandates". State recognition of and support for the important front-line role local governments play in reducing GHG emissions is essential if Washington is to reach its targets by 2020 and beyond.

"Most Promising" Actions to Reduce Greenhouse Gases

The recommendations contained in this report have been developed under the direction of the CAT and the CAT affirms them as "most promising" strategies and opportunities within specific areas to move forward in 2009 and beyond to help meet the targets. The CAT believes that if enacted, these recommendations can enable significant reduction of GHG emissions and VMT reductions and implement transformational shifts in and strengthen Washington's economy to 2020 and beyond.

These recommendations were developed by the deliberate and constructive engagement of Implementation Work Groups (IWGs), which focused on a small number of strategic opportunities within specific areas that could be implemented in order to contribute significantly towards reducing GHG emissions. The basic goals of each IWG were as follows:

- ***Energy Efficiency and Green Buildings***: The goal of the Energy Efficiency and Green Buildings (EEGB) IWG was to achieve significant emission reductions in Washington's built environment, both directly through reduced use of carbon-based energy as well as indirectly by reducing the

use of GHG-intensive products. This IWG also aimed to strengthen the energy efficiency and green building sectors, and thus contribute directly to the clean energy job goals articulated in Executive Order 07-02.

- ***Beyond Waste:*** The goal of the Beyond Waste IWG was to significantly expand source reduction, reuse, recycling and composting and build on what is best and most successful in the current waste management system by targeting products and organic materials with the largest GHG emission reduction potential. This IWG focused on both reducing the amount of waste that Washingtonians produce, and increasing the amount of recycled material that is otherwise discarded.
- ***Transportation:*** The goal of the Transportation IWG was to achieve significant reductions in transportation-related GHG emissions, which account for nearly half of total emissions in Washington, and to recommend tools and best practices to achieve the VMT reduction goals enacted in ESSHB 2815.
- ***SEPA:*** The goal of the SEPA IWG was to ensure that consideration of climate change is included in the State Environmental Policy Act (SEPA) processes and guidance in a clear and straightforward manner that minimizes lawsuits over this issue and contributes to understanding and mitigating GHG emissions resulting from activities covered under SEPA. This IWG focused on developing recommendations that clarify how, where, and when to best address climate change in State and local governments' SEPA processes and decisions.

The range of expertise and number of interests involved in the IWGs was considerable. The members' commitment contributed to the depth and detail in the strategies that the various IWG's were able to accomplish in a very short period of time. The IWGs were comprised of individual CAT members, and other experts and interests appointed by Ecology and CTED needed to perform the tasks required. Over 100 people participated in this work as members of the IWGs, and included representatives from tribal and local governments, builders and developers, faith-based organizations, environmental advocates, lawyers, haulers and recyclers, auto dealers, engineers, and transit and bicycle advocates, among others. Substantive topics and goals for the four IWGs were initially identified by the CAT Co-Chairs, based on a review of the comprehensive 2007 CAT recommendations and the direction coming from the 2008 Legislature, and considered and affirmed by the CAT as the focus of their work for 2008. Each IWG then developed its work plan, reviewed by the CAT, which identified the specific actions the group would take to develop "most promising" recommendations in its area.

Over the course of the IWG's deliberations, the CAT provided input, suggested needed analysis, and affirmed the final recommendations. Each IWG held multiple meetings and accomplished a tremendous amount of work, the details of which are contained in the individual IWG reports located in the appendix of this report. The IWGs' recommendations are primarily a function of the members' dedication and hard work. Each IWG also had two to three co-leads, who were instrumental in guiding each IWG to the successful completion of their charge.

The CAT believes that the IWG recommendations are consistent with its vision and if properly implemented, can bring about the transformational change that will significantly reduce GHG emissions in Washington. The CAT believes these recommendations should continue to move forward, and once ready, be implemented. Some of these recommendations are ready to be implemented by the Executive Branch now while others need authorization and/or funding from the Legislature. Some are accompanied by draft statutory language while others still need additional effort to sort out critical details. Some reflect how to impact specific programs right here and now while others identify broader policy changes that surely will engender further discussion and debate beyond the CAT. As any of these recommendations move toward implementation, there will inevitably and appropriately be "give and take" on the best way to accomplish the desired outcomes. The CAT and its individual members look forward to this "give and take", and are willing to help with the next steps needed to implement these recommendations.

The recommendations also further develop and reinforce most of the 12 directional recommendations from the CAT's 2007 interim report. The directional statements, called "Headlines" in the 2007 report, articulated the path which the State should take to meeting its GHG emission goals. The 2008 CAT recommendations relate specifically to the ways that the 2007 CAT "Headlines" can be pursued. The recommendations represent a further delineation of the explicit path forward that Washington should follow to develop a more robust economy, provide good jobs, improve Washington's position in the global economy, reduce dependence on imported fuel and build healthier, more sustainable communities.

The following recommendations represent the contribution the CAT is making to meet Washington's GHG emission and VMT reduction targets established in ESSHB 2815. An introductory context for each specific area examined by the IWG is first provided below, followed by high-level summaries of the specific recommendations for that IWG. The full details of the recommendations are contained in the IWG reports, appended to this report.

Energy Efficiency and Green Buildings - Short and Long Term Efficiency Improvements to the Built Environment

Given the long-lived nature of the built environment, building and community design decisions will have a profound impact on Washington's ability to meet its longer-term emission reduction targets. By 2030, new buildings constructed in the preceding two decades will account for 20 to 25 percent of the commercial building floor area and will account for more than 20 percent of the housing units. Over the same 20-year period, it is expected that most existing buildings will undergo some level of renovation, install new equipment, and will add or replace many energy using devices. In developing policies to increase energy efficiency of new and existing buildings, the EEGB IWG has developed a set of policies that also aims to strengthen energy efficiency and green building industries, as well as contribute to the clean energy job goals articulated in the Governor's Climate Change Challenge.

The EEGB IWG has developed a set of actions incorporating both near-term opportunities to increase building energy efficiency and long-term strategies to further develop Washington's ability to meet emission reduction goals. Near-term strategies including an upgrade to the building energy code to achieve a 30 percent reduction in energy use (EEGB Recommendation 3, part 1) and strengthening current high-performance public buildings legislation to extend the green building standards for the public sector (EEGB Recommendation 2). The EEGB IWG has developed draft legislation designed to establish incentive-based approaches to motivate and accelerate the design, construction, and annual operation of buildings to levels of superior energy performance (EEGB Recommendation 1A), and to encourage the incorporation of Combined Heat and Power (CHP), distributed electricity generation, and other distributed and district energy systems, including district heating and cooling (EEGB Recommendation 1B). Over the long-term the EEGB IWG has proposed legislative action to develop and implement a State Building Efficiency and Carbon Reduction Strategy to guide the continued improvement of the energy performance of the State's building stock over the longer term (EEGB Recommendation 3, part 2).

The recommendations developed by the EEGB IWG are consistent with and incorporate the goals of the Climate Advisory Team's 2007 Report "Headline" #8, "Design, build, upgrade, and operate new and existing buildings and equipment to maximize energy efficiency", and also, especially through the longer-term goals associated with Actions 2 and 3, incorporate elements of the Climate Advisory Team's Headline #9, "Deliver energy from lower or non-carbon sources and more efficient use of fuels".

These recommendations focus on achieving reductions in carbon emissions through increased energy efficiency of new and existing buildings in the private and public sector. Recommended standards for green buildings link to climate change actions taken in the Transportation and Beyond Waste areas,

through increasing transportation options to buildings, as well as directing CTED to incorporate embodied energy criteria in standards used to establish eligibility under incentive programs.

The recommended energy efficiency and green building actions are summarized below. Please see the full EEGB IWG report in appendix [##] for additional detail on these recommendations.

EEGB Recommendation 1: Energy Efficiency Incentives

This recommendation calls for legislation to establish incentive-based approaches to motivate and accelerate the design, construction, and annual operation of buildings to levels of superior energy performance (Recommendation 1A), and to encourage the incorporation of combined heat and power, distributed electricity generation, and other distributed and district energy and water systems, including district heating and cooling (Recommendation 1B). This approach would reward actual demonstrated energy performance with tax credits.

1A: Energy Efficiency Quality Investment Program (EEQUIP)

Near-term high priority legislative concepts for this recommendation include:

1. Public Utility Tax (PUT) credits for non-residential buildings that meet specific levels of energy performance based on actual utility data, with 50 percent of the PUT credit supplied by the utilities serving the building.
2. A modification of statutory language related to Local Improvement Districts (LID) that adds energy efficiency as a qualifying activity.

Other most promising future legislative concepts for this recommendation include:

1. Partial sales tax refunds for new non-residential buildings that achieve energy performance standards equivalent to an ENERGY STAR Target Finder rating of 90.
2. Partial sales tax refunds for new and existing residential buildings that meet a level of energy performance equivalent to an ENERGY STAR Northwest-rated home.

The concepts incorporated into this recommendation are designed to work with familiar and accessible programs of merit (e.g. LEED, ENERGY STAR, Built Green or other verifiable third-party or independent certifications) that have gained acceptance by the commercial and residential buildings market. In addition, standards to qualify for incentives become increasingly stringent over time, so as to drive the market in Washington toward progressively more energy-efficiency building design, construction, and operation.

1B: Expanded Implementation of Distributed Energy and Water, Combined Heat and Power (CHP) and Renewable Energy

Complementary to Recommendation 1A, this recommendation offers tax incentives to encourage the development and use of CHP and other distributed energy systems potentially including B&O (business and operations) Tax credits, Public Utility Tax credits for buildings and industries that use CHP/distributed energy systems, sales tax exemptions on machinery and equipment used in CHP/distributed energy systems, and property tax exemptions for distributed energy and water systems. In the short term, sales tax exemptions on purchases of equipment used in distributed energy and water systems—consistent with the existing manufacturing and retail sales tax and use exemptions (which include exemptions for CHP systems used in manufacturing)—will be the most straightforward to implement. This recommendation also includes:

- Efficiency requirements for CHP systems.

- Similar eligibility criteria for incentives for other distributed energy systems would be set by CTED based upon the effectiveness of the system and incentive models established for CHP.
- For district water projects, set a baseline fractional water demand reduction to receive incentives, with a tiered approach so that progressively higher percentage reductions qualify for higher incentives⁸.
- Addressing barriers to implementation of distributed energy systems, including barriers to interconnection with the electricity grid, issues associated with dispatching of generation resources, split incentives between project owners and tenants, and issues associated with compliance with local and State regulations.

Impacts on Goals

These legislative concepts are designed to use incentive-based approaches to motivate and accelerate the design, construction, and annual operation of buildings to levels of superior energy performance. The reward through tax credits for actual demonstrated energy performance is innovative and critically important to achieving the Washington’s overall greenhouse gas reduction and quality job creation goals, outlined in Executive Order 07-02. Overall this recommendation (components 1A and 1B together), implemented at the levels of revenue impacts shown below, is estimated to provide a net reduction in greenhouse gas emissions of 1.2 million metric tons of carbon dioxide equivalents (MMTCO₂e) annually by 2020.

Additional Benefits

In addition to reductions in GHG emissions, building energy efficiency improvements and the implementation of CHP and distributed/district energy systems reduce (in most cases) the emissions of non-GHG air pollutants, can result in reduced water use, and can increase the use of in-state renewable fuels while reducing the consumption of imported fossil fuels. District energy systems can also play a role in promoting compact development to reduce transportation requirements.

Costs

Preliminary estimates of revenue impacts include: Priority proposal: \$750,000 for PUT refund with participation of 28 million sq. ft. of commercial property; Future legislative proposals: \$3.75 million for sales tax refund for non-residential new construction (by 2012), between \$5-10 million per year for sales tax refund for existing and new residential buildings, and \$1-1.5million per year for sales tax refunds for distributed energy systems. Overall, this recommendation implemented at the levels of revenue impacts shown here, is estimated to provide a net savings to the people of Washington of \$184 million dollars (2006 dollars) between 2009 and 2020, on a net present value basis.

Other Impacts

Utility cost sharing of the PUT credit element of this recommendation provides opportunities for utilities to meet I-937 targets, while reducing the burden of this action on State revenues.

Relationship to Other Efforts

Renewable generation included in this recommendation may count toward the renewable electricity mandates of I-937. Similarly, energy efficiency gains through this action will serve to reduce the

⁸ This element has not yet been reviewed by the full EEGB IWG. This element was included in the draft that the CAT reviewed at the Oct 14-15 CAT meeting, and will be given final review by the full EEGB IWG at its last meeting on October 29.

absolute amount of additional renewable energy-based electricity generation required under the renewable electricity mandates of I-937.

EEGB Recommendation 2: Energy Efficiency in Existing, New and Renovated Public Buildings, and Energy Benchmarking and Energy Performance Disclosure in Public and Private Buildings

Legislative action is recommended to substantially upgrade the energy efficiency and sustainability of publicly-constructed and -operated buildings, including both new and existing buildings. Key elements of the proposed legislation, which has different provisions for State agencies, colleges, universities and school districts and for cities, counties, and other taxing authorities, would include:

1. Require a process of benchmarking, auditing, and implementation of energy-efficiency measures in existing publicly-constructed and –operated buildings, with energy-efficiency requirements becoming more stringent over time in a tier/phased approach⁹.
2. Require that new and substantially renovated publicly-constructed and –operated buildings meet strict energy performance standards, again with energy-efficiency requirements becoming more stringent over time in a tier/phased approach.
3. Emphasize education and promotion as critical components to the success of the program.
4. Implementation will emphasize the use of existing programs and funding in State and local governments.
5. Partnering with US EPA’s ENERGY STAR program is a critical element and has been initiated.
6. Develop and implement energy benchmark (e.g. energy use/square foot) public disclosure requirement for private non-residential and residential buildings at time of sale or, in some circumstances, at time of lease.

Impacts on Goals

This recommendation is estimated to provide a net reduction in GHG emissions of 1.2 MMTCO₂e annually by the year 2020, and will contribute substantially to growth in green jobs in Washington.

Additional Benefits

With the 2005 passage of Chapter 39.35D RCW High-performance public buildings, Washington stepped forward as a national leader in public sector green building projects. As the mandate has seen implementation, areas that can increase the energy-conserving attributes of these buildings have become known. This proposal aims at increasing the strength of the legislation as it currently exists, ensuring that green public buildings are operated and maintained in such as way as to meet the energy goals of the projects, and set the stage to address issues related to embodied energy as focus shifts to building products.

Because this proposal builds on existing legislation that has seen success, it is primarily a revision to a statute with agency and public momentum. This proposal will ensure that public buildings (new/renovated) prioritize energy efficiency credits offered in green building standards and help to build the market for regionally produced green building materials, as well as green building services.

⁹ Many of the tiering and phasing approaches in this and other recommendations include applying requirements to larger buildings first, including smaller buildings over time, and gradually increasing the stringency of the design and performance criteria. This allows the public sector to gain implementation experience, take advantage of future technology improvements, and have a clear planning schedule.

Expenditures by state and local governments are expected to be more than made up for by savings in energy costs by government entities, thus reducing the overall costs of government for years to come, and setting a positive example for the private sector. In addition, this action will result in better-built and – operated government buildings that require less maintenance over time. Through its impacts on energy use, this action will reduce emissions of local and regional environmental pollutants, reduce water use, and promote the use of in-state sources of renewable energy.

Costs

Existing programs will be utilized as much as possible, however, it is recommended that a professional level staff member be provided to each of the following agencies: Ecology (for local governments), Dept. of General Administration (for State agencies, colleges and universities), and Office of the Superintendent of Public Instruction (for K-12 Schools). This is needed to implement these efforts across all public sector entities. Overall, this recommendation is estimated to provide a net savings to the people of Washington of \$222 million dollars (2006 dollars) between 2009 and 2020, on a net present value basis.

Other Impacts

Resources available at the State level to support local and regional government efforts in improving building energy efficiency will need to be expanded in order to meet the demands of programs implemented under this recommendation.

Relationship to Other Efforts

Renewable generation included in this recommendation may count toward the renewable electricity mandates of I-937. Similarly, energy efficiency gains through this action will serve to reduce the absolute amount of additional renewable energy-based electricity generation required under the renewable electricity mandates of I-937.

EEGB Recommendation 3: State Energy Code Improvements and Establishment of 2030 Building Goals

This recommendation includes two major elements: a revision to the Washington State Energy Code (WSEC) to achieve 30 percent reduction in new building energy use relative to the 2007 edition of the WSEC and a long-term State Building Efficiency and Carbon Reduction Strategy.

1. In the 2009 Washington State Building Code adoption cycle, revise the Washington State Energy Code (WSEC) to achieve a 30 percent reduction in new building energy use compared to the 2006 edition of the WSEC. In addition, provide substantial efficiency advances in the code as it applies to remodeling, retrofit and equipment replacement, specify a process of periodic review and improvement of building energy codes, consider the impacts of codes on the availability of incentives through utility demand-side management programs, and provide education and technical assistance in the implementation of updated codes.
2. Legislative action is recommended to provide policy direction in the development and implementation of a long term **State Building Efficiency and Carbon Reduction Strategy**. Legislation would direct CTED to develop a 2010 State Strategy for Building Energy Efficiency and Carbon Reduction, which would include establishing specific targets for building energy use intensity and target for new buildings similar to the Architecture 2030 Challenge schedule. This strategy would examine several implementation methods including: state codes and appliance standards, emerging technologies, user incentives, education and technical assistance, and measurement. It is recommended that the strategy be updated every three years prior to the routine state building code review development and adoption process.

Impacts on Goals

This recommendation is estimated to provide a net reduction in GHG emissions of 5.7 MMTCO₂e annually by 2020. By setting out a long-term strategy to produce buildings that are highly energy-efficient and use renewable resources to meet their energy needs, this recommendation will contribute substantially to growth in green jobs in Washington.

Additional Benefits

Through this action, expenditures by building owners and developers are expected to be more than made up for by savings in energy costs by building owners and tenants, thus reducing the overall costs of building operations for years to come, and increasing the value of the new and existing buildings covered by this recommendation. In addition, implementing this strategy will result in better-built and –operated buildings that require less maintenance over time. Through its impacts on energy use, this action will reduce emissions of local and regional environmental air pollutants (in addition to GHG emissions), reduce water use, and promote the use of in-state sources of renewable energy.

Costs

Some additional costs will be required at the local government levels for enforcement of new building codes, and at the State level for support of local jurisdictions in enforcing codes and in preparation of the State Building Efficiency and Carbon Reduction Strategy. Additional outlays will be required to set up and run education/training programs needed to support code officials, architects/engineers, builders and others in compliance with revised building energy codes. Overall, this recommendation is estimated to provide a net savings to the people of Washington of \$811 million dollars (2006 dollars) between 2009 and 2020, on a net present value basis.

Relationship to Other Efforts

Renewable generation included in this recommendation may count toward the renewable electricity mandates of I-937. Similarly, energy efficiency gains through this action will serve to reduce the absolute amount of additional renewable energy-based electricity generation required under the renewable electricity mandates of I-937.

Beyond Waste - Capturing the Next 50% of Waste Reduction and Recycling

Through the waste reduction and recycling efforts of the last 20 years, Washington now diverts about 48% of solid waste generated in the state to reuse, recycling and beneficial use applications, representing significant GHG reductions. Pursuing the strategies recommended here to reduce and recycle “the next 50%” of solid waste in Washington could result in further reductions of at least 6 MMTCO₂e per year. Because materials and products are produced around the world, not all of these reductions will occur in Washington; however, the environmental impacts of our consumption are global and so are the benefits of efforts to reduce those impacts.

The charge given to the Beyond Waste Implementation Working Group was to recommend ways to significantly expand source reduction, reuse, recycling and composting and build on what is best and most successful in current waste management system by developing an implementation plan targeting products with the largest GHG reduction potential.

The solid waste management system is part of larger systems of materials use. Materials are extracted, turned into products, used and then disposed. The solid waste system has traditionally focused only on the last point in this stream – disposal. Recycling has been demonstrated to be an effective strategy to reduce the impacts of disposal. It is now also recognized as an effective tool to reduce the upstream

impacts of extraction, production and use. The recommendations keep these farther reaching benefits in mind.

The climate change action agenda demands a shift in our economy. The traditional “dig and dump” economy relies heavily on resource extraction and waste disposal. The new “sustainable” economy will rely on resource conservation and materials reutilization. A robust recycling system is key to making this new economic system work.

The Beyond Waste recommendations build on the success of the current waste management system, focusing on

1. Optimizing the collection system for recyclable materials,
2. Creating a product stewardship program, and
3. Providing incentives for organic materials use.

Future work is also recommended that focuses on

4. Environmentally responsible purchasing by State and local governments, and
5. Working collaboratively with the retail industry to encourage waste reduction and recycling.

The recommendations developed by the Beyond Waste IWG are consistent with and incorporate the goals of the Climate Advisory Team’s 2007 Report “Headline” #11, “Reduce waste and Washington’s emissions of GHGs through improved product choices and resource stewardship.”

The recommended Beyond Waste actions are summarized below. Please see the full Beyond Waste IWG report in appendix [##] for additional detail on these recommendations and other ideas, including discussion of a sustainable design institute and tax incentives for use of recycled materials.

Beyond Waste Recommendation 1: Optimize the Collection of Recyclable Materials

In order to optimize the collection of recyclable materials, source separation of solid wastes by residential and commercial generators into at least three categories should be required: recyclable materials and products, organic materials, and residual solid wastes. This could then increase the collection of recyclable materials and products, organic materials, and construction and demolition debris to meet a new recycling goal of 80% of the overall solid waste stream by 2020.

- The fundamental strategy to achieve this goal is to require source separation of solid wastes by residential and commercial generators into at least three categories: recyclable materials and products, organic materials, and residual solid wastes.
- Recyclable materials include at a minimum recoverable paper, container metals, container glass (with some exceptions) and plastics (number 1 and 2). Organics include at a minimum yard, garden and food wastes.
- Residential generators must separate their wastes and participate in provided collection services.
- Commercial generators must separate their wastes and can select their recycling service provider.
- Local governments would be required to update their local comprehensive solid waste management plans on a phased schedule based on population size and location or contract renewal, describing the services that will be provided. Implementation may be phased as well. Participation by small rural counties and small population areas is optional.
- As part of the local plan, affected local governments are to develop reuse and recycling policies for construction and demolition wastes.

- Financial and other incentives need to be adequate to provide the private sector capital to invest in the infrastructure needed to support this action.
- This recommendation is complementary to the organics management recommendation and the product stewardship framework recommendation.

Impacts on Goals

This recommendation could lead to approximately 5.2 MMTCO₂e in additional annual emissions savings by 2020.

This action will contribute to green collar job creation in industries that collect, process, and use recycled materials.

Additional Benefits

Optimizing use of collection services will result in fewer personal vehicle trips to transport recyclables or self-haul solid waste, contributing towards reduction in VMT.

Costs

Recycling of “traditional” recyclables has proven to be more cost effective than disposal. Recycling costs less than disposal given that disposal fees are avoided and that marketing of recyclables generates revenue. The cost of collection remains, in either case.

Costs will be borne by users (waste generators), not government. This is a “pay as you go” proposal. Costs to State and local government for planning, monitoring, public education and enforcement must include an identified funding source.

When successful, this strategy could result in reduced revenue collected by the Solid Waste Collection Tax which could impact the Public Works Assistance Account. Efforts are needed to assure revenue neutrality on this account.

Relationship to Other Efforts

This action relies completely on the ability of local governments and the private sector to work collaboratively to provide services to the public.

Beyond Waste Recommendation 2: Product Stewardship Framework Legislation

This recommendation calls for legislation that would make producers of covered products responsible for their products from cradle-to-grave, as those products are determined to be problematic from a reuse, recycling, or disposal point of view.

- Minimize the environmental and health impacts of products throughout all stages of their lifecycle, including GHG emission impacts. (46% of U.S. GHG production is the result of products according to EPA.)
- Place responsibility to reduce those impacts on those that have the greatest ability to influence product design, manufacturing and use – primarily the producer.
- Producers plan, provide, finance and report on systems to collect, transport and recycle covered products. Ecology would designate covered products and establishes guidelines for producer programs. The law is not prescriptive; it allows manufacturers flexibility in designing and providing the program.
- Potential initial products include carpet, mercury-containing lighting and thermostats, paint and rechargeable batteries. A stand-alone bill for mercury-containing lighting has also been drafted to show how the product stewardship approach could be used to address a single product.

Impacts on Goals

This action would significantly reduce GHGs. There is a two-fold benefit to product stewardship. First, there is a large potential to increase the recycling and diversion of products that are currently being disposed, resulting in reduced GHG emissions. Second, there is a significant potential to reduce GHG emissions throughout the product production process and supply chain. For example, a product stewardship program that recycled carpet could reduce GHG emissions in WA by up to 0.9 MMtCO₂e in 2020 (assuming 80% recycling). Product stewardship programs also can provide a convenient system for proper handling of mercury-containing lighting (such as CFLs) and mercury-containing thermostats. Significantly, the availability of these recycling systems will enable people to responsibly switch to energy-efficient lighting and programmable thermostats; such shifting will reduce GHG emissions by roughly 1 MMtCO₂e (not directly attributable to this action).

Additional Benefits

Product stewardship also:

- Provides a recycling solution for energy efficient products that contain mercury.
- Provides incentives to design greener products.
- Complements, and may utilize, collection programs for traditional recyclables.
- Directly addresses the 2007 CAT's recommendations.
- Creates jobs.
- Responds to citizens that want stewardship programs.

Costs

Producers – not State or local governments – would set up and pay for the recycling programs.

Residents want recycling programs, especially for toxic and hard-to-handle products; however, local governments are unable to adequately finance these programs. The framework approach minimizes waste management costs to State and local government.

There will be some costs to Ecology associated with rule-making.

Relationship to Other Efforts

Products likely to be addressed under this approach contain mercury or other toxic materials, and have significant implications for human health and water quality, including Puget Sound, if not handled appropriately at end-of-life.

Beyond Waste Recommendation 3: Market Development for Diverted Organics

The goal is to provide end uses for organics that have been diverted from the waste stream with an emphasis on optimizing the value of and developing markets for these materials. These recommendations are meant to function as both a stand alone recommendation and as complementary to the collections and environmentally responsible purchasing recommendations.

- The fundamental strategies to achieve this goal are to encourage anaerobic digestion and land application by providing/identifying financial incentives.
- Anaerobic digestion of putrescible organics including food scraps, manures and food processing wastes is encouraged through feed in tariffs and wheeling provisions.
- Use of composts and other organics is expanded on a municipal level by altering the existing purchasing language to permit all recycled organics regulated by Ecology to be used in municipal projects.

- Agricultural use of composts and other recycled organics suitable for land application is encouraged through subsidies to farmers to be administered by the State Conservation Districts.
- The State is encouraged to promote the use of existing carbon markets by municipalities and private entities as a means to partially subsidize organics diversions including food scrap composting and municipal and on farm anaerobic digestion. The Chicago Climate Exchange currently has such projects in Washington.

Impacts on Goals

Diversion of putrescible wastes has the potential to reduce 2.0 MMTCO₂e through methane avoidance while also creating jobs, benefits and credits through production of green energy and valuable soil amendments.

The cost of diversion of food scraps is comparable to the cost of landfilling- suggesting that the \$ cost per ton of CO₂ for this program is minimal.

Additional Benefits

Use of organic soil amendments increases soil carbon, improves water use efficiency, provides a substitute for synthetic fertilizers that require fossil fuels to produce, and improve soil tilth and product quality.

Anaerobic digestion and land application are complementary technologies.

These recommendations capture the value of both the carbon and the nutrients in material that has traditionally been landfilled.

Costs

Costs for anaerobic digestion are covered by sale of energy to utility companies and other revenue sources such as sale of products (nutrient recovery and peat moss substitutes) and tip fees.

Changes to the purchasing rules require no additional costs; use of organics on land will require a new source of revenue.

Existing or in process protocols on functional carbon exchanges can provide an external source of revenue for these recommendations (i.e. the Chicago Climate Exchange).

Relationship to Other Efforts

These actions rely on the public and private sectors and are complementary to recommendations by the Agriculture Carbon Market Workgroup (the full recommendations from the Agriculture Carbon Market Workgroup are available in the ESSHB 2815 report).

Beyond Waste Recommendation 4: Government Environmentally Responsible Purchasing

This recommendation calls for establishing, through a Governor's Executive Order, an intergovernmental work group to evaluate the need for and recommend revisions to state purchasing laws, regulations and practices to ensure that products and services used by State and local government have the lowest possible environmental and carbon footprint for the consideration in the 2010 legislative session.

This action is about identifying barriers to environmentally responsible purchasing within current legislation and regulations and creating the legislated authorizing environment within which environmentally responsible purchasing (ERP) can be achieved. While the focus of the proposal is to reduce the carbon footprint of governmental purchasing, it is anticipated that proposed legislation would

require that all purchases made with State funds meet environmental performance characteristics, such as lowest possible GHG emissions and toxicity. Currently, government purchasing is based on three criteria 1) price, 2) availability and 3) physical performance. This recommendation aims to add a fourth criterion, environmental performance, to the list.

Impacts on Goals

The opportunity to leverage a significant portion of the State's buying power to achieve noticeable GHG reductions by the State as a consumer, and to influence other consumers, was the rationale for selecting this action. The affect on reducing greenhouse gases is unknown at this point. As a major consumer of products and fossil fuels, the potential for reductions is significant.

Costs

Actual costs of desired products and services may or may not be higher than more traditional products have been. However, when product comparisons include life cycle costs throughout the supply chain along with environmental costs, it is likely that products meeting environmental performance standards will be price competitive.

Other Impacts

Local government will be affected by the statutory changes as well. Embedding environmentally responsible purchasing in State law will influence local governments by providing them the tools and authorities needed to integrate ERP into their own purchasing practices.

Relationship to Other Efforts

Additional actions that should be included in the Executive Order are:

- Adopt the Electronic Product Environmental Assessment Tool (EPEAT) standards for all computers purchased by government
- Require the use of environmentally responsible office paper by all State agencies
- Establish standards for motor vehicles used by government related to environmental performance.

Beyond Waste Recommendation 5: Collaborate with Retailers to Reduce Consumer Waste

Establish a voluntary collaborative mechanism to set specific commitments by retailers to reduce the carbon foot-print of and waste from products and packaging they sell to consumers. Two likely initial targets are packaging and food waste.

- Waste prevention measures result in greater GHG emission reductions than recycling. The AW-3 strategy recommended by the CAT in 2007 envisioned an overall 15% waste reduction goal, in addition to increased recycling.
- At least 50% of household wastes come through retailers. Retailers would be asked to help the State meet an overall 15% reduction goal, as described in AW-3, through voluntary actions.
- Collaboration with retailers provides a unique opportunity to reach product producers and suppliers as well as consumers---because retailers have enormous influence on the products and packaging offered to consumers and have the most direct consumer contact.
- Projects often can be structured to also benefit retailers through, for example, reduced shipping costs by light-weighting packaging and less spoilage of food.
- A possible implementation mechanism is a memorandum of agreement with the Governor's office to set specific commitments to improve options to consumers and reduce product packaging. The two initial targets are packaging and food waste, though many other options will be considered.

- Food waste: nearly one-third of the food that is purchased is thrown away. The “Love Food, Hate Waste” campaign engages retailers and producers in developing packaging for longer safe food storage and information about how to store food properly.
- An example of a possible packaging initiative addresses wine bottles: in the glassrite bottle initiative retailers could work with wine producers to lightweight wine bottles.
- Both initiatives are based on successful UK programs.

Impacts on Goals

Reducing in-state food waste generation by 50 percent could reduce GHG emissions by 0.9 MMtCO₂e by 2020.

Additional Benefits

Raising the profile of climate change with retailers and, through them, producers, suppliers and consumers has valuable education potential and could prompt these parties to make other more sustainable choices.

Initiatives have the potential to reduce costs to producers and retailers, e.g., by reducing shipping costs through more lightweight or efficient packaging.

This proposal is compatible with and complimentary to the product stewardship framework proposal (Beyond Waste Recommendation 2).

Costs

State collaborative effort, planning, technical support, outreach and education require a funding source.

Other costs and/or savings will be incurred by retailers and/or producers, and these costs or savings most likely will be passed to consumers in the purchase price of products. There are cost savings for retailers associated with many waste reduction activities, including less wastage of food.

There are cost savings for households associated with better product choice, less wastage of food and reduced waste to be disposed.

Relationship to Other Efforts

This action relies completely on the ability of the State to actively engage retailers in collaborative efforts that appeal to the retail sector because of cost reduction or other benefits.

Transportation IWG – Increasing Transportation Choices for the Future

Emissions from transportation account for nearly half of total greenhouse gas (GHG) emissions in Washington. Achieving significant reductions in transportation-related GHG emissions is critical for Washington to meet its short and long term vehicle miles travelled (VMT)¹⁰ benchmarks with the ultimate goal of reaching the state’s GHG emission reduction goals.

At the same time, Washington’s transportation sector is facing a funding crisis. Declining sales tax revenues and increasing fuel prices have contributed to shortfalls in the revenue that the Washington State Department of Transportation (WSDOT) and local transit agencies need to fund transportation

¹⁰ As referred to in ESSHB2815 vehicle miles travelled (VMT) is the number of miles that vehicles less than 10,000lbs are driven. VMT is a surrogate for GHG emissions from the transportation sector. Reducing VMT per person reduces emissions and improves the overall efficiency of the transportation system.

infrastructure and operations. Moreover, because transportation funding is dependent on the gas tax, as the state achieves progress in reducing the amount of miles travelled, the funding for transportation further diminishes.

In light of this challenge, the Transportation IWG recognized the opportunity to re-conceptualize transportation in Washington. To work towards collaborative solutions, WSDOT combined its responsibilities under ESSHB 2815 with the CAT effort. The charge to the Transportation IWG was to recommend tools and best practices to achieve the VMT reduction benchmarks in Section 8 of ESSHB 2815. The work of the Transportation IWG under the CAT addresses the ESSHB 2815 requirements regarding “most promising” GHG reduction strategies and VMT reduction strategies for transportation.¹¹ These recommendations are summarized in this section of the CAT report, and complete details can be found in the full report from the Transportation IWG in appendix **XXXX**.

Demonstrating the creativity and collaboration that will be necessary to address the transportation and funding crisis in Washington, the Transportation IWG has recommended bold actions that can begin to meet the VMT reduction benchmarks with the ultimate goal of reducing transportation related GHG emissions, while providing appropriate levels and quality of service throughout Washington and addressing the transportation funding crisis.

Through these recommendations, the Transportation IWG seeks to create a future travel environment for Washington where citizens can choose transit, walking, biking or ridesharing for their daily activities; a future transportation system that supports environmentally-friendly transportation choices that are easier to use, more reliable, safer, and less expensive than the current system; and future funding decisions that support and encourage reductions in GHG and VMT, further Washington’s economic competitiveness and minimize expenditures on imported fuels.

The ultimate goal is to build, operate and maintain a transportation infrastructure that is efficient and effective at moving people and goods. To achieve this vision, Washington must reexamine how investments in transportation infrastructure and services are made at all levels of government. Washington State should make funding decisions and pursue revenue generating strategies that stimulate behaviors that support climate change solutions and that discourage behaviors that contribute to the problem.

In addition, short and long-term supply and demand strategies must be implemented immediately and harmonized to account for long-term changes in behavior. A portfolio of strategies is needed that evolves over time as the transportation infrastructure becomes available and as demand shifts, with strategies tailored to meet three different types of users: Large Urban, Small Urban, and Rural. Recognizing these different user types in the design and timing of strategies is an important component of maximizing their effectiveness. Several of the Transportation IWG strategies to reduce VMT focus primarily on those parts of Washington that are more densely populated, such as the Puget Sound region, where the VMT reduction potential is greater.

To reduce both VMT and GHG, the Transportation IWG is recommending a package of three integrated strategies:

- Transit, Ridesharing, and Commuter Choice Programs, including specific transit, ridesharing, and commuter choice programs that increase viable alternative options for people to conduct the activities, trips and travel needed and desired for daily life;
- Compact and Transit Oriented Development (CTOD) & Bicycle and Pedestrian Accessibility that supports the development of compact walkable, bikable and transit-friendly communities and to increase the travel choices available;

¹¹ Due to time and scope considerations, three of the ESSHB 2815 requirements were completed by WSDOT outside of the CAT process, including **XXXX**. This work is contained in appendix **XXXX** on page **XXXX** of the State’s full report in response to ESSHB 2815.

- Transportation Pricing Strategies that identify and create potential pricing mechanisms to support and incentivize GHG and VMT reductions, and stress key considerations for revenue use to support transportation infrastructure maintenance and operations.

Given the need for a scalable multi-pronged approach to address the climate impacts of the transportation sector, the Transportation IWG has also defined and advanced specific non-VMT transportation policy proposals, including recommendations related to freight railroads; diesel engine emission reductions and fuel efficiency; vehicle electrification; and low carbon fuel standard.

The recommendations from the Transportation IWG further advance several of the strategies recommended by the CAT in 2007 and build upon steps already taken by Washington Department of Transportation (WSDOT) and regional and local planning organizations. The Transportation IWG’s work furthers the 2007 CAT headlines for VMT reductions (*Headline 5: Build and continue to redesign communities that offer real and reliable alternatives to single occupancy vehicles*), cleaner vehicles and fuels (*Recommendation 6: Ensure Washington has vehicles that are as efficient as possible and use non-carbon or lower carbon intensity fuels developed sustainably from regional resources*) and investing differently in transportation infrastructure in order to move people and goods, and not just cars, as efficiently and effectively as possible (*Recommendation 7: Focus investments in Washington's transportation infrastructure to prioritize moving people and goods cleanly and efficiently*).

The [XX#] Transportation IWG recommendations are summarized below. Please see the full report in appendix [##] for additional detail on these recommendations and other ideas, as well as the background materials developed by the Transportation IWG.

Placeholder for short summaries on each of the five Transportation IWG recommendations. These summaries will be forwarded to the CAT on Monday, October 27 with the full final draft Transportation IWG report:

- *Funding*
- *Transit, Ridesharing, and Commuter Choice Programs*
- *Compact and Transit Oriented Development (CTOD) & Bicycle and Pedestrian Accessibility*
- *Transportation Pricing*
- *Non-VMT*

State Environmental Policy Act (SEPA) Implementation Working Group – Guidance for Incorporating Climate Change into Development Decision-making

The SEPA Implementation Working Group (IWG) developed products and recommendations to provide guidance for local and State agencies on how to incorporate climate change considerations into SEPA analyses. The IWG’s work responded to the CAT Headline 3, to “analyze greenhouse gas emissions and mitigation options early in decision-making, planning processes, and development projects.”

In other states and on a federal level, climate change policy under SEPA-like statutes has been made on an ad hoc basis through piecemeal litigation or through piecemeal precedent set by individual environmental reviews negotiated between individual applicants and individual lead agencies. In neither case has there been consistency or predictability.

The purpose of the SEPA IWG’s work was to diminish the potential for litigation (and to provide consistency and predictability) by giving State and local agencies the tools and framework they need to fully incorporate climate change considerations into their decision-making. Through its recommendations, the IWG seeks to provide assurance to government decision-makers and project proponents that proposals will be assessed under a predictable climate change framework which will help Washington meet its greenhouse gas reduction requirements. Through these recommendations, the IWG also sought to present ways in which SEPA can be leveraged to provide incentives for “climate friendly” plans, policies, and projects.

The IWG notes three key shared principles:

- The SEPA IWG generally supports the concept of upfront nonproject SEPA review of climate change planning, based upon adequate standards, to reduce greenhouse gas emissions and to eliminate duplicative project-level SEPA review.
- The SEPA IWG does not intend for any of its recommendations or ideas to unintentionally impact existing categorical exemptions under SEPA. Any desired changes to categorical exemptions put forward by the group or any of its members will be made explicit in the text of this report. The IWG did not address categorical exemptions in depth or focus on whether they should be expanded, reduced, or remain the same.
- The SEPA IWG acknowledges that it is equally important to provide clarity and predictability for treatment of both project and non-project actions or proposals under SEPA.

The 11 SEPA IWG recommendations are summarized below. Please see the full report in appendix [##] for additional detail on these recommendations and other ideas, as well as the resources developed by the SEPA IWG.

SEPA Recommendation 1: Clear Guidance and Revised Checklist

Ecology should revise the environmental (SEPA) checklist and provide guidance to assist in the evaluation of greenhouse gas emissions from both project and non-project proposals. Guidance would include:

- Clear guidance on which of the 16 categories listed in Appendix D of the SEPA IWG report should be included for typical types of projects and non-projects. The guidance would give lead agencies the discretion to apply any combination of the 16 source categories for exceptionally complex proposed actions outside the range of “typical” SEPA actions.
- Clear guidance on how each of the 16 source categories should be handled at different stages of the SEPA process (e.g., determination of any applicable exemptions, disclosure, quantification, threshold determination, mitigation, and future monitoring/reporting) for representative types of projects and non-projects.
- Incorporation of external resources for determining which of the categories to measure and potentially mitigate for projects and non-projects (e.g., current activity in California and Massachusetts; IPCC guidance, ISO, etc.).

A draft outline of Ecology guidance is included in Section 8 of the SEPA IWG report.

Expected Benefits

The guidance and the revised SEPA checklist will provide clear direction to SEPA proponents about “what to measure“ under SEPA, especially for typical types of projects and non-projects. At the same

time, the guidance will allow flexibility to a) accommodate differences in the relative importance of different sources of emissions sources for different types of projects and plans and b) to accommodate “atypical” projects that require a tailored approach.

SEPA Recommendation 2: Regularly Updated Materials and Coordination

Ecology should regularly update and distribute the reference materials developed through the IWG related to emission sources, assessment tools, and mitigation options. This is particularly important in the case of new emerging tools, which could be useful for greenhouse gas emissions assessment under SEPA. In updating the tools reference materials, Ecology should coordinate with other State and local lead agencies, SEPA proponents, and the public that are looking at tools for similar purposes to help achieve statewide consistency in tools used. A future task includes the review by practitioners of the tools matrix developed by the SEPA IWG.

Expected Benefits

These resources will reduce the burden on SEPA applicants and increase the consistency of SEPA analysis of greenhouse gas emissions. Coordination with other State and local agencies will help ensure that the most up to date tools and resources are available and increase consistency of analysis across programs. Review by practitioners will help ensure that resources are effective and non-burdensome.

SEPA Recommendation 3: Emissions Tool Development

Ecology should work with other State and local lead agencies, SEPA proponents, and the public to develop and/or identify basic tools for recommended use within the SEPA process to make assessments predictable and not overly burdensome. Any tools developed should be effective, easy to use, and be useful for “typical” SEPA applications. These tools should be regularly updated as the state of knowledge in the field changes. In particular, the IWG recommends that easy-to-use tools, both qualitative and quantitative, be identified and/or developed in the following areas:

- VMT forecasting and GHG tailpipe emission factors for on-road traffic for large and small projects and plans,
- Embodied emissions,
- Loss of sinks and greenhouse gas reductions through the use of sinks,
- Reduction in space heating and electricity use for residential, commercial, and industrial buildings, and
- Mitigation effectiveness.

Expected Benefits

The development of easy to use tools in key areas will increase the consistency and quality of analysis and reduce the burden for project applicants to conduct measurement in key areas.

SEPA Recommendation 4: Use of Qualitative Analysis

The SEPA IWG recognizes that easy to use tools are not currently available for estimating future emissions from all sources, and it may be some time before adequate tools are available. The IWG also

recognizes that quantitative evaluation may not be practical or warranted for some types of proposals (e.g., small, routine projects). Therefore, the IWG recommends that applicants be able to conduct a qualitative analysis of greenhouse gas emissions in cases where a) adequate tools do not exist, b) criteria outlined in SEPA guidance requiring a quantitative evaluation are not met, or c) there is an established alternative to quantification (e.g., a “green list”¹² or programmatic analysis of the proposed action). Qualitative tools may include check lists, decision trees, stream-lined assessments or screening tools where assumptions and approximations dictate that the results are qualitative in nature. Ecology should provide guidance on 1) qualitative standards, 2) when qualitative analysis is acceptable and 3) what constitutes an acceptable qualitative description of emissions.

Expected Benefits

Giving project applicants an option for qualitative analysis (along with accompanying guidance) in specified circumstances will increase the rigor and consistency of analysis in areas where quantitative tools are not available or appropriate. It may also reduce the burden of analysis for certain types of “typical” projects where the results of quantification are easily predictable and therefore not needed in every case.

SEPA Recommendation 5: Guidance Regarding Mitigation

Ecology should develop guidance on the effectiveness of mitigation options. The guidance should also develop criteria for assessing newly identified mitigation strategies. In addition to information on the effectiveness of strategies, (i.e., how many tons are mitigated), guidance would ideally include the following information:

- Cost and cost-savings from each strategy, and
- Criteria/approach for assessing “new” strategies not already in the guidance.

This guidance should be regularly updated.

Expected Benefits

Mitigation guidance will reduce the burden on lead agencies and applicants of identifying appropriate mitigation options. It will also increase statewide consistency in the analysis of mitigation strategies’ effectiveness and appropriateness for similar types of projects and non-projects. Including criteria and approaches for assessing new strategies will help keep mitigation guidance up to date with current technology and scientific understanding.

SEPA Recommendation 6: Develop Approach to Threshold Determination

The Department of Ecology should develop an approach to threshold determination under SEPA that has the following characteristics:

- A requirement that all lead agencies establish a significance standard;
- The development of a statewide standard of significance that is available to lead agencies should they choose to use it;

¹² A “green list” could contain types of projects that are pre-determined not to have climate change impacts and may produce net benefits to climate. For projects contained on the list, project proponents may be relieved from some or all aspects of SEPA analysis for climate change or some or all mitigation requirements.

- The option for lead agencies to develop their own standard, subject to “sideboards”¹³ set by the State in guidance, rule, or statute;
- The development of approaches for applicants to qualitatively obtain a Determination of Non-Significance (DNS) for climate impacts (note the relationship to qualitative analysis described in Recommendation 4); and
- A linkage between the significance standards and the statewide greenhouse gas reduction requirements.

The above components of an approach to SEPA threshold determination are based on a plurality or majority of votes cast by IWG members (the outcomes of these votes are included in Appendix B of the SEPA IWG report). Even though the characteristics described above were favored by a plurality or majority of members, IWG members still held a range of views on some key points that would benefit from further discussion by Ecology and its stakeholders. These are:

- The degree to which threshold determination provisions should be set in guidance, rule, or statute (the term “sideboards” was used to encompass all three possibilities). The IWG did not decide on this issue.
- The degree to which the State should provide sideboards to constrain lead agency discretion in setting a significance standard other than a statewide standard. Although it was not an option that achieved a plurality of votes, many members felt that the State should not constrain lead agencies’ efforts to set their own standards. Some felt that flexibility would allow lead agencies to innovate and experiment and inform a “learning by doing” approach statewide.
- Whether there should be a “phasing in” of State requirements and sideboards in threshold determination. The State could begin with a more flexible approach (possibly including no State requirement that lead agencies set a significance standard) and refining it into a more consistent statewide approach over time.
- The specific type of quantitative significance standard. The SEPA IWG analyzed a number of different types of quantitative significance standards, and the two types of standards that generated the most discussion were 1) a percentage below business as usual and 2) a strict volume approach (e.g. tons per unit). However, the majority of IWG members voted for something other than a strictly percentage-based or volume-based approach. Instead, the “sense of the group” was that a hybrid percentage-volume approach or a “menu” approach was promising.¹⁴
- How to link the stringency of significance standards to statewide greenhouse gas requirements and whether to do this for both a statewide standard and as part of the sideboards for lead agencies that set their own standards. Although the SEPA IWG recommended a conceptual linkage between threshold determination and the State requirements, it did not address any questions about how to operationalize it. One key question is how much greenhouse gas reductions to expect from new development versus existing development.
- Similarities and differences in the approach to threshold determination for projects vs. non-projects.

Expected Benefits

Clear and consistent approach to threshold determination is one of the most important features of making SEPA predictable for lead agencies and project proponents. The approach outlined above seeks a balance

¹³ The SEPA IWG struggled with the right word to describe limits or constraints placed on lead agency discretion without implying that these would be in the form of state guidance, rule, or statute. The IWG used “sideboards” as a working term for this concept. Members suggested other terms as well, including “constraints,” “benchmarks,” “criteria,” and “parameters.”

¹⁴ Under a menu approach, the state would develop a menu of possible standards and lead agencies could adopt the menu or use it as source for selecting one or more standards. It is described in more detail in Section 4.1.2.

between statewide consistency and lead agency discretion while also linking SEPA to the statewide effort to achieve greenhouse gas emissions requirements. The recommendation for further discussion of some aspects of threshold determination reflects the importance that the SEPA IWG attaches to getting this aspect of SEPA right.

SEPA Recommendation 7: Conceptual Ideas for Leveraging SEPA

The SEPA IWG recommends four conceptual ideas to the CAT as promising approaches for using SEPA-related incentives or disincentives (i.e., “leveraging SEPA”) to promote climate friendly development. The IWG has not fully discussed or endorsed specific approaches for implementing these ideas—this is an area for future work. Some of the ideas may require legislation, but the IWG does not recommend legislation at this time. Rather, it asks the CAT to support these ideas in concept without asking the CAT to endorse any particular version of them.

The IWG identifies one additional idea to the CAT as an area for further analysis by Ecology and its stakeholders.

The ideas are summarized below; more in-depth descriptions—along with additional comments from IWG members—are included in Appendix C of the SEPA IWG report. These ideas are put forth based on a majority vote of IWG members; the level of IWG member support for each is also summarized in Appendix C of the SEPA IWG report.

The IWG recommends the following four “leveraging SEPA” ideas:

- *Neighborhood, District-Level Exemptions.* SEPA would be amended to authorize jurisdictions to provide a "neighborhood, district-level exemption." This would be for municipally designated areas within UGA's, where property owners agree to comply with statutorily set minimum sustainable development standards. The standards could require compact, connected, walkable neighborhoods, with good jobs ratios, open space, a wide variety of uses, transit supportive residential densities; and high performance buildings and infrastructure. Any exemption should be clearly tied to achieving total GHG and VMT reductions to document or demonstrate effectiveness and ensure credibility. Also, the exemption language will need to be carefully drafted, and would include specific statutory criteria to address the full range of environmental impacts.” This exemption could be a new statutory section, or RCW 43.21C.229 could be revised to incorporate this approach. Alternatively, RCW 43.21C.240 could be utilized, with or without amendment, to accommodate this approach.
- *Upfront SEPA.* This idea would allow cities to elect to designate a subarea for more compact commercial, residential, mixed use or industrial development ("Subarea"). If the city: 1) designates the Subarea; 2) conducts thorough SEPA review (EIS) of the Subarea which is a maximum build-out analysis that identifies mitigation steps to address significant environmental impacts (including climate change impacts); and 3) adopts as new Subarea development regulations that incorporate and require the climate change mitigation and any other mitigation identified in the Subarea SEPA review that is not already addressed in development regulations, then all subsequent development in the Subarea would be required to implement the climate change measures and would be exempt from any project-level SEPA or SEPA appeals. Ideally this approach would be an improved form of Planned Actions with an upfront funding mechanism. SEPA Planned Actions, RCW 43.21C.031, with an upfront funding mechanism, or RCW 43.21C.240 might be utilized to preclude project-level SEPA review.
- *Voluntary Mitigation List and “Green List” Projects.* This idea involves programs for GHG emission mitigation or mitigation measures which, if included in a project proposal, could

provide certainty that greenhouse gases (GHG) impacts are addressed, and thus fully or partially exempt the project from further GHG reduction requirements. For example, specific mitigation measure and programs could be included on a “Green List.” “Green List” mitigation measures (or mitigation types) would be considered a positive contribution to the State’s efforts to reduce GHG emissions, and as such would exempt projects from further mitigation measures. Additionally, aspects of projects or programs may have mitigating effects, and as such would be given a mitigation value that would reduce or eliminate the need to further address GHG emissions through mitigation.

- *Regional Planning.* This idea involves developing and adopting a regional or statewide Climate Change Plan (GHG Reduction Plan) that would identify the broad direction of the State’s or region’s approach to reducing emissions. As part of that Plan process, a statewide EIS on GHG emissions, impacts, and mitigation would be prepared and could then be adopted into local plan-level EISs. The statewide EIS would be prepared anticipating its use for regional and local planning SEPA analysis. The statewide/regional plan could identify regional targets and identify alternative ways that local agencies could translate the regional targets into local plan-level and project-level environmental analysis and significance thresholds.

The IWG recommends further analysis of the following “leveraging SEPA” idea:

- *Future Vulnerabilities/Adaption Measures in Environmental Impact Statements.* Over and above the SEPA IWG’s Recommendation 8 to incorporate considerations of vulnerabilities and adaptation in the SEPA checklist (see below), the IWG suggests further analysis of the idea of incorporating these considerations into other aspects of the SEPA process. Specifically, the ideas to be analyzed are:
 - Amending the SEPA rules to require an analysis of the adverse impacts of global warming on the proposed action as part of an EIS.
 - Amending the SEPA rules to require that EISs must include and analyze an alternative that would be minimally affected by the adverse impacts of global warming.
 - Requiring reopeners or contingent mitigation for uncertain, but high cost impacts.

Expected Benefits

Well-crafted “leveraging SEPA” ideas, with appropriate standards and safeguards, can create appropriate incentives for both reducing greenhouse gas emissions and reducing the procedural burdens of SEPA for “climate friendly” projects. This is an area that the IWG sees one of the most direct connections between SEPA and the reduction of greenhouse gas emissions.

SEPA Recommendation 8: Analysis of Future Vulnerabilities in Checklist

Ecology should revise the environmental (SEPA) checklist to incorporate analysis of how predicted changes in the existing environment due to climate change, combined with proposed actions, may create additional impacts on the natural and built environment. Ecology should also provide accompanying guidance on how to conduct this analysis. The required analysis should be based on readily available tools and resources and not require applicants to conduct new studies. As components of this recommendation,

- The State and local governments should continue to fund and synthesize research into the anticipated regional effects of climate change;
- Ecology and other agencies should provide guidance on how to evaluate and mitigate the effects on the natural and built environment of predicted changes in the existing environment due to

climate change, combined with proposed actions as part of SEPA review. Ecology and other agencies should clarify the responsibilities of lead agencies and applicants in this analysis;

- Ecology and other agencies should make tools and resources available to applicants to support the required analysis; and
- Ecology should amend the SEPA checklist to require analysis of the vulnerability to climate changes of the proposed action, future adaptations that may be required to address those vulnerabilities, and the impacts of those adaptations. Key resources and sectors to be addressed are¹⁵:
 - Water Availability (changes in participation patterns)
 - Water Quality (particularly temperature)
 - Urban Infrastructure (including potential for increased storm water runoff from increased flooding)
 - Energy Supply and Demand (due to decreased water supply and temperature rise)
 - Forests (health, productivity, fires, diversity)
 - Agriculture (particularly irrigated and dryland areas)
 - Air Quality (increased ozone, particulates, allergens)
 - Impacts due to Extreme Weather Events (flooding, windstorms, droughts, heat waves)
 - Coastlines (direct and indirect impacts from sea level rise)

Expected Benefits

This recommendation is a small but important step in encouraging lead agencies and project applicants to think ahead about how expected changes in Washington’s climate may affect the future impacts of their projects. Through analysis and disclosure of these potential future impacts using readily available tools and resources, projects and plans can be made more resilient to expected future changes in the climate.

SEPA Recommendation 9: Taking into Account Lead Agency Resources, Capacity, and Constraints

As Ecology develops formal SEPA and climate policy, it should take into account the implementation resources, capacity, and constraints of the range of jurisdictions implementing SEPA. The IWG has identified several related items in the “Future Work” section of its report that should be further addressed by Ecology and/or stakeholders.

Expected Benefits

This recommendation acknowledges that lead agencies in the State have dramatically different levels of resources and capacity to implement SEPA and that this affects both the burden placed on some lead agencies as they implement SEPA and climate procedures and the effectiveness of the new procedures in their jurisdictions. Accommodating these differences up front in the design of SEPA and climate procedures can make SEPA more effective and less burdensome for lead agencies.

SEPA Recommendation 10: Training

The State should provide training and funding for training for lead agencies and applicants implementing SEPA and climate provisions. An estimated cost for training could be based on the cost of recent statewide storm water training.

¹⁵ This list is drawn from Summary of Regional Impacts of 21st Century Climate Change (from February 2008 CAT Interim Report)

Expected Benefits

Training will help lead agencies effectively implement SEPA and climate procedures and reduce the burden on lead agencies to get trained to understand and implement new guidance and procedures.

SEPA Recommendation 11: Advisory Committee

Ecology should address future work described in the recommendations above and the highest priority issues described at the end of this report in the “Future Work” section with the assistance of an advisory group and invite members of the IWG to participate. This committee may have sub-committees or working groups that focus on particular sectors (e.g., transportation) or issue areas (e.g., threshold determination).

Expected Benefits

There are many important issues that the SEPA IWG did not fully address or resolve because of the constraints of time, the complexity of the issues, and the many aspects of SEPA that are affected by considerations of climate change. The IWG expects that the continued work of a stakeholder advisory committee can help develop SEPA and climate policy and provide a valuable resource to Ecology as it implements the recommendations of this group.

Market-Based Mechanisms Are Critical For the Success of the Comprehensive Climate Approach

The Legislature and the Governor, in passing and signing ESSHB 2815, established a firm public policy commitment to achieve significant reductions in GHG emissions. These “most promising” recommendations from the CAT contribute towards these GHG targets, but they are targeted approaches that cover only specific sectors of the economy. In order to meet the 2020 targets and achieve the longer-term GHG emission reduction targets, a ‘centerpiece’ market-based policy is essential to establish a strong economic signal that can both deliver cost-effective solutions, and drive the broad structural changes needed to achieve a flourishing low-carbon economy. The sector-specific policies recommended by the CAT can complement this centerpiece policy – in particular, a cap-and-trade system as described below -- but they alone cannot (nor are intended to) achieve the longer-term goals in the absence of this market signal, as well as additional complementary policies. Market alignment with GHG reduction targets is crucial to help guide the untold number of every day decisions that will need to choose to emit less carbon and to stimulate with certainty the investments and innovations needed to transform structurally the economy on the long road to our 2050 goals. The exact mix of policies, investments, inventions and behavioral choices needed to achieve this long range goal is impossible to predict, but market mechanisms can incorporate the goal of significantly reduced GHG emissions into all of our economic decisions, and support the most efficient way of getting there.

In 2007, the CAT called for Washington to *“build market-based mechanisms to unleash investment in the creativity and innovation of Washington’s economy to deliver cost-effective emission reductions”* (Headline #1). The CAT also called for the State to “continue to participate and provide leadership in the Western Climate Initiative (WCI) and emerging national efforts to develop market mechanisms”. Over the course of 2008, the CAT has kept abreast on the developments of the WCI, which released its design recommendations for a regional Cap and Trade program in September 2008. The CAT applauds the efforts and leadership of the State in the development of the WCI design. This path-breaking achievement demonstrates the capacity of highly diverse states and provinces to work collaboratively and develop a market mechanism that enables each jurisdiction to meet its emission reduction goals, to lower

costs, and to address its unique circumstances. Washington should continue to participate and provide leadership in WCI and other regional and national efforts to address climate change through market mechanisms and other means. By actively participating in these broader dialogues, the State will be able to ensure that Washington's interests are recognized and more effectively influence the development of any federal climate policy.

The CAT believes that some key principles should be observed when aligning the market to drive reductions of GHG emissions. The approach must be effective in reducing GHG emissions at pace and depth commensurate with addressing the climate challenge. These reductions should be accomplished in a manner that minimizes costs as much as possible. Sufficient market oversight should be provided to prevent market manipulation. Finally, the approach should also recognize Washington's competitive strengths, avoid leakage of emissions or jobs, and minimize impacts to Washington citizens, especially low-income residents.

As the Legislature evaluates whether continued participation in the further development of WCI is in Washington's best interest, various individual members of the CAT have expressed the following considerations for potential design performance: establishing an economy-wide approach to reducing GHG emissions; encompassing a geographic and economic market broad enough to be viable; creating linkages with other existing trading systems; enhancing the ability to influence the development of, and eventually connect with, future national or international systems; utilizing offsets and other design features in a meaningful manner that effectively reduces the costs of compliance for emitters and for the State as a whole; generating and distributing any revenue that may be generated in a responsible manner that reinforces the ways that GHGs can be reduced without impeding the ability for entities with compliance obligations from making needed investments to reduce their own GHG emissions; ensuring sufficient returns to the private sector to serve as a catalyst for investment in low carbon technologies; and resulting in significant GHG emission reductions within the covered sectors of the economy by the year 2020.

The CAT as a whole has not developed a collective opinion on whether or not WCI as currently designed accomplishes these and other design considerations. Many key implementation decisions still lie ahead, both for the WCI as a whole and for the State on aspects for which the State has discretion. The CAT believes that other approaches, such as a tax on carbon, may also be capable of aligning the economy to stimulate meaningful GHG reductions by 2020, and the State should be open to them should it decide that continued participation in the development of WCI is not warranted. In deciding if such other mechanisms are feasible, the CAT recommends that consideration be given to whether the approach will actually ensure meaningful GHG reductions; what other states or political jurisdictions, if any, would need to participate so as not to diminish Washington's economic competitiveness; and how such an approach would be distributed throughout Washington's economy and upon its citizens.

The CAT is concerned that if a centerpiece approach to align the market in order to drive GHG emission reductions is not soon available in Washington, then significantly more intensive regulatory policies or public subsidies would be necessary to ensure that Washington can meet its GHG emission reduction targets. The CAT believes that such an approach may be less efficient in achieving the necessary GHG emission reductions.

Estimating the Benefits and Impacts of the CAT's Recommendations

[Placeholder for summary table of costs and tons for quantified recommendations]

As described in the State's report in response to ESSHB 2815¹⁶, the CAT's recommended actions can

¹⁶[Insert reference to 2815 report]

play a key role in the State's overall plan to meet its GHG emission reduction, and other related, goals. Working in concert with other existing and planned State actions, the CAT's recommended actions described in this report can contribute a significant share [% can be added when ESSHB report is drafted] of the reductions needed to return the State's GHG emissions to 1990 levels by 2020 and help to spur the transition to a low-carbon economy.

GHG emission impacts were estimated for [##] of the CAT's [##] recommendations.¹⁷ Taken together, and assuming full and timely implementation, these [##] actions could yield [##] MMTCO_{2e} in annual emissions reductions by 2020. This amounts to a reduction of [##] percent below expected 2020 levels, after existing actions are taken into account.¹⁸ These estimates account for interactions among the various CAT recommendations, as well as interactions with some, but not all, of the other existing State programs and policies, such as the energy efficiency provisions of I-937.¹⁹ The analysis of GHG emission reductions was conducted in coordination with IWG co-leads and members, using consistent data sources, assumptions and clear presentation of results across the IWGs (for more details, see the quantification approach summary in appendix ##).

The other [##] recommendations are likely to contribute in one way or another to declining GHG emissions as well. Many of these strategies also have significant benefit beyond emissions reductions, and contribute towards Washington's goals of creating a Clean Economy, supporting Washington industry, and reducing expenditures on imported fuel. Several strategies have other air quality benefits and/or contribute to additional "quality of life" enhancements.

The CAT recognizes that there are significant public and private investments associated with many of its recommendations, even as there is often significant payback to society and to businesses from many of these recommendations, as well. Some of the CAT's recommendations are designed to generate public revenue; many recommendations are also designed so that the direct users and beneficiaries of the strategy pay for their choices. Other recommendations are designed to send price signals that both encourage changes in behavior and also may raise revenue for needed investments.

¹⁷ Due to the general nature of some recommendations or the lack of adequate quantification tools, the other [##] could not be analyzed at this time.

¹⁸ To ensure consistency with recent and ongoing analysis by the State, the quantification of 2008 recommendations is largely based on the projections and assumptions from *Washington State's GHG Inventory and Reference Case Projections, 1990-2020*, the same report that serves as the basis for the CAT's 2007 interim report as well as the State's ESSHB 2008 report. Developments since the time these projections were assembled (mid-2007) may change the economic and GHG emissions outlook for the State and the specific impact of the recommended actions, particularly in the near term. Significant increases in fuel prices and the current slowdown in economic activity are likely to dampen driving behavior, business activity, personal consumption, and thus energy use and emissions. Gasoline consumption has already dropped [XX] percent over the past year; VMT has begun to decrease and may continue to decrease in ways that were not assumed to be likely last year. GHG emissions are now likely to increase more slowly than anticipated in either the CAT's interim 2007 report or the State's official inventory and forecast. Given the rapid pace at which economic and energy price outlooks have been changing, and the limited time available for the CAT's work, the CAT has continued to use last year's projections, while at the same time recognizing the potential impact of these recent developments. In addition to lowering the rate of business-as-usual emissions growth, slower economic growth and high energy prices are likely to decrease the estimated emissions savings and increase estimated cost savings (at least in the short run) associated with many recommended programs and policies (as well as those already implemented), especially those that aim to reduce the use of fossil fuels.

This report provides some clarity about whether emissions reductions are likely to occur in Washington or otherwise "show up" in the State's official inventory, as do emissions savings, for example, that result from reducing the emissions from electricity imported from generators outside Washington. For example, transportation-related GHG emission reductions will occur largely within Washington, which "count" towards the 2020 GHG emission reductions and will help the State meet its compliance budget if the State participates in the Western Climate Initiative cap and trade program. Reductions from some recommendations, primarily those dealing with goods that are consumed or disposed of in Washington, but produced outside Washington, lead to emission savings outside the state. Because these reductions may not occur in Washington, they may not be reflected in the State's emission inventory and, while contributing towards reducing Washington's lifecycle GHG emissions "footprint", may not "count" towards the 2020 GHG emission reductions established by the Legislature in ESSHB 2815. However, such actions are a critical demonstration of Washington's leadership in addressing climate change, represent important opportunities for sizeable emission reductions, and could prove critical on the long-term path to a global low-carbon economy.

¹⁹ This report provides on a partial accounting of the emissions impact of CAT actions. For a fuller assessment of how CAT recommendations interact with the fuller suite of state actions, see the ESSHB 2815 report.

The complete IWG reports discuss the cost implications of the recommendations more fully (see appendix **XX**). They touch on both the overall costs to the state as a whole (consumers and businesses), as well as the implications for State budgets, in terms of both revenue and revenue requirements. With respect to the former, the total cost (or cost savings) to the State as a whole has been estimated for those recommendations most readily subject to quantification.

Similarly, the IWG reports reflect on what the recommended actions could mean in terms of state budget for the current biennium. For each of the actions with budget implications, fiscal impact reports (“fiscal notes”) are currently underway in order to inform the State and the legislature. In some cases, a greater understanding of the costs and cost savings, particularly concerning who will initially bear costs or reap savings, will help ensure successful implementation design, for others costs are sufficiently understood for implementation efforts to commence.

While the current economic challenges and the resulting declining public revenues may limit the public funding available in the near term to address the CAT’s recommendations, these economic challenges underscores the importance of reevaluating existing budgets and reallocating existing resources to accomplish the work needed to meet Washington’s targets. As well, it emphasizes the importance of incorporating meeting Washington’s climate change targets as significant, “co-equal” criterion for the expenditure of public resources.

The CAT’s recommendations are designed to ease the discernable financial burden that may fall on some parts of the economy or citizenry. As state, national, and global markets evolve to address climate change, and as choices are made and investments redirected accordingly, costs and benefits will inevitably be distributed unevenly to some sectors or interests. It will be essential to ensure that Washington communities with limited financial resources are strengthened as a result of these changes. Indeed, these communities are often those most vulnerable to the impacts of climate change itself.

2009 and Beyond: Fulfilling the Comprehensive Climate Approach

In 2008, the CAT has primarily focused on recommending “most promising” next steps for Washington in four specific areas, covering 23 of the strategies recommended in 2007. In and of itself, this set of recommendations is not a comprehensive package to address all aspects of reducing GHG emissions. The CAT has not addressed every recommendation from its 2007 interim report in its 2008 deliberations, nor has the CAT identified or analyzed all potential strategies in each major sector of the economy. What has been developed here are the ‘most promising’ recommendations of the areas the CAT did analyze in 2008. The CAT wishes to note that several of the 2007 CAT “Headlines” and specific strategies have moved forward in 2008 outside the CAT process.

Actions Being Pursued Outside the 2008 CAT Process That Address the CAT’s 2007 Interim Recommendations

Washington has implemented significant actions to date that reduce GHG emissions and continues its leadership to meet the challenge and seize the opportunity of addressing climate change and creating economic benefits. In particular, the following “Headline” recommendations from the CAT’s 2007 interim report have moved forward in other venues:

- *Establish Emissions reporting so that progress in emission reductions can be tracked and acknowledged. (Headline #2)* This has moved forward through internal work by Ecology through its development of reporting rules. For more information, see ESSHB 2815 report, page **[XX]**.

- ***Invest in worker training for the emerging Clean Economy to ensure having a skilled workforce and to provide meaningful employment opportunities throughout the State. (Headline #4)*** Many of the CAT recommendations support development of green economy jobs, work to explicitly target and grow green economy jobs in Washington; the State has also moved forward through work carried out by CTED and other agencies in response to Legislative direction. For more information, see [XX].
- ***Restore and retain the health and vitality of Washington's farms and forest lands to increase carbon sequestration and storage in forests and forest products, reduce the releases of GHG emissions, and support the provision of biomass fuels and energy. (Headline #10)*** The Legislature established two working groups in ESSHB 2815 to address these critical issues. The CAT kept abreast of the progress of these groups and coordinated and referenced their work in its recommendations as relevant and appropriated. The full recommendations from the Forestry Carbon Market Workgroup and Agriculture Carbon Market Workgroup are available on page [XX] of the ESSHB 2815 report.

State agencies, the Legislature and others have already moved several of the specific 2007 CAT strategies forward²⁰:

- ***Quantification of GHG Impacts of Transportation Plans, Programs and Projects (T-5)*** is being addressed by the Land Use Climate Change (LUCC) technical group authorized by the Legislature under Sections 2 and 3 of ESSB 6580 (*An Act Relating to mitigation the impacts of climate change through the growth management act*²¹), which will be provided in 2009.
- ***In-State Production of Biofuels and Biofuels Feedstocks (AW-2)*** is being addressed by Washington State University (WSU) and CTED. CTED is requesting legislation to extend the five tax preferences enacted in 2003 to promote the production of biofuels from wood biomass feedstocks, and WSU will be submitting a final report on December 1, 2008, in response to ESSHB1303 Section 402²² to develop market incentives for the use of in-state biofuel.
- ***Improved Forest Health (F-1)*** is being addressed by DNR under its Forest Health Program, through which DNR provides technical assistance on tree and forest health care for a variety of public and private landowners, and conducts applied research and cooperative studies with universities and government agencies.
- ***Expanded Urban and Community Forests (F-8)*** is being addressed by DNR and CTED as required under the Urban Forestry Partnership established by ESSHB 2844.²³
- ***Grid-Based Renewable Energy Incentives and/or Barrier Removal (ES-1)*** is being addressed in part by the energy credits associated with solar, wind, combined heat and power (CHP), and microturbines extended under the federal Emergency Economic Stabilization Act of 2008²⁴, which also established new Clean Renewable Energy Bonds to finance a number of facilities

²⁰ Of the 45 mitigation strategies recommended by the CAT in 2007, 42 of them have been further advanced in some manner by the CAT and/or by the State outside the CAT process. The three specific options without any explicit action by the State or CAT in 2008 were ***AW-8: Support for an Integrated Regional Food System; ES-4: Technology Research and Development, Plus Technology-Focused Initiatives;*** and ***RCI-5: Rate Structure and Technologies to Promote Reduced GHG Emissions (including decoupling of utility sales and revenues).***

²¹ *Addressing the impacts of climate change through the growth management act* (<http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/Senate%20Passed%20Legislature/6580-S.PL.pdf>).

²² *Encouraging the use of cleaner energy.* (<http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/House%20Passed%20Legislature/1303-S2.PL.pdf>)

²³ *Regarding urban forestry.* (<http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/House%20Passed%20Legislature/2844-S2.PL.pdf>)

²⁴ <http://financialservices.house.gov/>

generating renewable energy. In addition, a number of utilities in Washington are working with the NW Solar Center on a Renewable Rate Recovery and Control approach to provide incentives for solar power.

- *Carbon Capture and Sequestration or Reuse (CCSR, including pre and post-combustion) Incentives, Requirements and/or Enabling Policies plus R&D (ES-5)* is being addressed in part by rules adopted by Ecology for geological carbon sequestration. The Federal Emergency Economic Stabilization Act of 2008 also provides \$1.5 billion in tax credit for carbon capture and sequestration and recovery (CCSR) demonstration projects as well as Carbon Dioxide Capture Credits of \$10-20/ton.
- *Transmission System Capacity, Access, Efficiency and Smart Grid (ES-6)* is being addressed in part by rules adopted by the Washington State Energy Facility Site Evaluation Council (FSEC) applicable to the construction, reconstruction, or modification of electrical transmission facilities, which are scheduled for adoption in October, 2008.
- *Targeted Financial Incentives and Instruments to Encourage Energy Efficiency Improvements (RCI-2)* is being addressed in part by SHB 3120,²⁵ which was enacted by the Legislature in 2008 and directed CTED to conduct a study of sales and use tax exemptions for certified residential and commercial construction. The research conducted as part of this effort has been reviewed and largely incorporated into the EEGB IWG report.

Areas of Future Work and Next Steps

Given its focused scope in 2008, the CAT did not work on its adaptation recommendations from its 2007 interim report, but does believe that adaptation to climate change is a critical component of a comprehensive response to climate change, and that the State should determine how adaptation to the inevitable impacts of climate change should proceed. The State began an initial assessment of opportunities to prepare and adapt to climate change with the Preparation and Adaptation Working Groups in 2007. The CAT recommends that the State renew its efforts on adaptation in 2009 and beyond through such a coordinated multi-agency and sector effort. Governments, businesses and citizens need information, tools and resources to react to a potentially changing climate-impacted landscape. This response is critical to make informed planning decisions, to protect and restore natural systems, and to adjust the provision of basic services as necessary due to a warming planet.

Meeting Washington's targets for 2020 and beyond remains a compelling and daunting challenge. Climate change is not a problem that lends itself to easy, simple or singular solutions, and despite their potential, the CAT recommendations alone will not get us there, especially since many of these recommended actions have not yet been initiated. The CAT's recommendations in this report point to some of the key opportunities to change direction and make the necessary strategic choices over time, but it is imperative to act now. Many of the recommendations can be implemented in a sequence that has been laid out by the CAT. Most can at least be started in 2009. The Executive Branch and the Legislature should implement those CAT recommendations that it deems viable now while continuing to pursue opportunities in 2010 and beyond that together will result in full implementation of a Comprehensive Climate Approach, and move Washington towards a vibrant Clean Economy in a thoughtful and deliberate manner.

There is also much more to do outside Washington to ensure that the GHG emission reductions needed worldwide to minimize the damaging impacts from climate change also occur. The actions recommended here are an important contribution that Washington can make in reducing GHG emissions; as importantly, these actions represent an opportunity for Washington to continue to provide leadership to the nation and

²⁵ *Providing a sales and use tax exemption for environmentally certified residential and commercial construction.*
(<http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/House%20Passed%20Legislature/3120-S.PL.pdf>)

the world. The critical response to the global climate challenge is, however, necessarily a global one. Washington must and will continue to act, and must also continue to demonstrate the leadership that will encourage others to join us. By demonstrating the political will to follow the pragmatic approach towards implementing significant changes as laid out in this report, Washington can continue to do its fair share and show the way to an effective global response to climate change.

Conclusion

The recommendations in this report represent the CAT's vision for moving Washington towards a low-carbon future with economic opportunities, and describe the bold and thoughtful action needed to build the foundation by which Washington can meet its 2020 GHG emission and VMT reduction requirements as established in ESSHB 2815. There continues to be an urgent need for both immediate and sustained action over time for Washington to achieve its economic and GHG emission reduction targets for 2020 and beyond.

Climate change presents Washington with both enormous threats and substantial opportunities. The recommendations contained in this report point the way towards implementing significant efforts the CAT identified in its interim report that will allow governments, businesses and individuals in Washington to pursue opportunities, technologies, and choices that reduce carbon emissions in our economy and our daily lives. These recommendations build upon Washington's strengths, leverage going quickly with going smartly, guide Washington's continued transition to a vibrant Clean Economy, and contribute significantly towards meeting Washington's GHG emission and VMT reduction goals.

In order for these recommendations to be successfully implemented, the following four commitments need to be fulfilled:

- *Decisive and thoughtful leadership at all levels of government and in the private sector to prepare Washington to participate in the Clean Economy and ensure the success of Washington's response to climate change.*
- *Targeted investment in the infrastructure changes required to reduce carbon use and spur innovation throughout Washington's economy.*
- *Protection and restoration of natural systems, including working farms and forests, to ensure the function and resiliency needed to both mitigate GHG emissions and adapt to the unavoidable consequences of some inevitable amount of climate change.*
- *Education, engagement and empowerment of the public to support the above and to generate the participation necessary to address climate change at the household and local business levels.*

The CAT believes that it has accomplished its charge from the Governor and the Legislature. The members of the CAT appreciate the privilege they have been given by the Governor to be on the CAT, and remain committed as individuals to help further advance these recommendations with the same spirit of cooperation and intellectual integrity in which they were developed. The CAT strongly urges the Governor and the Legislature to continue to provide leadership and real action in 2009 and beyond to reduce GHG emissions, build the Clean Economy, create green jobs and reduce reliance upon imported fuels, informed and guided in part by the CAT's vision and recommendations. Given the long range nature of this challenge, the CAT also suggests that from time to time the State re-convene a representative group of stakeholders similar to the CAT to take stock of progress to date and re-chart as necessary the path forward. The CAT's collective effort has been and can continue to be a hopeful message that, by working together, we can meet the challenge of global warming.

Appendices

- i) List of CAT Members
- ii) Charge to CAT
- iii) List of IWG Members by IWG
- iv) Charge to IWGs
- v) Technical Analysis and Key Assumptions Memo
- vi) IWG Reports and Technical Analyses
 - (1) Beyond Waste IWG
 - (2) Energy Efficiency/Green Buildings IWG
 - (3) SEPA IWG
 - (4) Transportation IWG