LEGISLATIVE CONCEPT

Concept subject or title:
Optional Self Direction of RAC to Energy Conservation

Brief description of proposal:
Allow large consumers (greater than 1 Average MW) the option to self-direct an IOU's renewable adjustment clause (RAC) dollars to energy efficiency measures within the consumer's facility. The IOU's RPS percentage target will not change. Rules for self direction under this proposal could be similar or the same as rules for the existing 'Public Purpose Fund' industrial self direction program.

'Self direction' is defined as allowing large consumers to fund energy efficiency measures at their facilities and to credit those dollars against the renewable energy surcharge whether collected in the RAC or included in subsequent basic rates.

Background:
Under SB 838, an IOU may request the OPUC to authorize a rate surcharge (RAC) to collect the costs of renewable resources. In a subsequent general rate case, these costs would be included in the basic rate charges.

Example:
Assuming a RPS calculation results in a 5% rate surcharge for a 2 Average MW or $61,000 / yr ($5,110 / month):

(1) Industry invests $100,000 in a conservation project that saves 1,429 MWH/year for 25 years. The ODOE verifies the validity of the conservation project.
(2) The $100,000 invested above would be "tracked" by ODOE in an on-line account similar to existing self direction of Public Purpose Funds.
(3) The monthly RPS surcharge of $5,110 would be deducted from the $100,000 ODOE account and credited to the utility bill as long as money exists in the ODOE account.

What problem does this concept address?
The RPS increases utility rates and installs renewables, but the load remains unchanged. A 2006 study, commissioned by the ETO, found that there is still approximately 200 MWa of industrial energy efficiency that is achievable in Oregon. This measure would create a powerful incentive to drive down industrial load through conservation by an estimated 1-2% per year resulting in a 10-20% decrease by 2020. Under this measure, industry would be contributing financially to the cause of GHG reduction to the same degree as other rate payers either through this self direction measure or payment to the RPS. Directing these dollars to conservation would (1) leverage greater GHG reduction, i.e. a dollar invested in a 5 year conservation project will produce more than double the MWH in savings than the same dollar invested in wind generation, (2) increase the industry's cost effectiveness (lower energy costs/production unit). At the same time, this measure benefits other rate payers since the overall load will be reduced, all consumers will need to buy less fossil fuels for electrical generation and reduce the need to install as much alternate energy.

Another benefit of industrial energy efficiency is reducing not only CO2, but other fossil fuel combustion byproducts such as NOX, SOX, etc.

What happens if this concept isn't implemented?
Scarce industry dollars will be inclined to not be spent on energy conservation but for other business needs. This measure would incent industry to invest in cost-effective conservation – both to reduce GHG and to improve the industry's competitiveness.

Lost opportunity to achieve viable industrial energy savings, carbon, and other air pollution reductions.

Would you characterize energy and GHG benefits of this proposal as major, medium or minor? What data are needed to quantify these benefits?
Major – The GHG reduction for a 5 year payback conservation project is double the benefit of a wind generator for the same money spent. See the model dated 6/10/08. For example, if the RAC is set at 5% and industry invests this money into an 5 year payback conservation projects (resulting in a 20% energy savings per dollar invested), there will be a resulting conservation savings of 1% in that industrial facility (1/5 x .05 = .01 or 1%) cumulatively each year i.e. 5% in 5 years. If all of qualified industry participates in the Oregon Pacific Power territory alone, it is projected that the 5 year reduction in load would be 18AMW or 155,803MWH, the equivalent to the output of 37 wind turbines.

Data – ODOE would track, verify, and quantify conservation projects by the industry.

Who is affected by this proposal? Who will support it? Who is likely to oppose it?
Support – Industry, environmental community, trade groups
Oppose – Renewable developers, other customer groups (but all will benefit from less fossil fuels being purchased and the need to install as many renewables).

The IOU's RPS target will not change—although the IOU's total retail load to which the % is applied will decrease. The last increment of renewable resources to meet the target---which is expected to be more expensive than the average-- may be avoided. Any existing renewable resource from which a retail sale is displaced by this additional conservation could be sold on average for more than the tariff rate and thereby benefiting all other customers.

The money that will be invested in Oregon industrial conservation will stimulate the Oregon economy since about half the dollars are spent on trade labor to install the initiatives and the result will be lowered costs for industry though lower utility bills.

Will there be a fiscal impact? Order of magnitude estimate?
No material fiscal impact on State revenues.

Self Direction of Renewable Adjustment Clause
Phil Ermer, HP Regional Energy Manager, 6/10/08

This is to further explain why I believe it is in the best interest of the environment and the State of Oregon to allow industry to self direct the 4-6% Renewable Adjustment Clause. The utilities RPS percentage target would not change.

What I'll do to illustrate this is to compare the cost & output characteristics of a regional large scale wind generator to various energy conservation projects. I won't include any tax or energy incentives for clarity.

Here's information regarding wind generators in the western US:
Typical large scale wind generator = 1500 kW max output
Typical output efficiency (given varying wind conditions, etc) = 32%
Typical cost = $2500 / kW (this price has doubled since 2004)

Typical yearly output = 1500 x .32 x 365 x 24 = **4,204,800 kWh / yr**
Typical cost of the generator = 1500 x $2500 = **$3,750,000**

The easiest way to compare this to an energy conservation project is to simulate taking the same $3,750,000 and 'invest' in varying projects. As a background, HP takes the same view of conservation projects as the Oregon Office of Energy, we evaluate a project's value by 'energy payback', i.e. how much energy is saved per money invested in the project. This is expressed as (project $ spent) / (energy $ saved). For example, if $1000 was spent on a conservation project that saved $1000 in energy, that's a one year payback project.
$1000 in energy is $1000 / .07 kWh = 14,285 kWh.

So if the above $3,750,000 was invested in a one year payback conservation project, it will save $3,750,000 in energy or 52,857,143 kWhs at $.07 / kWh yearly. This provides 10x the environmental benefit to the above wind generator. There are one year payback projects we have in progress now at HP, but the typical project we do is closer to 2 to 8 years before incentives. Below are energy savings for various projects:
1 year payback = 52,857,143 kWhs
2 year payback = 26,428,571 kWhs
3 year payback = 17,619,048 kWhs
4 year payback = 13,214,285 kWhs
5 year payback = 10,571,428 kWhs
8 year payback = 6,607,142 kWhs
10 year payback = 5,285,714 kWhs
12 year payback = **4,404,761 kWhs**

So the 'energy value' of a 12 year payback energy conservation project is about the same as the current cost of wind power. A factor in this is the cost of wind energy is has increased in cost by 2.5x in the last 4 years. What was a 'good deal' is less so now.

The cost of Solar Photovoltaic's is substantially worse than wind, a project with today's technology would cost $7M to deliver 1,700,000 kWhs / yr.

To sum up, if industry could self direct the 4-6 % Renewable Adjustment Clause for the typical 8 year or better project, more kWh and green house gases would be preserved than with wind generation or other renewables. Self direction of energy bill fees are already an established process in the Oregon Office of Energy as an easy to use web based system. Economically for Oregon industry it means the difference between extra a 4-6 % fee that would need to be absorbed by the business vs. a reduction in energy consumption that would lower cost and make industry more competitive worldwide.