

From: WALTER J EAGER [<mailto:eagerwj@centurylink.net>]

Sent: Tuesday, June 09, 2015 3:14 PM

To: Reiley Beth

Subject: Study Report: "Evaluation of Carbon-Pricing Bills" as Testimony on Senate Bill 965

Dear Beth,

Please include the following as written testimony for the June 10th hearing on Senate Bill 965 by the Senate Committee on Energy and Natural Resources.

Thank you,

Walt Eager

Chair Dembrow, Vice Chair Olsen and Members of the Senate Committee on Energy and Natural Resources:

The following is a study that I recently conducted of the five carbon pricing bills which committees of the 2015 Legislature have considered. These are Senate Bill 965 (Cap and Taxpayer Dividend) and House Bills 3176 (Fee and Taxpayer Dividend), 3250 (Cap and Taxpayer Dividend), 3252 (Tax and Multiple-Use) and 3470 (Unclassified).

The purpose of this study is to facilitate selection of that carbon pricing bill which will provide earliest conversion from fossil fuels to safe energy sources and do so with the least expenditure of time and funds and the greatest fairness to the public.

The Introduction, Standards, Results and Recommendations are presented below and are supplemented by the attachments.

Qualification to Conduct this Study

I am an Oregon-Licensed, Professional Engineer, with graduate-level education in both the physical and life sciences. I have 62 years of combined experience in Energy, Environmental and Transportation Engineering. Since 1978 my family and I have been proponents of converting from fossil fuels to safe energy sources. Originally, it was to protect public health from the toxic combustion products of fossil fuels and prevent military entanglements in the Middle East that have proven to be overwhelmingly costly in both lives and funds. In 1980 the National Academies of the Sciences (NAS) issued its first public warning of human-caused climate change and attributed it to fossil fuel use. That broadened our purpose to include the avoidance of climate catastrophe.

We started in 1978 by designing and then constructing an energy efficient and productive solar home with food-producing gardens. Our primary purpose was to demonstrate fossil-fuel-free living to the public. Our home, gardens and 95% of our vehicular transportation are now powered by solar electricity, the rest by hydro-power. We grow most of our food. Our trees on this and another lot sequester enough carbon dioxide for us to be carbon negative by a margin of 60%. We know that fossil-carbon-free living is achievable, how to achieve it and how to teach these techniques to others.

Potential Conflicts of Interest

There are essentially none. To maintain objectivity in evaluating global warming mitigation efforts I refrain from membership in every organization involved in this work. I have participated in the meetings and lobbying activities of most global warming mitigation organizations, including those which originated and are promoting the carbon pricing bills, now being considered by the 2015 Oregon Legislature.

Acknowledgments

Commendation is deserved by the leaders of the organizations which originated and are promoting these carbon-pricing bills and by the sponsoring legislators, named in Attachment 1. Two of these legislators deserve special recognition. They are Senator Dembrow for his leading sponsorship of Senate Bill 965 and Representative Barnhart for his sponsorship of Senate Bill 965 and his leading sponsorship of House Bill 3470.

Why Carbon Pricing Legislation?

Daniel Kahneman won the 2002 Nobel Prize for research on human judgment and decision making. He states that climate change (from human-caused global warming) is a “perfect problem”. By this he means that it cannot be resolved because we humans bend information to fit our existing values and prejudices. (Assimilation Bias). Fortunately, not all humans do this.

However, it takes the active participation of at least a large majority to prevent global-scale, climate catastrophe. So the primary approach that has been taken for the past 35 years, promoting individual action, is necessary but not sufficient. We are at least 25 years behind the required schedule in my estimation. Therefore, the most effective legislation for eliminating the use of fossil fuels is required and required now. With enactment of such legislation we can catch up and begin reversing the exponentially-

rising level of atmospheric carbon dioxide and the rise in the climate disasters that it is causing.

This legislation must provide the most effective motivator for most humans. That is financial incentive. The most effective way to do this is to charge the suppliers of fossil fuels and electricity, generated with fossil fuels, for the privilege of selling products that degrade public health and security. **These suppliers will pass these fees on to consumers by increasing the prices of fossil fuels. They must be increased, annually, until they fully compensate for the damage that fossil fuels are causing to human health and security. Before their full, damage-compensating prices are reached, fossil fuel prices will exceed those of most safe forms of energy, which are decreasing. That will eliminate fossil fuels from the energy market. Threat resolved!**

It is important to realize that fossil fuels are having an effect on humans, that is independent of climate change. It is the direct impact of the toxic components of fossil fuel exhaust on public health. Unlike climate change, this effect is not slow-moving (stealthy). As extensive medical literature on this subject reports, fossil fuels are causing three of the four leading causes of premature death in the United States and immense suffering from these and others. Properly used, this knowledge will become a major factor in gaining support for eliminating fossil fuel use. See Attachment 2 for more on this.

As NAS and other highly-regarded organizations of climate scientists have repeatedly warned, fossil fuels are the primary cause of global warming. The initiating effect is the release of greenhouse gases from fossil fuel exhaust. These gases retain excess heat in the Earth's atmosphere, raising global temperatures. This slow-moving (stealthy) condition is the trigger for secondary (later and uncontrollable) effects that would suddenly accelerate global warming and climate catastrophes to levels that are beyond human endurance.

An example would be the release of Methane from vast expanses of thawing arctic tundra. Methane is 30 times more effective, as a greenhouse (heat-retaining) gas, than Carbon Dioxide. Its release would be uncontrollable and self-reinforcing, comparable to a nuclear chain reaction. The only way to prevent horrific suffering, followed by human extinction, is to eliminate fossil fuel use before greenhouse gases can raise tundra temperatures sufficiently to trigger Methane release.

This is why carbon pricing legislation is essential to human health, security and ultimately, survival.

Legislation Must Be Resistant to Effectiveness Degradation

To achieve timely conversion from fossil fuels to safe energy sources, the enacted legislation must be resistant to effectiveness degradation by special interests.

Foremost among these are the fossil fuel industries. They conduct public disinformation and political intimidation and corruption campaigns to protect their vested interests, regardless of the human consequences. An understanding of their influence on public opinion and legislative action can be obtained at:

<http://www.pbs.org/wgbh/pages/frontline/climate-of-doubt/>

For reasons, given below, Oregon is better-positioned to overcome the political power of the fossil fuel industries than any other state.

Why Oregon?

The highly-capable Citizens Climate Lobby (CCL) has been unable to get its “Fee and Dividend”, carbon-pricing proposal enacted by the grid-locked U.S. Congress. To do so CCL needs a successful example of carbon pricing legislation at the state level to which it can point. That carbon-pricing legislation must have the ability to eliminate fossil use at the earliest time, do so at least cost in time and funding and be fair to consumers. (See Attachment 3 for more on this.)

No state is better positioned to provide that carbon pricing example than Oregon. Its forward-looking government understands its responsibility, as fiduciary of the public trust, to protect Oregonians from the ravages of fossil fuels. The fossil fuel industries' “jobs (versus environment)” argument will not wash in Oregon. Thanks to its beneficial geology, Oregon has no commercially-viable, fossil fuel deposits. It has abundant safe energy from the sun, wind, elevated water and geothermal resources. So it is in the economic, as well as the humanitarian, interests of Oregonians to turn away from economy-draining, imported fossil fuels and to safe, “Made in Oregon” energy. This will produce many new businesses and many higher-paying jobs for Oregonians. What's not to like about safe energy?

Oregon's economic situation is quite similar to that of British Columbia. Four years ago the BC government enacted a carbon pricing bill that is similar to some of those, considered by Oregon's legislative committees. The resulting law has the overwhelming and enduring support of both BC citizens and business owners.

I have heard some rationalize their inaction by stating: “What Oregon does to control climate change will be a drop in the bucket.”. On the contrary Oregon can and must demonstrate to our nation and the world that eliminating fossil fuel use is not only the safest course to take, it is the most economically beneficial. This is what highly-regarded economists, both Democrats and Republicans, have concluded. (See Attachment 3)

Evaluation of Carbon-Pricing Bills

Evaluation of carbon-pricing bills requires a set of standards against which they can be judged. I used the following characteristics as Standards in this study: (1) completely describes its process, enabling citizens and legislators to judge efficacy, (2) has a simple process which will minimize time and cost to execute and administer, (3) provides an effective process which will eliminate fossil fuel use at the earliest time, (4) is intrinsically fair to the public, which prevents reversal before accomplishing its objective, (5) provides a strong incentive for personal conversion to safe energy, (6) defines a process that is resistant to degradation of effectiveness by opposing and non-aligned interests and (7) enables enactment by a simple majority vote.

House Bill 3176 (Fee and Taxpayer Dividend) fails Standard (4) “is intrinsically fair to the public ...”, and (7) “enables enactment by a simple majority vote”. It satisfies to a greater degree than any other bill Standard (2) “has a simple process which will minimize time and cost to execute and administer”. It failed Standard (4) because it designates, as dividend recipients, all taxpayers. This deficiency can be easily rectified by amending this bill to read “...all Oregon households...”. This will increase its fairness by including those, whose incomes are below the taxation threshold, but still must contribute to carbon-pricing income when they purchase fossil fuels and fossil-fuel-generated electricity. That is because vendors will pass the carbon fees on to consumers through price increases.

HB 3176 fails Standard (7) because the House Committee on Revenue, which performed HB 3176's first and only review, decided that the fees, which it would impose, would be a tax. Therefore, enactment of this bill would require a three-fifths majority vote. Because this would be virtually impossible to achieve, its originator dropped this bill in favor of another which it originated and is promoting.

Enactment of a well-written, fee and consumer dividend bill would provide substantially superior carbon pricing law. So, if no current bill, that satisfies all of the critically important Standards (1) through (7), can be enacted during this session, then

a fully-qualified, fee and dividend bill should be developed in the meantime and considered by the 2016 Legislature. See Attachment 3 for more on this.

Senate Bill 965 satisfies all of the Standards (1) through (7) with the exception of (4) “is intrinsically fair to the public...”. As with HB 3176, its Standard (4) deficiency can be rectified, simply by amending this bill to read “...all Oregon households...”. For SB 965's detailed enactment qualifications see Attachment 4. SB 965 has been assigned to the Senate Committee on Environment and Natural Resources. Its first hearing, which is restricted to invited testimony, will be on June 10th. SB 965 is the successor to HB 3250 and is essentially the same bill. Therefore, all of the extensive testimony in favor of HB 3250, given during its hearing in the House Committee on Energy and Environment, is applicable to SB 965. HB 3250 was dropped by this committee after taking extensive testimony in its favor. Notable among those who testified for it were economists. For good reason most economists favor carbon pricing bills that have the dividend feature.

House Bill 3252 (Tax & Multiple Use of Income) fails Standards (3) through (7). This bill imposes a tax on fossil fuels and electricity, generated with fossil fuels, and distributes it, 50% for low income housing and utility support and the remainder for several uses ranging for carbon mitigation to roadway improvement. Being classified as tax bill, this bill requires a three-fifths majority vote to enact. It was dropped after its hearing by the House Committee on Energy and Environment. Because it fails five of the seven Standards, established for this evaluation, I recommend that HB 3252 receive no further consideration by the 2015 Legislature.

House Bill 3470 (Unclassified) either fails or does not enable evaluation on Standard (1) “completely describes its process, enabling citizens and legislators to judge efficacy, ”, (2) “has a simple process which will minimize time and cost to execute and administer”, (3) “provides an effective process which will eliminate fossil fuel use at the earliest time”, (4) “is intrinsically fair to the public...”, (5) “provides a strong incentive for personal conversion to safe energy”, and (6) “defines a process that is resistant to delay and degradation of effect by opposing and non-aligned interests”. It does satisfy Standard (7) “enables enactment by a simple majority vote”.

Concerning Standard (1): As HB 3470 advocates essentially acknowledge, it is an incomplete bill. One of those, who testified in its favor during its hearing before the House Committee on Energy and Environment, was a Corvallis City Council member. He subsequently wrote in an e-mail to Representative Rayfield and posted on the Corvallis CCL website the following message: "The bill does not create any mechanism for reaching goals, it requires the state to move responsibly and the Environmental Quality Commission to establish green house gas limits. So it can't

hurt to pass the bill, but it doesn't really do anything. More like a statement of principle.”

I agree with all but the following part of this statement: “So it can't hurt to pass the bill,”. Enacting the incomplete, open-ended HB 3470 will prevent enactment of a carbon pricing bill, which satisfies all of the essential Standards (1) through (7). That is essential if conversion from fossil fuels to safe energy is to be achieved.

See Attachment 5 for the evaluation of HB 3470 on each of the other Standards (2-7).

Because it is incomplete and cannot be effectively evaluated on five of the seven essential Standards, I recommend that HB 3470 be given no further consideration by the 2015 Legislature.

Conclusions:

Senate Bill 965 is the only bill, currently being considered by an Oregon legislative committee, that can be readily amended to satisfy all of the essential Standards, cited above. I am not in a position to know whether this bill can be expedited through the remaining review process and enacted before the end of this legislative session. If it can, then it should, because that will start critically-important action one year earlier. That is marginally more important than waiting a year to obtain the added benefits of a fee and dividend bill. If SB 965 cannot be enacted during this session, then no carbon pricing bill should be. Instead, work should begin immediately to develop a superior Fee and Consumer Dividend Bill that imposes a fee, not a tax, on fossil fuels and electricity generated with fossil fuels. See Attachment 3 for more on this.

Recommendations:

1. Enact Senate Bill 965, amended as described above, if that is possible before the 2015 Legislature ends its session.
2. If not, request that the 2016 Legislature give priority to enacting carbon pricing legislation during its session. In the meantime support the development of a superior Fee and Consumer Dividend Bill, that can be enacted by a simple majority vote, for consideration by the 2016 Legislature. Also support development of an improved Cap and Consumer Dividend Bill for coincident consideration by the 2016 Legislature.

Respectfully submitted,

Walter J. Eager, PE

Retired Energy, Environmental and Transportation Engineer