Testimony in Support of HB2020 (Clean Energy Jobs Bill)

HB 2020 provides a solid framework for addressing greenhouse gas (GHG) emissions from the covered sectors, although the current language needs strengthened in several places. First, I want to give some perspective to my testimony. I have been fighting this battle to mitigate the impacts of climate change for 30 years, first to commercialize solar energy starting in 1980s, implementing small-scale renewable energy projects in developing countries and rural communities, and modeling national energy systems to advise government policy in transitioning to a clean and low-emission economic system. I have been preaching urgency for the last 20 years, and I commend the legislature for taking this important step. There seems to be consensus among the Joint Committee that one justification for Oregon passing legislation now is to set an example for others states and countries that Americans care enough to transition our energy and economic systems into one that's clean, sustainable, healthy, equitable, and just. But, there are several other very valid reasons to pass this bill.

- **It's the right thing to do**, and Oregon has always prided itself as a land of pioneers!
- There will be an **economic cost for covered entities** to invest in more efficient devices and renewable energy sources, but the savings in fuel expenditures pays back those investments within a decade.
- There will be a **much more serious economic cost for all of us**, including loss of life and property, if we do not stop our pollution quickly. Consider climate change to be like a steam locomotive. The more we continue to dump GHGs into the atmosphere we are adding fuel to a locomotive that is already speeding out of control. We cannot undo what has been done, but we can and MUST stop adding more fuel as quickly as possible.
- By moving now, Oregon will **give its businesses a head start** on their competitors, and it will build the industries and jobs of the future. Clean energy is already the number one creator of new jobs in America, and these jobs cannot be outsourced or automated.

To be effective this bill needs to be a strong centerpiece to a set of smart climate protection measures. Legislation to reform forestry and agricultural practices, ban new fossil fuel infrastructure and create a public transit fund are warranted and necessary. For HB 2020, I have specific comments and recommendations.

- **The Cap is the Stick**. It creates the legal requirement for covered entities to reduce GHG emissions, and requires that they must turn into the state one allowance for every ton of climate pollution they produce. As the annual amount of available allowances declines, so do GHG emissions. The bill calls for 45% reduction from 1990 levels by 2035 and 80% reduction from 1990 levels by 2050. The latest climate science argues for more ambition rather than less, and I recommend the targets be set at: 20% by 2025, 50% by 2030, 75% by 2040 and 100% by 2050.
- **The Market is the Carrot.** It allows businesses to invest in emission reduction activities according to their individual capacity and timing, and raises revenue from the sale of allowances that the state places for auction each year. The market is a compliance mechanism, intended to smooth out the lumpy investments that the covered entities will need to make in energy efficiency, renewable energy, fuel switching and process improvements to meet the requirements of the cap. It is not a mechanism for speculation, and requires specific limitations on the number of offsets allowed, and the time period available for banking unused allowances.
- **Allowances:** Free allowances provided to electric utilities (currently 100%) should be reduced to only account for their RPS and Coal-to-Clean committed reductions. Free allowances for gas utilities are assigned in proportion to their low-income customer base to help mitigate increased fuel costs for those customers. All funds realized by utilities from sale of free allowances must be used to support low income customers through weatherization, solarization and bill rebates.

Energy intensive, trade exposed industries (EITEs) that are at risk of leakage (losing market share to out-of-state entities) are awarded free allowances, but the current benchmark of the sector-average emission factor is not ambitious enough and should be at most 90% of the average (as in California). EITE status should be needs-based only, regularly re-evaluated, and phased out altogether by 2030. The current level of free allowances (by our calculations) is 39%, and we recommend that free allowances be no more than 25% of total allowances.

- **Offsets**: The bill allows any covered entity to use offsets (emission reductions from forestry and agriculture) to comply with up to 8% of their emissions. At least half of those offsets must provide environmental benefits for Oregon, and no covered entity can use offset if located near in a communities which suffer from poor air quality standards. The bill establishes an advisory board to monitor the program and ensure that offsets are real, permanent, quantifiable, verifiable and enforceable. In order to maximize fossil fuel emission reductions, we should limit offsets to the 4% and require all to have Oregon benefits.
- **Exemptions and Exclusions:** All major polluters of greenhouse gases need to be subject to the cap. Semi-conductor GHG pollutants should not be exempt for 5 years, and aircraft and marine fuels should not be excluded.
- **New Fossil Fuel Infrastructure:** The bill clearly states that new fossil fuel infrastructure projects cannot be granted exemptions or EITE status. In addition, we should push for a companion bill to place a moratorium on all new fossil fuel infrastructure projects.
- **Investment Fund Requirements:** The bill is very specific about how the moneys raised by the program should be invested.
    - Any revenue gained by utilities from selling unused allowance must go to strengthen existing utility-based **weatherization, solarization and low-income-rebate programs**
    - Proceeds from vehicle fuel suppliers go to the **Transportation Decarbonization Account** (a subaccount of the Highway Trust Fund) that must be dedicated to projects that reduce GHG emissions and benefit impacted communities.
    - The majority of proceeds from Industry and other fuel suppliers go to the **Climate Investment Fund** that will focus on energy efficiency and energy conservation projects, transportation electrification, investments in natural and working lands to support GHG sequestration, development of clean energy infrastructure, and projects to increase the resilience of fish and wildlife ecosystems.
    - The rest of the proceeds from Industry and other fuel suppliers go to the **Just Transition Fund** to support economic diversification, job creation, job training and provide support and re-training for workers who need to transition into the clean energy economy.
    - However, the bill needs to **enumerate specific allocations** of the Climate Investment Fund (e.g. 50% to impacted communities, 10% to tribes, 20% to natural and working lands, and 20% statewide) and the Just Transition Fund.
- **Public Utility Commission (PUC)**: The bill specifies that the PUC is required to ensure utilities use proceeds from sale of allowances to reduce GHG emissions and provide bill assistance, weatherization, energy efficiency, transportation electrification and grid modernization. I believe the PUC should adopt, as a core part of its mission, supporting Oregon's transition to a clean energy economy.
- **Carbon Policy Office:** This office, established by the bill, is expected to be combined into a new Oregon Climate Authority that will integrate those departments from DOE and DEQ needed coordinate actions and ensure the GHG reduction goals are met. This new authority must have the necessary

regulatory authority to ensure compliance with requirements set out in the bill. Stay tuned as more is learned about this new authority.

- **Governance:** The bill establishes a nine-member citizen advisory committee that has geographic and socioeconomic diversity. The bill needs to strengthen the requirements for racial diversity and representation by tribes in the citizen advisory committee. The bill requires that five-year reviews are conducted and reported to ensure accountability to the goals.

Dr. Pat DeLaquil
155 SE 16th Ct.
Gresham, OR 97080

DecisionWare Group
Policy Analysis for
Energy, Economy and Environment

www.decisionwaregroup.com

Dr. DeLaquil has been a leader in the commercialization of clean and renewable energy technologies for over 35 years. He is currently CEO of DecisionWare Group, which is a small business that develops and uses MARKAL/TIMES models to perform policy analyses, conduct energy supply - energy security studies, and undertake capacity building and model transfer on behalf of donors, governments and the private sector to identify optimal pathways for achieving economic development and environmental goals.

Dr. DeLaquil's expertise covers technical, market and financial services to government, multilateral and private sector clients interested in the development, commercialization and market introduction of clean, renewable and energy efficient technologies. He was recently Director of IRG-Analytics for International Resources Group, which is an international development consulting company working for USAID, Asian Development Bank and others. He has led the formation of two clean energy start-up companies: EnergyWorks, a Bechtel-PacifiCorp joint venture, which out-sourced energy services for major industrial companies in developing countries through renewables and cogeneration, and another to market biomass gasifier systems to agribusiness customers in developing countries.

Prior to that, Dr. DeLaquil managed Bechtel's interests in the development and commercialization of renewable energy technologies. Key projects developed by Dr. DeLaquil and his group were the PV-USA Project with Pacific Gas & Electric and the 10 MW Solar Two Power Tower Project with Southern California Edison.

Dr. DeLaquil started his career in renewable energy technology development at Sandia National Laboratories, where he performed several studies evaluating the cost and performance of solar power tower technologies for both utility and industrial process heat applications.

Dr. DeLaquil holds a Ph.D. in Nuclear Engineering from Massachusetts Institute of Technology and a B.Sc. in Marine Engineering from the US Merchant Marine Academy He has authored over 100 papers, reports, and articles on solar and renewable energy including chapters in two books on renewable energy technology. He was a contributor to the 2nd IPCC report and holds a patent for a high temperature solar receiver.