

**Comments of Climate Solutions
On the
Northwest Power and Conservation Council's
Draft Fifth Power Plan**

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On behalf of Climate Solutions, I'd like to thank the Council for the opportunity to comment on what we regard as the most sophisticated and publicly accountable regional power planning exercise in the nation.

The Draft Fifth Power Plan is up to the Council's usual standard of excellence in its application of the principles of the Regional Act and its treatment of the many uncertainties and risks associated with building an adequate, environmentally responsible resource portfolio for the region. We generally applaud the Draft Plan's analysis and recommendations with respect to energy efficiency, renewable and cogeneration resources, BPA's role, and other areas.

The Draft Plan's treatment of climate change, however, has been overtaken by events: the pending entry into force of the Kyoto Protocol and the acceleration of west coast climate protection initiatives suggest that the Council should take a much more affirmative approach to this issue. The Draft Plan approaches climate in the context of financial risk. While this perspective is useful, we hope and expect that the Council will take a much more active role in developing a responsible climate policy for the region, including binding limits on power sector emissions.

A few specific comments:

Energy Efficiency: Once again, the Council has distinguished itself in its analysis of the cost, value, and availability of energy efficiency. We particularly appreciate not only the analytical rigor of the resource characterization, but also the systematic identification of barriers and the willingness of the Council to apply itself to the removal of those barriers.

Among its many contributions to the region since it was created, arguably the Council's most noteworthy achievement has keeping the spotlight focused on the enormous value of energy efficiency and the things we must do as a region to harvest that value. As a result of that leadership, the region cost-effectively saves more power than Idaho uses, with economic savings of \$500 million or more per year. This is by far the most successful and important piece of the region's power development history over the last 25 years. This draft Plan represents another strong chapter in that history of achievement. The Action Plan in particular represents a thoughtful, strategic blueprint for removing barriers and accelerating the acquisition of our most cost-effective and environmentally benign resource.

Energy efficiency achievement suffered from the prolonged uncertainty and market disruptions associated with industry restructuring, beginning in the early 1990s. In the

aftermath, the policy infrastructure for energy efficiency achievement in the region remains uneven. In Washington, where the lion's share of the efficiency potential resides, efficiency achievement is improving but still spotty. The economic effects of the 2000-2001 price shocks were mitigated to some degree by energy savings. But taking our eye off the efficiency ball in the mid-1990s cost us dearly during the crisis.

We applaud the Council's recommendation to develop a strategic plan for conservation acquisition under action CNSV-3. We hope that plan will include a concerted attempt to develop the policy and financial incentives that will sustain conservation achievement at high levels over a range of market conditions. We believe that to be successful, such a plan must include a serious, state policy-level commitment to some combination of dedicated funding and/or efficiency achievement in Washington.

Demand response

We fully support the plan's assessment that at least 1,800 megawatts of cost-effective demand response are available; this might even be on the low side. We also support the goal of acquiring 500 megawatts of demand response in the 2005-2009 timeframe. This will begin to develop a regional least-cost resource that avoids or defers the need for costly peaking power plants and transmission and distribution infrastructure.

Deploying the technologies required to gain targeted demand response, such as smart meters and distributed generation communications and control systems, is a vital element in building a "Smart Grid" in the Northwest that can improve grid reliability and security. EPRI estimates that power disturbances annually cost the U.S. \$120 billion, so improved reliability provides important economic benefits. This technology deployment also represents significant opportunities for Northwest companies in the field of Smart Energy, the full integration of digital information technologies into the power grid. The Poised for Profit II Partnership, which included Bonneville Power Administration and Pacific Northwest National Laboratory, as well as key state and local energy and economic development agencies, commissioned research which found an emerging cluster of at least 225 Northwest Smart Energy companies generating \$2 billion in annual sales in a \$15 billion global market. See <http://www.climatesolutions.org/pubs/pdfs/Smart%20Energy%20Prospects.pdf>.

In addition to these comments, we refer you to the November 11 to the Council that we co-signed, along with representatives of the region's smart energy industry and technology innovators.

Lost opportunity renewables and cogeneration

We support the analysis and the recommendations in the Action Plan. We note, however, that such opportunities seem chronically underutilized. We agree that utilities and their regulators should have every incentive to capture these resources as they become available, with confidence that their long-term economic value will be reflected in the short-term economics of developing or hosting such resources.

Prepare to construct additional generating resources

For reasons described in the section below on climate change, we do not believe the Plan should include any new, conventional coal development. Given the imperative to reduce CO₂ emissions, the only circumstance in which new coal development may be justified is when it uses IGCC technology and makes reliable provision for permanent sequestration of CO₂. Any conventional coal addition would make an enormous new contribution to the region's GHG emissions, at a time when scientists have confirmed that avoiding "dangerous anthropogenic interference" with the Earth's climate system requires immediate and aggressive emission reductions. Given this urgent imperative, the Council's plan should begin to anticipate and facilitate retirement of existing coal units, not development of new ones.

With respect to wind development, we note that the Draft Plan represents a considerable improvement over past plans, consistent with the extraordinary advancements in commercial wind development. We also appreciate the Draft Plan's movement toward incorporating wind development early in the planning period, consistent with the commercial activity we see. Some of this activity may be considered "lost opportunity" resource development, given the uncertain future of the federal production tax credit. Here again, in light of the urgent necessity to not only avoid new CO₂ emissions but also reduce emissions from existing levels, we see little danger that accelerated wind development will prove to be unneeded or uneconomic.

We would also like to see a more thorough treatment of some of the renewables that are not yet competitive for bulk power generation, but that we must begin to bring into the region's mix within the planning horizon. New developments in the technology for capturing power from tidal flows, for example, warrant an effort to characterize the resource and track the technology.

Developing cost-effective generating resources We appreciate the Draft Plan's nod to the resource priorities of the Regional Act in Action GEN-11. However, it calls for the priorities to be invoked only when "other considerations are equal". We believe there are a variety of ways in which the Council could make the Act's resource priorities functional, including assigning a cost "subtractor" for high priority resources. But this "tie-breaker" notion has little practical value, as other considerations are rarely if ever exactly equal. We'd love to see the Council propose a way to make the Act's resource priorities stick.

Demonstration of renewable and high-efficiency generation with Northwest potential

Again, given the compelling need to develop non-fossil resources to meet both new loads and existing demand, we hope the Council will take an active role in these demonstrations. And we hope the list of potential resources will be inclusive. Accelerated innovation will be essential as the region develops targets and plans for steep reductions in its GHG emissions, which must begin during the planning period.

Resource adequacy. We would urge the Council to consider two dimensions of the relationship between climate change and resource adequacy:

- 1) The likely effects of climate on the region's hydrology. While we do not have reliable projections of the effect of warming on total precipitation, scientists predict substantial snowpack reductions with confidence. This both changes the hydrograph and will likely exacerbate existing conflicts among water supply, power production and fish habitat needs in the summer and early fall.
- 2) The need to begin retiring existing fossil capacity within the planning horizon. Reducing GHGs to levels below 1990 emissions will clearly require not only avoiding new fossil capacity, but also retiring and presumably replacing existing capacity. It is not clear that the draft plan accounts for this potentially significant impact on resource adequacy. A very useful first step would be for the Council to inventory scheduled retirements for the region's fossil capacity to determine whether state GHG reduction goals could be met by meeting all load growth with non-fossil resources and replacing fossil resources at their planned retirement dates.

Climate change science and policy

Climate stabilization is emerging among the pre-eminent challenges of our generation. The scientific consensus on this issue is among the most rigorously peer-reviewed and thoroughly tested conclusions in all of science, and is documented exhaustively in the Third Assessment of the Intergovernmental Panel on Climate Change. Unchecked global warming will be almost unfathomably disruptive to natural and human economic systems. In view of the magnitude of climate disruption already underway and expected, the treatment of the issue in Chapter 6, page 6, is so understated as to be misleading. A more balanced treatment of the impacts on the region can be found in the Draft Oregon Strategy for Greenhouse Gas Reductions at http://www.energy.state.or.us/Publications/Global_Draft.pdf or the Scientific Consensus Statement on the Likely Impacts of Global Warming on the Pacific Northwest at http://inr.oregonstate.edu/policy/climate_impacts_consensus_statement.pdf

The draft plan treats climate change and climate policy as risks to be modeled. We would urge the Council to treat them instead as a policy imperative that is vital to the future of the region's power supply.

By the time the Fifth Power Plan is adopted, the Kyoto Protocol will probably have entered into force, uniting the rest of the world's advanced industrial nations in an urgent, systematic campaign to substantially reduce GHG emissions. The EU emissions trading market will begin formal operations in 2005. Just as human-caused climate change is now globally accepted as a scientific fact, binding limits and markets for GHG emission allowances are now globally accepted as an economic fact. And while the U.S. has not

ratified the treaty, the U.S. economy is entwined with the global economy. GHG reduction will become a driving force behind the rules of international commerce.

With no significant federal policy on climate, U.S. states are becoming engaged, including Oregon and Washington. Under the West Coast Governors Global Warming Initiative, Governor Locke has set forth a target to reduce Washington's GHG emissions to 10% below 1990 levels by 2020. Oregon stakeholders have recommended the same target, and a much more aggressive long-term target. Stakeholders groups in both states expect to recommend limits on GHGs from the utility sector and a market system for trading within these limits.

Many of these developments have occurred since the Council began this Draft Plan, so it is understandable that they have not yet been incorporated. Revisiting some of the plan's assumptions to incorporate these developments would be straightforward. For example, in the Executive Summary, p. ES-7, the draft indicates that emission allowance values associated with reducing "carbon dioxide production to 1990 levels may be at an upper limit for the next decade or two," implying that the analysis assumes CO2 emission allowance costs derived from a policy to return to 1990 levels. But Governor Locke has articulated a goal of reducing CO2 emissions to 10% *below* 1990 level by 2020, before the end of the planning period, and Oregon is evaluating a similar policy. (The New England States have also adopted this target.). So it appears that the emerging policy direction of the 2 states is beyond the upper limit of CO2 allowance values analyzed in the plan. Insofar as carbon emission content standards may be applied to power delivered in Oregon and Washington, they would apply to the vast majority of the region's load and affect the economics of power developed in Idaho and Montana for west coast markets.

Specifically, then, we recommend that the Council's analysis of CO2 allowance values assumes a much higher likelihood of higher values, earlier in the planning period, to reflect the policy direction emerging from the West Coast Governors process.

But we also have a more fundamental concern about the Draft Plan's approach to this issue. The language and posture in the Draft is almost entirely predictive and reactive. The language used to describe climate policy may be considered neutral from an analytical perspective, but it is decidedly negative from a political perspective. "Carbon tax" and "carbon penalty" are both inaccurate with respect to the likely policy direction, and counterproductive with respect to the imperative to adopt a responsible climate policy. (We say these terms are inaccurate because the fundamental policy in question is the adoption of responsible limits on global warming pollution. With the introduction of emission trading markets, emitters can purchase allowances to avoid actual emission reduction. That is not a tax; it's the market value of the right to emit. Unlike a tax, it has no intrinsic connection to what government does to fund its public functions.)

The draft plan assumes a predictive, defensive posture with respect to GHG limits and their economic implications. But policy to limit GHGs is the logical, necessary, and inevitable corollary of scientific limits on the atmosphere's capacity to safely absorb the emissions. As the place where public policy meets power planning, the Council's role

should not be limited to modeling the timing and probability of this crucial feature of our energy policy. A wide spectrum of stakeholders working in Oregon and Washington expect to recommend binding limits on the power sector. The Council should guide and facilitate this development rather than just calculate its probability.

An interesting example of how the Council might approach this issue is the section of the draft action plan entitled “Establishing the Policy Framework to Ensure the Ability to Develop Needed Resources.” We would argue, indeed, that responsible limits on global warming pollution and emission trading markets under those limits *are* a piece of the necessary policy framework for developing resources. The extraordinary environmental and economic risks associated with climate change suggest that, without a clear climate policy framework, investment in solutions will be forestalled.

Frank Cassidy, president of Public Service Energy Group Power, put the policy imperative clearly:

“There is one great, unknown element that will have a profound impact on the direction of our industry, and this is the public policy response to climate change. I can tell you as a business leader this makes me very uncomfortable. I prefer an environmental policy that is clearly defined and one that establishes precise emissions targets and timetables. I believe that such a program, for no other reason than to mitigate risk and provide an appropriate level of certainty on which to base investment decisions, must include a sound, mandatory program for reducing greenhouse gas emissions.”

Wayne Brunetti, Chairman and CEO of Xcel, the nation’s fourth largest electric and gas utility, put the issue more succinctly:

“Give us a date, tell us how much we need to cut, give us the flexibility to meet the goals, and we’ll get it done.”

A coherent climate policy framework -- including goals, timetables, and limits on GHG emissions – are essential for at least three reasons:

- a) **Policy structure:** GHG reduction policies are the simplest, most effective way for governments to set the limits within which private markets operate to achieve a socially necessary end.
- b) **Economics:** GHG limits – even relatively modest, politically achievable ones – send powerful economic signals that encourage investment, technology development, and entrepreneurship in non-fossil energy sources and efficient energy systems.
- c) **Communication:** GHG limits send a clear signal to a confused public that the problem is real, urgent, and fixable.

We address each of these in turn below:

a) Policy structure: Governments can do many positive things to reduce emissions. But the indispensable role that *only* government can play is to set the limits within which private markets can achieve socially necessary results. Markets can also do many things to help us rise to this challenge, but they cannot determine the safe level of GHG emissions. Public officials must do that, informed by the best available science. It is both ineffectual and unfair to rely on voluntary actions to achieve this level. Private actors need to know that they can move in the right direction with confidence that the desired results will be achieved and certainty that they will not be penalized for being part of the solution. Limits on GHG emissions are essential in order to create a favorable environment for investment in solutions.

GHG limits are an appropriate policy tool. Unlike carbon taxes (which may also be effective), they cannot be confused with what government does to fund the achievement of other goals. Government can also lead by example, adjust the tax code to encourage desirable outcomes, and provide incentives for use of alternatives to fossil fuels, but many of these functions require significant, controversial public expenditures. GHG limits do not. They focus on the one function of government that almost no one disputes is necessary – limiting actions that impose catastrophic costs on society.

Government doesn't have the money to make a meaningful dent in this problem. The money is in private hands. It travels from consumers to energy companies, in extremely large quantities. A policy framework that directs that flow of money away from the problem and into solutions is among the most powerful and appropriate things government can do to reduce emissions. And GHG limits are an essential, high-leverage feature of such a policy framework.

GHG limits will also give the states a rational framework within which to evaluate the effectiveness, cost, and desirability of proposed initiatives proposed under state climate action plans. Although we can and should evaluate co-benefits, a coherent global warming initiative must have a bottom line, and it must be denominated in GHGs.

b) Economics: The basic architecture of most climate policies, including Kyoto and McCain-Lieberman, includes GHG limits and markets for trading within those limits. The lower the limits are set, the more scarce and valuable the right to emit GHGs becomes. As that value rises, investment shifts toward non-fossil alternatives. This is an appropriate way to promote efficient solutions to a problem of this sort in a market economy.

PacifiCorps' Integrated Resource Plan is a case in point. In that plan, the company assumes that it will have to pay \$8 per ton to dispose of CO₂, beginning in 2008. This assumption emerged from rough analysis of various proposed GHG limits and the expected value of GHG allowances under those limits. The estimated value of CO₂ allowances under Kyoto-level limits is expected to be somewhat higher. PacifiCorps' analysis reflects a conclusion – affirmed by the regulators – that it would be imprudent to assume free GHG disposal indefinitely. Limits are on the horizon. Other recent IRPs incorporate prudent anticipation of CO₂ disposal costs.

GHG limits and markets are a simple, elegant, efficient way to correct a classic market failure: externalities. And by rendering a more accurate cost accounting for fossil-fueled power, they help level the playing field for non-fossil alternatives. Here again, private markets can deliver the necessary innovation and investment to address the problem, and government can remove the barrier by clearing away a conspicuous market failure.

c) Communication: Global climate disruption presents enormous communication challenges, in large part because the scale and scope of the problem are beyond what most people feel they can influence. Nevertheless, opinion research confirms that most people do now believe that climate disruption is occurring and that human actions are implicated. But they still tend to treat it like the weather – consigning it to the category of conditions that we should have the serenity to accept rather than a focused determination to fix.

Slow, inexplicit policy responses tend to reinforce public confusion and denial. So the communication challenge is only partly about increasing awareness of the problem; it's also about clearly showing that the responsible authorities are undertaking appropriate responses, scaled and scoped to the problem.

Clearly, Northwest states can't take on the whole scope of the problem. But explicit, responsible GHG limits within our jurisdictions help communicate a focused, results-oriented response – the kind of response that affirms that the problem is real, urgent, and fixable.

We urge the Council to take on this issue with the level of attention and commitment that the scale of the problem requires. Under Action MON-4, the draft plan proposes that “the Council will monitor climate change science and policy.” This action alone is too little, given both the implications of the issue for future power development and the Council's potential to make a significant contribution to helping the region rise to this challenge. As the publicly accountable body that sets the planning benchmark for private investment, the Council has a crucial role to play not just in analyzing the financial risks associated with climate policy, but in helping the region develop a responsible climate policy framework for the power sector. For example, the Action Plan could incorporate a section such as:

Facilitate the development of an appropriate climate policy framework for the power sector, including:

- Developing recommendations to build the information infrastructure for effective administration of GHG limits and markets. GHG registries and mandatory emissions reporting initiatives in other states provide a starting point.
- Designing mechanisms to maximize the likelihood that emission reductions in advance of formal emission trading markets count toward future emission reduction requirements.
- Explore how Northwest utilities might begin to participate in international or other regional emission trading regimes.

- Take a leadership role in processes chartered to design power sector emission limits (or “carbon content standards”), pursuant to recommendations of the Oregon and Washington climate stakeholder processes.

In closing, we believe the Northwest has an extraordinary opportunity to exert global leadership in the development and deployment of climate solutions. Few if any other places have the combination of clean energy experience, technical talent, policy infrastructure, entrepreneurial zeal, and demonstrated capacity to lead major technology transformations. To realize that opportunity, we need a clear, results-oriented climate policy framework. We urge the Council in its final plan to step up to this challenge. And we thank you again for the opportunity to comment on your extraordinarily important and impressive work.