

CLIMATE CHANGE IN WASHINGTON

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Climate change will affect nearly every facet of Washington's economy. For example, summer stream flows are crucial for salmon, urban water supplies, farms, and hydropower. As a consequence of global warming, the Washington Department of Ecology ("Ecology") predicts that the snow pack that feeds those stream flows will be reduced or will shift to higher elevations. In place of snowfall, precipitation will fall as rain during periods of the year when the demand for electricity and water are lower.

Because several Washington economic sectors are heavily reliant on natural resources, climate change is expected to have greater impacts on Washington compared to some other states. For forestry and agriculture, water is not the only cause for concern. Ecology predicts that higher temperatures will increase the range of insects that spread disease and destroy forests and crops. Higher temperatures likely will cause declines in salmon as well as native plant and animal populations – affecting fishing, recreation and tourism. Rising sea levels will result in flooding, coastal erosion, and loss of wetlands and estuaries.

Even the technology and manufacturing sectors may be affected. Ecology expects that higher temperatures may exacerbate air pollution. For municipalities and water districts, global warming may affect water supplies and treatment costs, as a shift from snow to rainfall causes greater stormwater runoff, increasing pollutant loads carried to streams and other water bodies.

On a positive note, Washington's state and local governments have responded with a wide-ranging mixture of incentives, research, industry guidelines, and emission reduction goals. This article describes a few of the more recent and prominent responses.

State Executive and Legislative Responses

Transportation accounts for the majority of the state's greenhouse gas ("GHG") emissions. While the State has taken some steps to address GHG emissions associated with transportation, it has thus far directed greater efforts toward reducing GHG emissions from power generation, and facilitating cooperative standard-setting and regional agreements.

Governor Christine Gregoire issued Executive Order 07-02 in February 2007, launching a "Washington Climate Change Challenge" initiative. Through that order, the Governor announced her intention to achieve ambitious goals of reducing greenhouse gas emissions, developing clean energy, and preparing for the impact of global warming.

In May 2007, the Legislature embraced Gov. Gregoire's goals for reducing greenhouse gas emissions by enacting ESSB 6001 (now codified at chapter 80.80 RCW). Washington will try to

reduce overall greenhouse gas emissions to 1990 levels by 2020, and to 25 percent below 1990 levels by 2035. By 2050, the state intends to reduce overall emissions to fifty percent below 1990 levels. Goals also include fostering a clean energy economy by increasing the number of jobs in the clean energy sector to 25,000 by 2020, from just over 8,000 jobs in 2004. *See* RCW 80.80.020.

Deadlines under ESSB 6001 are rapidly approaching. Two reports are due December 31, 2007. Section 11 of the new law requires the Governor to report on the potential benefits of tax incentives to spur certain electricity-generating facilities to reduce emissions through equipment upgrades. The same day, the departments of Ecology and Community, Trade, and Economic Development are required to issue a report on 1990 total greenhouse gas emissions including the totals in each major sector for that year. *See* RCW 80.80.020(2)(a). In addition, during the 2008 legislative session, the Governor will report on policies developed for achieving the greenhouse gas emissions reduction goals. The recommendations must address, at a minimum, (1) regulatory and tax policies to encourage electric utility emissions reductions; (2) market mechanisms; (3) sequestration options; and (4) options for reliance on indigenous resources for power production.

State-Led Efforts to Reduce GHG Emissions from Power Generation

In addition to targeting general emissions reductions goals across the economy, Chapter 80.80 RCW sets performance standards for reduction of greenhouse gas emissions in energy production. The statute sets emission performance standards for baseload electric generation for which electric utilities enter into long-term financial commitments beginning June 30, 2008. RCW 80.80.040.

The statute takes account of developing carbon sequestration options. In calculating the emissions for a power plant, the state will not include those permanently captured or sequestered. Ecology is working on rules for carbon sequestration projects, and published a draft rule on October 26, 2007.

Certain facilities are exempted from the greenhouse gas emissions performance standard. Facilities or power plants powered by renewable resources – including water, wind, solar energy, geothermal energy, and ocean thermal, wave or tidal power – are considered to be in compliance with the new standard. The exemption also includes power plants or facilities powered by landfill gas, biomass energy from animal waste, and certain solid organic fuels from wood, forest, or field residues or dedicated energy crops.

Other exemptions are time-limited. The exemption for electric utilities in operation as of June 30, 2008 expires when the utilities engage in new long-term financial commitments for a supply of baseload electric generation. RCW 80.80.060. Cogeneration facilities will lose their exemption if they are upgraded – i.e., modified to increase electric generation capacity.

Cross-Border Engagement In Search of Joint Solutions

The State of Washington has also been active in forging alliances with its neighbors. On June 8, 2007, Gov. Gregoire and British Columbia Premier Gordon Campbell signed a Memorandum of Understanding. Under that agreement, Washington and British Columbia agreed to reduce greenhouse gas emissions, advance renewable energy policies, and improve air quality. The two governments also pledged to bring together tribes, businesses, scientists, and environmental advocates from both countries to pursue joint academic and industry research.

This spring, Gov. Gregoire joined the governors of Arizona, New Mexico, California, and Oregon in establishing the Western Regional Climate Action Initiative (www.westernclimateinitiative.org). The initiative sets a six-month deadline for establishing a regional goal for reducing collective emissions. The states agreed to design within eighteen months a regional “market-based multi-sector mechanism” to facilitate meeting the regional goal. The states also agreed to participate in The Climate Registry, a means of tracking, managing, and crediting entities that reduce GHG emissions.

Local Governments Galvanizing Awareness

Two Puget Sound-area elected officials have made climate change a centerpiece of their administrations. King County Executive Ron Sims made news recently by retracting his support for Proposition 1, a regional tax proposal that would have provided funds for 50 miles of light rail and 186 miles of roadway improvements. Mr. Sims argued that funding new roads was inappropriate in light of climate change. On November 6, 2007, the tax proposal was defeated, with many voters citing environmental concerns.

Mr. Sims has been at the forefront of regional efforts to reduce GHG emissions. Together with the Climate Impacts Group at the University of Washington, he co-authored *Preparing for Climate Change: A Guidebook for Local, Regional and State Governments*. The guidebook contains advice for scoping the impact of climate change by region, building a team, selecting implementation tools, setting goals, and measuring progress.

King County is active on a variety of other fronts. It has proposed to cut its GHG emissions by 80 percent below current levels by 2050. King County maintains a climate action team, including members of its departments of transportation, development and environmental services, public health, and natural resources. The County issued its own climate change plan in 2007. The County estimates that on-road motor vehicles accounted for 50% of GHG emissions in the Puget Sound region in 2002. To build citizen awareness, King County provides online advice for reducing emissions and links to information on traffic monitoring and alternative transportation options.

Under Mayor Greg Nickels’ leadership, the City of Seattle has adopted a climate action plan featuring a mix of strategies including conservation, reducing reliance on cars for transportation, and regional alliances. A progress report issued October 29, 2007 estimates that Seattle is meeting Kyoto Treaty targets, producing eight percent less carbon dioxide than in 1990. The U.S. Mayors’ Climate Protection Agreement, crafted by Mayor Nickels, has nearly 700 signatories. In October, Seattle City Council member Peter Steinbrueck proposed that the City require developers to analyze greenhouse gas emission impacts from their projects. Mr. Steinbrueck’s proposal would require climate impacts to be evaluated under the State

Environmental Policy Act (SEPA) along with more traditional environmental impacts of development proposals.

Other Washington cities are considering clean energy, building practices, and transportation-based GHG emissions in their plans. Twenty-one Washington cities signed the U.S. Mayors' Climate Protection Agreement. In Tacoma, a "green-ribbon" task force is scheduled to present recommendations to the city council by June 2008 for setting precise GHG reduction goals and strategies for reducing emissions.

New Stakeholders and Decision-Makers

Climate change will continue to have two procedural effects. One, governments are rapidly developing new entities to provide education and feedback on policy matters. A second likely consequence of climate change is a rapid sharpening of respective interests.

One example of the former is the state Climate Advisory Team. Governor Gregoire instructed the departments of Ecology and Community, Trade and Economic Development to form the Team. In addition to the directors of those two departments, the Climate Advisory Team is composed of business, labor, environmental, tribal, and governmental officials. Five technical working groups, consisting of CAT members and their staff and technical members appointed by Ecology/CTED, report to the CAT.

The working groups ostensibly have a substantial opportunity to shape the state's climate change policy. Charged with analyzing issues related to transportation, energy, forestry, agriculture, and residential, commercial, and industrial development, the working groups are expected to review existing and planned state actions, assist with technical analyses, develop policy designs, respond to policy change requests, and review draft policy and report language.

The Climate Advisory Team will craft the State's position on any regional market-based system. Under Executive Order 07-02, Governor Gregoire declared her intent to consider market-based systems, allowance trading and incentives. In response, a subset of the CAT formed a Market-Based Mechanisms Ad Hoc Committee. That Committee convened a "tutorial series" during the summer of 2007 designed to prepare members to comment on the design of market-based mechanisms.

Conclusion and Implications

A second likely consequence of climate change is a sharpening of interests that will test the political will to reduce GHG emissions. For example, Ecology estimates that dams generate 72% of Washington's electricity. Lower stream flows would reduce energy production during the same seasons when higher temperatures are increasing demand. Failure to develop sufficient alternative sources of renewable energy might compel resort to dirtier sources.

Public commitment and political will are key to confronting anticipated difficulties with the state's cutting-edge solutions. For example, ESSB 6001 contains a legislative finding that public and private owners of forested land in Washington could benefit from carbon trading schemes.

However, pine bark beetles, aided by warming temperatures, are damaging large tracts of forested land in northeastern Washington. In other words, climate change threatens the same resources on which the state is relying to reduce GHG emissions.

For more information on state and local initiatives in Washington, see <http://www.ecy.wa.gov/climatechange/washington.htm>. (Sarah Mack and Brad Doll)