

**FINAL REPORT**

**RECOMMENDED LEGISLATIVE CONCEPTS  
ENERGY EFFICIENCY IN THE BUILT ENVIRONMENT**

**Governor's Energy Efficiency Work Group**

17-September-2008

## Background

The Energy Efficiency Work Group (EEWG) was convened in spring, 2008, by David Vant Hof, Governor Kulongoski's Sustainability Advisor. The charge of the EEWG was to develop recommendations relating to energy efficiency in the built environment as part of the Governor's 2009 legislative package focusing on climate change.

The group was comprised of 31 members representing diverse interests with expertise in energy efficiency in the built environment, plus liaisons from several state agencies. It was co-chaired by Bill Edmonds, Director of Environmental Policy and Sustainability for NW Natural, and Clark Brockman, AIA and Associate Principal and Director of Sustainability Resources for SERA Architects, and was staffed by the Oregon Department of Energy. A list of members and agency liaisons is attached (Appendix A).

The group met for 3½ hours nine times between April 25 and August 15. Meetings were open to the public and a majority of the committee attended all of the meetings; several persons from outside the committee provided substantial input as well. The Department of Energy hosted a Web page with meeting notices, minutes, legislation from other states and other supporting materials, and draft concepts submitted by members. These can be viewed at: [www.oregon.gov/ENERGY/CONS/EEWG/index.shtml](http://www.oregon.gov/ENERGY/CONS/EEWG/index.shtml).

The goal of the EEWG was to develop "big idea" legislative concepts to improve energy efficiency in the built environment. The understanding was that some of these ideas would become part of a larger legislative package to be introduced by the Governor focusing on climate change. The package may also include recommendations from other workgroups relating to cap-and-trade, renewable energy, transportation, and work force training. Therefore the EEWG tried to be more strategic in its approach and address major energy efficiency barriers and/or opportunities.

In an attempt to coordinate efforts, Angus Duncan, the chair of the Global Warming Commission, received all the materials and information developed by the EEWG, and attended several of the EEWG meetings. In addition, the EEWG co-chairs coordinated with the co-chairs of the Renewable Energy Working Group to share strategies and avoid conflicts on recommendations that overlap both energy efficiency and renewable energy.

At its first meeting, the group reviewed Oregon's infrastructure and policy to date, and held a brainstorming session to list legislative concepts. Concepts were discussed, debated, refined and winnowed at subsequent meetings. From the outset, the EEWG operated with the understanding that consensus may or may not be possible from such a diverse group, and that the Governor was looking for good ideas that had broad support of the EEWG. However, to assist the Governor in developing his legislative agenda, differences would be noted and forwarded with the recommendations.

At the end of the process, the co-chairs and staff conducted a survey using Survey Monkey to develop the "sense of the group." In addition, the last meeting provided all members a chance to provide closing comments, and in particular to identify what they saw as priority concepts or concepts they opposed along with their reasoning.

## Summary of EEWG's Work

In order to help mitigate the impacts from climate change, the Legislature enacted aggressive greenhouse gas reductions goals in the 2007 legislative session. They adopted goals of reducing greenhouse gas emissions 10 percent below 1990 levels by 2020 and 75 percent by 2050. The energy use in residential and commercial buildings is responsible for about 30 percent of greenhouse gas emissions from fossil fuel burning in Oregon, and industry is responsible for another 28 percent. In order to meet our greenhouse gas reduction goals, it is necessary to improve the energy efficiency of our buildings and industry.

Energy efficiency is the most cost-effective source for emission reductions. The Energy Trust of Oregon reports that it is achieving energy savings well below the OPUC's 2¢ per kilowatt hour (kWh) performance measure target, compared to new generation which costs 8-10¢/kWh. Oregon has long been a leader in energy efficiency. However, the state's effort fall substantially short of meeting our reduction goals. There is tremendous opportunity for additional savings, particularly from existing facilities, and it is time for Oregon to take the next step. In addition to meeting carbon goals, energy efficiency will help Oregonians combat escalating energy costs and save money.

To meet the state's reduction goals, the group as a whole agreed on the following program elements:

- Education. Provide information and education so individuals and businesses can make appropriate behavioral changes and purchasing decisions to reduce their energy use and carbon footprint.
- Financing and incentives. Provide the financial tools and assistance to help people afford major energy efficiency improvements in their homes and buildings.
- Affordable housing/low-income weatherization. Expand tools that effectively address energy efficiency for low-income households.
- Standards and regulations. Improve codes and other standards for new homes and buildings and major renovations and, where appropriate, for consumer equipment and appliances used in homes and buildings. It could also include requirements for utilities, although the group did not move forward with any particular proposal in that context.
- Work force training. Provide work force training to ensure Oregon has the skills and capacity to deliver energy efficiency required to meet its reduction goals.

## Summary of Concepts

Within the framework described previously, the EEWG came up with 12 concepts for possible legislative action, summarized below. Please see Appendices B-M for more detail on each concept.

The concepts received a range of support from the members of the EEWG. The concepts concerning public information, low-income assistance, and financing incentives received the strongest support. Concepts relating to standards and regulations were the most controversial. The seven most broadly supported concepts, each receiving more than 75 percent committee support, are listed below and are denoted by asterisks in the summaries that follow.

- Low-income Assistance
- Education and Outreach
- Work Force Training
- Energy Performance Scores
- 2030 Carbon Neutral Buildings
- Local Energy Improvement District Financing
- 50% Business Energy Tax Credit (BETC) for Industrial Projects

Appendix N provides a summary of the survey of EEWG members, and Appendix O contains minutes from the last meeting in which every member was asked to summarize their positions on the various concepts.

### **INFORMATION AND TRAINING**

- (1) ***\*Energy Performance Scores (EPS)\**** This concept would require homes and buildings to obtain an energy efficiency rating at time of sale. This information could help influence purchasing decisions, create a market value proposition for the consumer, and provide the basis for loans to improve energy efficiency. Details would be implemented during rulemaking, based on further public input.

Most members of the EEWG thought that ratings wouldn't be widely used or drive energy efficiency improvements in existing buildings unless they were mandatory at time of sale. They thought it could be achieved for a small cost and be a significant tool to help leverage energy efficiency of existing housing and commercial building stock as it turns over if complemented with an appropriate financing tool (see Financing and Incentives, below). It should be noted that a pilot to create energy efficiency ratings is currently being tested by the Energy Trust and Earth Advantage, who were both committee participants.

The concept received broad support from the EEWG, but it may be opposed by the real estate community, appraisers, lenders and others concerned about mandating an energy performance rating at time of sale.

- (2) ***\*Education and Outreach.\**** The group agreed that efforts to educate Oregon businesses and citizens about climate change and energy efficiency and renewable energy opportunities should be stepped up. The group acknowledged this concept may not need stand alone legislation, and instead should be integrated into each EEWG concept. These education and outreach objectives could probably be accomplished administratively with executive direction and a budget.
- (3) ***\*Work Force Training.\**** The EEWG supported work force training efforts broadly to ensure that persons responsible for delivering energy efficiency and energy performance analysis in the market place have the necessary skills and tools – without it there will likely be bottlenecks as the industry grows. Specifically, this concept would direct all state agencies responsible for conferring or administering professional licenses within the building industry to incorporate sustainability and climate change related topics into examination and continuing education requirements. The EEWG also recognized that a parallel effort by the Office of Economic and Community Development was ongoing to develop proposals for work force training in the renewable energy and energy efficiency sectors.

There was no opposition from EEWG members, although it was acknowledged that some industry and trade associations may oppose training requirements that might be parallel to their own. A few members commented that work force training doesn't need government funds, and it shouldn't duplicate or interfere with training provided by separate trades.

## **STANDARDS**

- (4) ***\*2030 Carbon Neutral Buildings.\**** This concept grew out of the nationally recognized Architecture 2030 Challenge ([www.architecture2030.org](http://www.architecture2030.org)), which calls for new homes and buildings to reduce their fossil-fuel GHG-emitting consumption 50 percent by 2010 and to be carbon neutral by 2030, and for existing buildings to achieve at least half of the same additional efficiencies on the same timeline. The concept would set the aspirational goal of carbon neutrality in all new homes and buildings by 2030 as a vision for where state needs to head. Similar efforts are being developed in Washington and California for their upcoming legislative sessions and the federal government has already passed similar aspirational legislation for federal buildings.

To move toward this goal, the concept proposes a clear structural pathway. It would begin with an initial aggressive improvement in the state commercial building energy code of an additional 25 percent energy savings by 2010 and 15 percent by 2012 for the state residential energy code (on top of the 15 percent energy savings for residential homes enacted in the 2007 energy code). At the same time as these code upgrades take effect, the new code would also define a “reach code” that sets a higher level of code improvement that is economically and technically feasible, that would become mandatory at the next code cycle. These reach codes would be complemented by incentives and training programs.

The concept would also establish a schedule of phased energy code improvement steps for both the mandatory and reach codes through 2030, with defined off-ramps for economic, technological, or other appropriate factors.

This concept generated the most controversy within the group. It received the second largest number of “strong support” votes in the survey, but also received some of the strongest comments in opposition. Proponents said clear and mandatory interim steps are needed to provide certainty and predictability to meet energy savings goals and that announcing the next cycle several years in advance provides the design and construction industries time to learn and adapt to future targets. A few members strongly opposed this concept because they do not believe aspirational goals aid the code setting process, particularly to the extent these targets extend beyond current technology. They were also uncomfortable with the State creating such strict mandates for the energy efficiency of all buildings.

- (5) ***Energy Codes Board.*** This concept would establish an Energy Codes Board within Building Codes Division with sole responsibility for the energy conservation provisions of the state building code. A separate board with expertise in building energy efficiency would help ensure that energy receives adequate attention and the energy code is as energy efficient as possible moving into the future. While most members of the EEWG agreed that adding dedicated energy expertise to the State codes process would be valuable, others thought that adding yet another board to the system would further complicate the existing code process, and may not be feasible.

## **FINANCING AND INCENTIVES**

- (6) ***\*Local Energy Improvement District Financing.\**** This concept would amend current statutes to allow public bodies to establish Local Energy Improvement Districts to issue bonds to make loans to property owners for energy efficiency improvements. The bond repayment revenue stream would be generated by long-term assessments against each individual property benefited, based on the value invested in each property from the bond fund.

Energy efficiency in existing homes and buildings is critical to meeting state reduction goals, and up-front cost is a key barrier to achieving this objective. A funding source allowing for longer-term repayment, such as through property tax assessments, could significantly expand the market for energy efficiency in existing homes and buildings.

Local Energy Improvement District financing was the EEWG’s favored vehicle for addressing the energy efficiency financing barrier for existing buildings, and is probably the group’s most broadly supported concept. There was no opposition from EEWG members. However, schools, community colleges and local governments may oppose it because property owners who face higher property

assessments because of energy efficiency improvements may be more likely to vote against other local bond measures.

- (7) ***\*50% BETC for Industrial Projects.\**** This concept would increase the Business Energy Tax Credit (BETC) from 35 percent to 50 percent for industrial process projects, similar to what the 2007 Oregon Legislature approved for renewable energy projects. Industry strongly favors this proposal as necessary to shorten the payback period and make more potential energy efficiency projects cost-effective. They are more likely to reduce carbon emissions over the short term from energy efficiency than renewable energy, and believe they should be given the same incentive as renewables. There was no strong opposition to the concept, though there were cautionary thoughts about the impact on state revenues of expanding BETC. There was also significant interest in requiring Oregon Department of Energy evaluation of industrial energy efficiency projects seeking the 50 percent BETC to ensure the expanded credit only extended to projects that would not be cost effective at the existing BETC level.
- (8) ***\*Low-income Assistance.\**** Low-income households represent 25 percent of Oregon households. Low-income advocates made a strong case that low-income households bear the brunt of higher energy prices and must be addressed. Members of the Work Group unanimously agreed. In fact, the general idea of addressing energy efficiency in low-income households received the highest level of support of all proposals.

However, it was difficult to come up with new program ideas that specifically address the issues low-income households face without large amounts of new funding. Some proposals indirectly addressed low-income housing, such as the Local Energy Improvement District Financing. However, while low-income households are not excluded from those concepts, low-income households typically don't buy or rent new homes or buildings and don't have the economic means to pay off additional loans for energy efficiency improvements.

This concept would authorize the Department of Housing and Community Services (HCS) to establish an "Energy Matchmakers" account to provide non-discretionary matching funds to various grants, modeled after a similar program in Washington state. A major problem is that each of HCS' patchwork of funding sources currently place different restrictions on how the money is spent. This results in some efficiency work not getting accomplished, and increases transaction costs. A matching fund would both increase funding to improve energy efficiency in low-income households, and provide non-discretionary funding to fill gaps in energy efficiency and essential related improvements that are currently not covered by any current funding sources.

- (9) ***SELP Financing.*** This concept would increase bonding capacity for the Small Energy Loan Program (SELP) from \$150 million to \$500 million, and earmark the loans for utilities and other entities (such as Local Energy Improvement

Districts, above) offering energy efficiency loans to their customers. This concept could complement the financing concept set out above. This concept had no opposition, but only moderate support. In general, members thought this concept was not yet fully fleshed out, and that the Local Energy Improvement District (#6, above) would be more effective at addressing the problem of financing of existing building energy efficiency improvements.

- (10) ***Energy Efficiency Benefits Expansion.*** This concept would require all electric and natural gas utilities and other heating fuel providers to spend a minimum percentage of revenues on energy efficiency, similar to what is currently required of the IOUs under SB 1149. These entities would be given latitude to administer their own programs, and would be given credit for energy savings they are achieving under existing programs. Thirty-one percent of all customers statewide are not covered by a legislatively required public purpose charge, although they may be covered by a public purpose charge administered under regulation or by other local programs. This proposal would ensure a minimum level of energy efficiency programs and services to all residents statewide.

This proposal received moderate support, but a number of committee members strongly opposed this concept. Concerns centered around opposition to new mandates for public utilities and how the concept would affect local policies and programs. In addition, representatives from the propane and fuel oil industries attended several meetings to voice their opposition.

- (11) ***Industry Self-direct of Renewable Adjustment Clause to Energy Efficiency.*** The concept would allow industrial customers larger than 1 average MW to self-direct an IOU's renewable adjustment clause (RAC) to energy efficiency measures within the customer's facility. The RAC is an approved rate surcharge to cover the cost of renewable resources under the Renewable Portfolio Standard (RPS).

This was the only concept that failed to receive majority support. Proponents argue that industrial energy efficiency is more cost-effective than renewable energy and will result in more greenhouse gas reductions. Opponents said the proposal is strongly flawed because it treats one customer class differently than others – other customer groups will be saddled with the cost of meeting the RPS, or may try to get similar group specific adjustments which would further undermine the RPS.

- (12) ***Industry BETC for Recycling Projects.*** The concept would expand eligibility of industrial recycling projects for BETC. The industry representatives argued that increased on-site recycling of materials would reduce life cycle energy use and greenhouse gas emissions compared to purchasing new product. BETC rules currently exclude reclaim projects which extract waste materials from a waste stream for re-use in the same way the product or material was first used, unless it changes the product or material.

The Work Group mostly had moderate support for, or no position on, this proposal. There was concern about opening the door to a flood of projects that make good business sense without any incentive, or are being done for other reasons, and that instead the State may want to rethink recycling policy in a comprehensive manner.

In addition to the concepts described above, the group generated a number of other concepts that did not make it to the final list for a variety of reasons. Many of the concepts may be good, but time and expertise prevented them from being more fully developed. All of the originally brainstormed concepts are included in the “Bucket List” in Appendix P.

The group understands the Governor will not introduce all of the recommended concepts as separate bills – some concepts may be combined, and others may not be advanced. It is also possible that some of the concepts may be able to be achieved voluntarily or administratively under existing laws and structures. However, we introduce them individually in this document so they can be evaluated on their own merits. Alternatively, some ideas may be picked up and introduced by others.