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Blueprint for Oregon's Energy Future
By the Oregon People's Utility District Association
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“The mission of the Oregon Department of Energy (ODOE) is to ensure Oregon has an adequate supply of reliable and affordable energy and is safe from nuclear contamination, by helping Oregonians save energy, develop clean energy resources, promote renewable energy and clean up nuclear waste.”

Peoples Utility Districts in Oregon support the Mission of the Oregon Department Energy.

However, a mission statement is only words unless and until it is translated into demonstrable actions and policies. Absent an effective and well designed energy policy, Oregon is facing a long-term energy crisis. This crisis could become one of the most significant economic challenges of the 21st century for Oregon businesses and consumers. Low cost energy has fueled the historic growth of the Pacific Northwest and we are challenged to maintain the affordable cost of energy to sustain our competitiveness in the regional and global economy that supports the quality of life that we have all come to love and respect.

Oregon PUDs believe there is no “silver bullet” to solve the nation’s or region’s energy challenges. They also believe a diverse mix of conventional and renewable power supply resources will be necessary to mitigate operational and financial risk to maintain safe, reliable, and affordable service delivery to our customer now and into the future. A proactive approach is necessary to acquire these resources in the near future as well as invest in new technology and processes to sustain the diversity of our resource acquisition mix.

A. Essential Service

Energy is essential across the broad spectrum of our priorities as a state and as a nation. The security and prosperity of future generations will depend on the actions we take today as we plan for the future. The electric grid is a unique common thread connecting every home and business. We rely on electrical energy in nearly every facet of our personal and professional lives. Seeing the impact and economic consequences from the 1996 electric blackout in the Western United States and the Northeast Blackout of 2003, it becomes abundantly clear that firm, safe, and reliable electric service is essential to the Northwest economy. According to the U.S. Energy Information Administration, demand is projected to grow 1.1 percent annually, or a total of 17 percent by 2020. By 2030, demand is expected to increase by 30 percent from current levels, the equivalent of adding four more California's to the power grid. Growth in the Pacific Northwest, especially on the I-5 corridor will supersede national growth trends. Oregonians currently spend \$10 billion per year on energy. Energy is the single most important physical resource

underpinning Oregon's and America's economic prosperity, national security as well as its regional and global competitiveness. We cannot afford or risk not having a comprehensive energy strategy to meet these regional and national challenges for today and future generations.

B. Energy Policy Goals

It is paramount that Oregon has an effective and efficient plan guaranteeing the citizens a firm, safe, and reliable supply of electric power and energy. It is essential that U.S. and state policy makers focus on the critical link between the increasing electricity demand, power costs, and climate change goals.

It is important that our political leaders develop a state energy policy that funds the development of new technologies to keep electricity affordable while meeting climate change goals. If this is not accomplished, a growing number of Oregonians will not be able to pay for power, the business economy will collapse, and many areas will be at risk of rolling blackouts and brownouts.

Fortunately, we are a state with abundant natural resources and a great capacity for technological innovation. Any successful effort to enhance our energy security while respecting the environment must begin with consistent and determined leadership. This is a challenge that must be met through the efforts of the private sector, government at all levels and our society as a whole. Oregon is unmatched in the caliber of its academic institutions, research laboratories, entrepreneurs, and private industry. We need to unleash the real and unique power of Oregon's innovation to solve our energy and environmental challenges. To succeed, we must reexamine outdated and entrenched positions, become better informed about the sources of our fuel and power, and make judgments based on facts, sound science, and shared responsibilities. We need to jump-start Oregon ingenuity. As a matter of state policy, state leadership should consider the following:

Maintain a strong economy and boost Oregon/American jobs and competitiveness by increasing Oregon and the nation's energy supply from all sources -- oil, gas, coal, nuclear, alternative fuels and renewable technologies.

Protect our state/national security through the expansion of domestic energy production, while safeguarding our energy assets at home and across the globe.

Preserve and improve the environment through greater efficiency, technology-based solutions, and the sound management of global climate change.

Continue to Incentivize Renewable Technology and Efficiency Development with a greater focus to utilize the output for "Oregonians First" before export of energy, developed with Oregon tax dollars, is considered.

Expand Oregon's and our share of the nation's fuel and power delivery systems to meet the growing energy needs of American consumers and businesses.

Encourage U.S. government and private sector leadership to address global energy problems through positive international engagement and the application of American technology and innovation.

Aggressively Promote Energy Efficiency

The most economic source of new energy is the energy we can save every day through improved efficiency. We must explore new business models that reward energy savings, especially for utilities and ultimately the customers.

Reduce the Environmental Impact of Energy Consumption and Production

We must address the impact of our growing energy consumption on the environment and climate, while recognizing that any approach must be both economically viable and environmentally effective. We must not set targets for which technology does not yet exist or which threatens major economic displacement. We must give industry a predictable and sustainable investment climate and incentives for innovation in clean energy. Costs and benefits must be transparent to consumers.

Invest in Climate Science to Guide Energy, Economic, and Environmental Policy

A deeper understanding of the issues and developing science associated with the environment and climate change will influence national and global energy, economic, and environmental policy choices. Balancing these priorities requires greater consideration of the complex processes driving climate change and increased attention to adaptation measures. We must increase our investment in climate science, which will enable us to adjust policies as scientific understanding advances and expands.

Significantly Increase Funding for Research, Development, and Demonstration of Advanced Clean Energy Technologies

Technology is the cornerstone of a new energy policy. The United States is currently spending 50 percent less on energy research and development than during the 1970s' oil embargo. The United States spends less than four billion dollars a year on clean energy R&D, which is less than it spends on three days of imported oil today. New industry and government relationships are needed. The demonstration and application of promising clean technologies must be carried out on an ambitious and cost-effective scale; small, tentative steps are not sufficient.

Immediately Expand Domestic Oil and Gas Exploration and Production

Expanding domestic production will reduce our dependence on foreign oil and gas and significantly reduce the billions of dollars we send abroad each year. As our reliance on oil and natural gas will continue for the foreseeable future, we can no longer rule out the value of our own significant proven oil and gas reserves nor the value of a future significant discovery anywhere in or off the shores of the United States. Doing so will create new investment and new jobs here at home. New federal and state partnerships are needed, and new revenue and risk

sharing models must be developed to build local support for environmentally sound energy exploration and production.

Commit to and Expand Nuclear Energy Use

Nuclear power is currently an emission-free source of 20 percent of America's electricity supply, despite our not having built a nuclear power facility in over 30 years. Expansion of new nuclear power assets is essential to meet our projected growing demand while mitigating our emissions of CO₂. As required by law, the federal government must provide authorized fiscal incentives for new nuclear power plants. We must solve our long-term nuclear waste challenges and aggressively expand efforts to recycle spent nuclear fuel.

Commit to the Use of Clean Coal

Currently, coal provides approximately 50 percent of our electricity supply, making it the largest source of domestic, reliable, and affordable energy. Coal will necessarily be a critical and expanding source for our future electricity and fuels needs. To use coal cleanly and to address CO₂ emissions, we need to greatly increase our research, development, and demonstration of clean coal and carbon capture and sequestration technologies.

Increase Renewable Sources of Electricity

Any effort to meet growing demand and address environmental concerns with continued economic growth requires zero and near-zero emission power generation to be developed and deployed. This is true not only in our country but around the world. We require a predictable and durable fiscal regime to stimulate new investments in solar, wind, energy-from-waste, and other renewable technologies. We must also invest in developing the required technologies needed to expand and transport new sources of commercially viable renewable energy.

Transform Our Transportation Sector

Transportation in the United States is currently 96 percent reliant on petroleum. New technologies, ready for application, must be affordable and become commonplace. Efforts to develop and promote alternative transportation options, including second generation biofuels, plug-in hybrids, and all-electric and hydrogen-powered vehicles, should be based on life cycle cost analysis and incorporate consideration of each technology's required infrastructure into policy planning. At the same time, we must focus on an improved surface and mass transportation infrastructure to generate efficiency and reduce emissions.

Modernize and Protect U.S. Energy Infrastructure

Our energy infrastructure is increasingly inadequate for our growing demand and economy. Blackouts, brownouts, service interruptions, and rationing could become commonplace without new and upgraded capacity. Critical energy infrastructure must also be adequately protected from both terrorist threats and natural disasters.

Address Critical Shortages of Qualified Energy Professionals

Our energy industry employs well over one million people today, yet nearly half of our professional and skilled workforce is expected to retire in the next 10 years. Presently, American universities are graduating fewer and fewer students in science, engineering, and mathematics. We need additional education and training programs, incentives, and visa policies that enable the American energy sector to attract and retain a new generation of human capital in an increasingly technological and globally competitive industry. We must entice young people to enter technical *fields to design, build, maintain, and manage our nation's energy systems.*

Reduce Overly Burdensome Regulations and Opportunities for Frivolous Litigation

Energy infrastructure systems, including both generation and transmission, require massive amounts of new capital investment in the face of rising difficulty in locating, permitting, and building new infrastructure. Industry estimates that it will take over 10 years to license and construct a new nuclear plant in the United States. Construction of numerous electricity transmission lines, natural gas terminals, and wind projects has been abandoned as a result of frustration and the inability to get siting approval. This may require us to address new federal eminent domain issues. As part of our national energy strategy to diminish our use of foreign oil the federal government should step in to mitigate the financial and liability risk of constructing and operating new nuclear plants and secure safe permanent waste disposal. Current regulatory uncertainty and liability issues discourage the development of clean energy alternatives and technologies. Failure to reverse this course will imperil our global economic competitiveness and prolong foreign dependence on oil.

C. Future Needs

According to the U. S. Census Bureau the population growth projection for Oregon in the 2000-2030 time period is thirty to fifty percent (30%-50%). This is one of the fastest growing population projections in the U.S. The impact of such growth on state infrastructure systems as well as the utility grid is significant. As prescribed by law (shown below) it is the responsibility of the State to estimate electric energy need and to present its plan of how this growth/demand can cost effectively be met. The Public Utility Commission of Oregon is the appropriate State agency for developing and utilizing forecast models for electric demand. The PUC Orders, dealing with integrated resource plans (IRP) are available to the Department of Energy for use in developing the next energy plan. At a minimum, the energy plan should contain/include the following: (all taken from PUC Order No. 07-002)

1. A determination of the levels of peaking capacity and energy capability expected for each year of the plan, given existing resources; identification of capacity and energy needed to bridge the gap between expected loads and resources; future transmission additions associated with needed resource portfolios; (the PUC adopted ODOE's language in Guideline 4(b) that a range of load forecasts be included in the IRP).
2. Projected annual load requirements, fuel prices, electricity prices, and costs to comply with any regulation of greenhouse gas emissions;

3. Identify in their plan any additional sources of risk and uncertainty;
4. Analysis of high and low growth scenarios in addition to stochastic load risk analysis with an explanation of major assumptions;
5. Analyze the range of potential CO2 regulatory costs;
6. Conservation potential study;
7. Modeling to reliably meet peak, intermediate, and base-load requirements (large incentives for wind generation have been successful, however, what happens when, not if, the wind does not blow? Do we have backup reserves?)
8. Analyze reliability within the risk modeling of the actual portfolios being considered. Loss of load probability, expected planning reserve margin, and expected worst-case unserved energy should be determined by year for top-performing portfolios; (called for in the PUC guideline is needed analysis of the tradeoff between higher reliability and higher cost, by providing information on how the best resources fare on different reliability measures)

D. STATUTORY REFERENCES:

469.060 Comprehensive energy plan; energy pricing structures research. (1) Every odd-numbered year, the State Department of Energy shall transmit to the Governor and the Legislative Assembly a comprehensive plan including comments on the energy forecasts of the utilities and on the department's independent analysis and evaluation. The plan shall be designed to identify emerging trends related to energy supply, need and conservation and public health and safety factors, to estimate the level of statewide energy need for each year in the forthcoming five-year period and for the 10th and 20th year following issuance of the plan.

(2) Notwithstanding ORS 469.030 (2)(c), the department shall conduct research into all energy pricing structures, relating price to consumption and considering the interchangeability of the various energy forms. In conducting the research, the department shall consider matters including, but not limited to, price elasticity, cross elasticity of demand and energy rate structures, as well as the rate structure studies of the Public Utility Commission. This research shall be submitted biennially to the Legislative Assembly and the Governor as a part of the plan described in subsection (1) of this section.

(3) Consistent with the legislatively approved budget, the plan described in subsections (1) and (2) of this section shall include, but not be limited to:

(a) An inventory of existing energy resources available to Oregon.

(b) An estimation of the potential contribution that various energy resources could make in satisfying Oregon's future energy needs consistent with the policy stated in ORS 469.010 and where appropriate, the energy plan and fish and wildlife program adopted by the Pacific Northwest Electric Power and Conservation Planning Council pursuant to P.L. 96-501.

(c) Recommendations for state and local governments to assist in the development and maximum use of cost-effective conservation and renewable resources, consistent with the policy

stated in ORS 469.010 and, where appropriate, the energy plan and fish and wildlife program adopted by the Pacific Northwest Electric Power and Conservation Planning Council pursuant to P.L. 96-501.

(d) Recommendations for proposed research, development and demonstration projects and programs necessary to evaluate the availability and cost-effectiveness of conservation and renewable resources in Oregon.

(4) The plan described in this section shall be compiled by organizing and refining data acquired by the department in the performance of its existing duties. [1975 c.606 §8; 1983 c.273 §1; 1989 c.466 §1; 1995 c.505 §5; 1995 c.551 §19a]

469.070 Energy forecast; contents; fees. (1) At least biennially the State Department of Energy shall issue a forecast on the energy situation as it affects Oregon. The forecast shall include, but not be limited to, an estimate of:

(a) Energy demand and the resources available to meet that demand; and

(b) Impacts of conservation and new technology, increased efficiency of present energy facilities, additions to present facilities, and construction of new facilities, on the availability of energy to Oregon.

(2) The forecast shall include summary forecasts for:

(a) Each of the first five years immediately following issuance of the forecast; and

(b) The 10th and 20th year following the issuance of the forecast.

(3) The forecast shall identify all major components of demand and any anticipated increase in demand, including but not limited to population, commercial, agricultural and industrial growth.

(4) The State Department of Energy, by July 1 of each even-numbered year, shall issue a statement setting forth the methodology and assumptions it intends to employ in preparing the forthcoming forecast, any changes in the preceding forecast, and an outline of the contents of the biennial plan to be published by the department on the following January 1, and not later than the 45th day thereafter, commence public hearings thereon.

(5) All state agencies, energy suppliers, owners of energy facilities, and other persons whom the Director of the State Department of Energy believes have an interest in the subject or who have applied to the director therefore, shall be supplied a copy of the statement issued by the department on July 1 of each even-numbered year. The director may charge a reasonable fee for a copy of this statement not to exceed the cost thereof.

(6) After the public hearings required by subsection (4) of this section, but not later than January 1 following the issuance of its statement, the department shall issue the forecast required by subsection (1) of this section.

(7) The forecast shall be included within the plan provided for in ORS 469.060 (1). [1975 c.606 §9; 1977 c.794 §3; 1983 c.273 §2; 2003 c.186 §17]

D. Expand Renewable Energy Credits (RECs)

We recommend that the State of Oregon consider creating a policy for providing/earning RECs for conservation and energy efficiency and for investments in transmission.

Municipal Solid Waste generation is a needed base-load resource that is dispatchable and should be included as an eligible resource under the RPS standards.

E. Cost Assessment Policy

As a state we are providing millions of dollars of tax incentives generated by consumers and businesses to the developers of renewable resources. The tax payers and rate payers in Oregon are not an endless source of dollars for developers. Tax incentives need to be reconfigured or expended to keep Oregon generated renewable energy within the state of Oregon to meet the needs of Oregonians First and foremost.

Renewable resource development and procurement within the Pacific Northwest at this time is being driven by regulatory and statutory mandate rather than cost benefit. This statutory/regulatory bubble has inflated prices to consumers unnecessarily. Proposed legislative solutions to climate change and green house gases has the potential to further increase retail electric rates.

F. Economic Emergency Plan

When electric and other energy prices exceed the “pressure point” as a result of legislative directives (RPS, climate change, carbon sequestration, etc.) corrective actions can and should be taken. It is important to recognize the increased economical impact that will reach segments of the population, leaving them unable to meet the economical demand. To alleviate this problem, there needs to be plans developed that will assist them. Too little analysis is given to the total costs being imposed on our energy consumers. These costs are not a fault of the energy provider serving the consumer. The energy providers are given directives to which they must comply and their customers in return are being economically victimized.

G. Environmental

1. Greenhouse gas regulation should include all sectors of the economy.

Legislative action to address climate change should involve all sectors of the economy and all sources of greenhouse gases. Reduction responsibility by sector should be commensurate with each sector’s impact. (See attached Oregon Department of Energy CO2 Emission.)

2. The point of regulation for greenhouse gases should be upstream where fossil fuels enter the economy, such as at the mine-mouth or well-head.

Upstream regulation and associated “Carbon Rider Fees” spread the cost of reducing greenhouse gases across all sectors of the economy.

3. Any actions should consider the economic impacts on customers, especially those who are financially challenged.

- 4. Legislation should favorably recognize and credit historical investments in energy efficiency and renewable resources which have mitigated or avoided greenhouse gas emissions.**
- 5. Federal legislation is strongly preferred over state or regional approaches to addressing greenhouse gas emissions.**

We prefer a single, comprehensive, national approach that recognizes the unique resource base of the Pacific Northwest to addressing climate change. However, if states or other local jurisdictions create related legislation, it should be compatible with other climate change initiatives in order to facilitate implementation and ensure reasonable certainty.

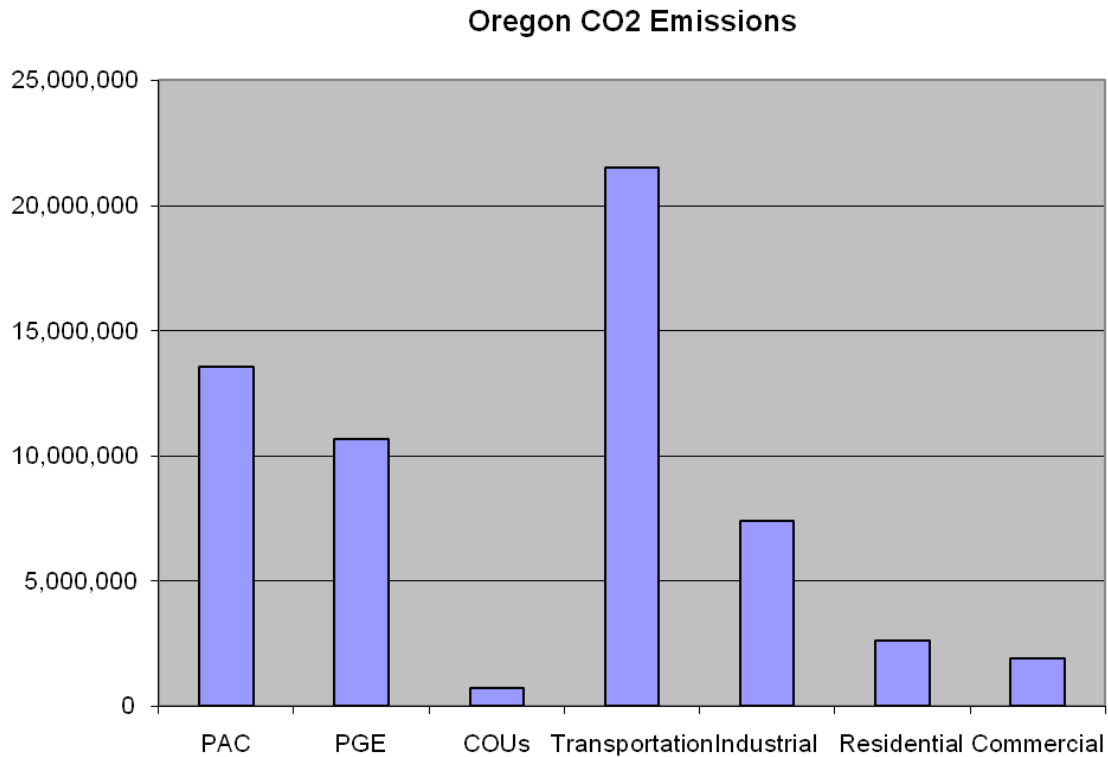
- 6. The Northwest region should not be required to subsidize the mitigation of greenhouse gases in other parts of the country that depend on substantial fossil fuel generation.**

The Northwest has been mitigating, at considerable cost, environmental impacts (e.g., fish and wildlife) associated with hydro-based generation. Electricity generated in the Northwest has significantly lower CO₂ production than electricity generated in other regions in the country. At the same time, Northwest and Oregon Consumer Owned Utilities face significant growth pressures that will demand large financial investments to acquire necessary levels of new renewable technologies. (See “CO₂ Footprint of Northwest Power System”.)

- 7. Each region of the country should mitigate its own environmental impacts and implement its own new technologies.**

The investment associated with the reduction of greenhouse gas emissions should be commensurate with the level of contribution to the problem.

- 8. Emissions reductions timelines must accommodate the practical constraints on the speed with which new technologies can be developed and deployed.**
- 9. Legislation should include a safety valve set at a level to protect the economy while still encouraging reductions in greenhouse gases.**
- 10. Emission reductions should be measured from a baseline using actual 2007 emissions.**
- 11. Each sector or industry share of emission reduction responsibility should be accurately determined and set forth.**



Emissions Data from Oregon Department of Energy
www.oregon.gov/ENERGY/index.shtml

H. Leadership

State policymakers should consider the following legislation designed to promote reliable, affordable, and clean energy for Oregonians:

1. Amend the Renewable Energy Tax Credit (RETC) to be used by Oregon's utilities to purchase renewable energy. Currently, power goes on the grid to be purchased by the highest bidder. Those who have high energy prices currently, like California, can purchase at a high price that does not make sense in Oregon. Consequently, right now, the tax credit benefits out-of-state companies. Shifting the tax credit to the in-state purchaser of power would provide a benefit to Oregon customers.
2. Expand the RPS to include small hydro, ignoring when the facility was placed into use. Also, allow all municipal solid waste generation to qualify, regardless of when built.