

## OUR HOMES ARE A GOLDMINE

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Our existing homes, right under our feet, are our greatest and least expensive new energy source. This is the "aha!" that emerged from last week's jam-packed Affordable Comfort Conference in Portland on deep energy retrofits of existing homes.

Forget oil, speakers said - we're sucking it dry. Forget coal - its emissions are drowning our coast counties. Forget wind - we've already grabbed the affordable sites. Forget solar electric - it's too expensive. Improving the efficiency of our existing homes can produce more energy for less dollars than any alternative. It can make our homes storm-safe and more comfortable. It can give real pocketbook relief that lasts the whole 80 year lifecycle of a home. And it can get us back inside our renewable hydro-electric budget with enough spare room to fuel an entire fleet of electric vehicles.

Our cheap hydro energy made us lazy and inefficient. Rocky Mountain Institute just announced that Oregon is 36th among the states in economic productivity energy-wise. We use twice the energy per dollar produced as the top 10 states. Today's world suggests huge benefits of looking close to home - literally inside our homes - for energy and dollars. The inefficiency of our homes, nationwide, resulted in \$13 trillion in lost value in 2008. That is just energy cost, and ignores even greater non-energy costs we are suffering.

Information presented from the NW Power Council's Sixth Energy Plan warns that new energy will likely be costing almost three times current rates within 25 years. This means as much opportunity for less expensive efficiency-energy in the residential sector as in the whole previous BPA plans.

What does this mean for your home and mine? We all know the litany of replacing light bulbs. And there is still room for action there. But super-insulating walls, roofs, and floors can bring huge savings for many homes. Barbara Miller, of the National Affordable Housing Network, amazed attendees with her reports that they have built over a thousand homes across the country with R-40 walls and R-60 roofs, and built them cheaper than standard construction. Large numbers of homebuilders and insulators learned details to thicken existing exterior walls to cut their energy loss by 50-70%, and to install the latest super-lowE windows with even lower heat loss.

Solar or heatpump water heaters can cut water heating energy use by 50-75%. Newest EnergyStar refrigerators and computers use 75% less energy than a generation ago. All energy uses in our homes show significant potentials for savings, with many programs targeting as much as 80% reduction in energy use per home.

States, such as Washington, with accessory dwelling ordinances have also found that splitting our oversized homes can give more comfort, drastically reduce our energy use per family, and even provide income to retirees that have just lost half their income. For a 3-bedroom ranch house, merely closing off the hall can turn the back bedrooms into a separate living unit. That by itself cuts per-family energy use in half.

The homebuilding industry everywhere has flatlined in our current recession, and little of it shows up in unemployment figures. Attendees showed that the industry is gearing up to shift from resource-intensive new homes to energy retrofits of existing ones.

Doesn't it seem wiser to employ people to save money and energy rather than just pay unemployment?

Everyone asks, of course, who is going to pay for all this work. The answer, spoken clearly at the conference, was increased federal and state funding and tax credits, and utility investment for demand reduction. The state of Alaska offers homeowners grants and loans against energy savings up to \$10,000 to fund efficiency improvements. Stair-step energy rates used in other states offer both incentives and funding. Small energy users pay low hydro prices. Larger users pay extra to encourage efficiency, and to pay for the work of reducing energy use to the lower levels.

After a decade of flim-flam profiteers, few people trust any of the wild and unproven schemes flying around to develop esoteric energy sources. It is very satisfying to learn that already well-proven efficiency improvements can meet our needs less expensively, while providing local employment and better quality of life.