



MEMORANDUM
EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Simpson, Brown, Helgeson, Manning and Mital
FROM: Roger Gray, General Manager; Erin Erben, Strategic and Resource Planning Manager;
Lance Robertson, Public Affairs Manager; and Jason Heuser, Legislative Affairs
Coordinator
DATE: April 9, 2012
SUBJECT: EWEB Proposed Policy Position on Greenhouse Gas Emission Pricing (aka “Carbon
Tax” or “Cap and Trade”)

Issue

The following is a policy position that EWEB staff supports regarding greenhouse gas emission pricing, or a so-called “Carbon Tax” or a “Cap and Trade” program. This policy position is issued for discussion among interested parties and may not represent a final EWEB Board or Management position or decision. However, EWEB believes this issue merits open discussion and deliberation among interested parties. EWEB welcomes feedback on this policy. More importantly, EWEB believes this important issue needs to be addressed now and would welcome further discussion and participation in appropriate regulatory, policy, academic and legislative forums. EWEB recently helped fund a Portland State University Study¹ that served as a good starting point for further exploration of this subject.

Background

The Eugene Water and Electric Board (EWEB) is the largest community-owned utility in Oregon. We provide electricity and water to the City of Eugene and some surrounding areas. EWEB, founded in 1911, prides itself on forward looking and progressive approaches to both the electric and water utility businesses. EWEB participated on the 2004 Governor’s Advisory Group on Global warming (“2004 Report”) as well as the 2006 State Carbon Allocation Task Force. EWEB also participated on the 2006 REWG that led to development of the Renewable Portfolio Standard (RPS). EWEB supported the RPS concept, but our views continue to evolve and we now believe that a more comprehensive approach that covers all sectors is necessary to meet the goal of reducing greenhouse gas emissions efficiently and effectively.

Discussion

The following represents management's proposed policy position on carbon pricing.

¹ The full report can be found at <http://www.pdx.edu/nerc/sites/www.pdx.edu/nerc/files/carbontax2013.pdf>

Overview:

At the start, EWEB's acknowledges and accepts the general consensus among the scientific community that climate change is real and that human activities are a major contributing cause. EWEB further acknowledges that regardless of the cause, the evidence supports immediate action. EWEB is concerned that the issue is accelerating and that acceleration of the problem exceeds the development and implementation of policy and technical solutions at this time. EWEB still supports the general goals of reducing greenhouse gas emissions articulated in the 2004 Report. However, EWEB now believes it may be necessary to adopt new strategies to meet these goals.

Greenhouse gas emissions are contributing to global climate change. Different greenhouse gasses such as carbon dioxide (CO₂) and methane (CH₄) have different impacts on the atmosphere; however, the sources of these emissions are being treated very differently today from a policy and regulatory standpoint. The differentiation of these emissions by state and by sector through incomplete and indirect means is neither efficient nor effective. EWEB believes that a new approach is needed.

EWEB's general position is that more comprehensive solutions that are direct rather than indirect will ultimately be more fair, efficient and effective in meeting greenhouse gas emission reduction goals. Draft policy position is not intended to debate the science or merits around whether global climate change caused by human activity is real or not. The purpose of this whitepaper is to explain why, from EWEB's perspective; a direct carbon pricing approach is preferred to the existing indirect and disjointed means of carbon regulation.

EWEB believes that our community-owned utility, other utilities, all sectors of the economy, our state, our region and our nation must be part of an overall global solution. The magnitude of this issue is large and every part of our economy and every institution must be part of the solution. The 2004 Report set forth several goals, recommendations and strategies. Some of these have been implemented, but nearly 10 years later we are not on target to the checkpoint goals set forth for 2010, 2020 or 2050.

EWEB recognizes that a single "grand plan" may be an insurmountable barrier at this time. However, EWEB also believes that incomplete, disjointed and indirect methods, while perhaps "expedient", are not necessarily efficient or effective long term solutions. EWEB believes it is time for a new approach that builds upon a combination of local, state and, if possible, regional approaches to greenhouse gas emissions.

In concept, EWEB supports establishing a price on the emissions of greenhouse gases into the atmosphere in order to address the growing impact of global climate change. EWEB has become increasingly convinced that a carbon price could be the most efficient and ultimately most effective method to reduce greenhouse gas emissions and very preferable to a large array of alternative "indirect" policy measures that are generally not applied widely to all economic sectors.

EWEB's basic tenants are summarized below:

- Global climate change is a real problem that needs to be addressed through comprehensive policy. If not on a national level then let's start on a state level and work with other states and provinces.
- Indirect and incomplete approaches used today are not particularly efficient or effective. EWEB favors a more direct and comprehensive approach to pricing greenhouse gas emissions and carbon.

- Cap and trade or carbon taxes are two possible carbon pricing mechanisms. EWEB believes that any approach must apply across all sectors of our economy to be efficient and effective.
- EWEB favors a work and study group approach that engages stakeholders to develop fair, efficient and effective solutions for policy-makers to consider.
- EWEB welcomes being part of such an approach.

Carbon Regulation Policy Already Exists, but is Inefficient:

Examples of “indirect” measures already in place include renewable portfolio standards (RPS), the use of renewable energy credits (RECs) that target single segments of the economy, and concepts such as feed-in-tariffs (FITs). Some of these policies are in place in large part because they were perhaps more politically palatable than more direct alternatives. EWEB questions the fairness, efficiency and effectiveness of such approaches. On a dollars per ton basis, some of the carbon reductions attributed to these policies may cost far more than would direct methods. An example of the impact of such indirect approaches would be building new resources ahead of need to serve RPS mandates rather than just conserving energy, which is far cheaper on a per MWH basis, than new renewable energy. Conserving energy reduces future need and therefore future carbon for 100 percent of what is avoided rather than the fractional percent obligated by the RPS. Forcing utilities to build expensive new resources rather than just reducing usage all together is less effective in the end goal of resource conservation and carbon management. Better utilizing the existing fleet of renewable resources to serve more of the existing load and foregoing the substantial resource costs associated with building a new plant of any kind is a superior solution to just adding more resources.

In some cases, these indirect approaches may even run counter to the overall objective of reducing greenhouse gas emissions. For example, in a region with a relatively low carbon energy mix, emission reductions could be obtained by incentivizing electrification of transportation. However, the current indirect method of regulation, Renewable Portfolio Standards (RPS), does not provide an incentive for electrifying transit because utilities would be taking on new RPS exposure and cost by increasing their electric load, thereby transferring a non-carbon regulated sector (transit) to a regulated sector (utilities with RPS mandates). The 2004 Report makes clear that greenhouse gas emissions come from nearly every economic sector, including: utilities, transportation, and industry, agriculture, commercial and residential.

As a matter of sound economic principle, producers and consumers of products should pay the cost for their production or consumption, whether those costs are raw materials, labor, energy, delivery costs or capital investment. Consumption of clean air and the production of pollution in the form of greenhouse gas emissions is something that should be monetized as a production or consumption cost like any other raw material cost. EWEB believes it is time to monetize these costs more directly. EWEB believes that direct methods, such as carbon pricing, applied broadly across all sectors of the economy (ideally nationally, but at least across our state) can be more efficient, effective and equitable than our current indirect and incomplete approaches to regulation.

Problems with Our Current Approach:

Rather than tackling this issue directly (e.g. with a carbon price) our current laws, regulations and policies attempt to solve the issue indirectly and incompletely. Renewable Portfolio Standards (RPS's) have been established in approximately 36 states and the District of Columbia. EWEB is almost an entirely renewable generation utility and is still subject to the Oregon RPS. EWEB's current holding of renewable energy is far in excess of its RPS compliance requirement. EWEB's current status was driven

by Board and Management policy decisions based on the values of our community-owned utility. Nonetheless, EWEB is concerned about the continued use of disjointed and indirect means to solve the greenhouse gas challenge because EWEB must operate in an economy and marketplace that is often distorted by such indirect and incomplete policies.

The RPS standard in Oregon is not applied uniformly to utilities in the state and it does not transcend to other sectors of the economy such as transportation. Utilities and transportation are the two largest contributors to greenhouse gas emissions according to the 2004 Report. Many states have developed different RPS standards as well as different Renewable Energy Credit (REC) models. Conceptually, RECs were originally envisioned as being products that could be openly traded. However, due to different state regulations, different standards and definitions, changing and evolving policy and general lack of clarity, RECs have become anything but a fungible product that is homogenous and tradable. Contributing to further ineffectiveness is the fact that the U.S. electric grid is regional in nature and some larger utilities have multi-state service territories. Electricity continues to move across state lines as it has for decades; however, RECs and RPS standards don't necessarily move across state lines as easily, thereby leaving RECs "stranded" in their state of origin even when the power flows out.

An interesting effect of a RPS approach is that it indirectly monetizes carbon in parts of the utility sector in those states with RPS standards and generally increases electricity costs as a result. The benefit of the RPS is that it creates a requirement for renewable (non-carbon or non net-carbon) generation. The RPS does not directly price carbon, but in some respects indirectly prices carbon in the form of greenhouse gas emissions. Interestingly, greenhouse gas emissions are not priced either directly or indirectly today from the transportation sector or other sectors of our economy. The transportation sector like the utility sector is one of the largest consumers of fossil fuels and producers of greenhouse gas emissions in the United States. Failure to address greenhouse gas emissions across sectors and across states is creating a variety of unexpected and undesirable outcomes.

The relative carbon content of electricity varies greatly across the nation. Coal-based utilities and states have higher carbon content per kilowatt-hour (kWh) than non-coal-based utilities. The Pacific Northwest generally has some of the lowest carbon content electricity in the nation. One possible means to decrease greenhouse gas emissions in our nation is to convert from fossil fuel based transportation to electricity-based transportation (EVs). Whether this conversion creates a net carbon savings depends highly on the "fuel" used to create electricity used to charge EVs. In some states, EVs may reduce greenhouse gas emissions (e.g. states with less fossil fuel electricity like in the Northwest) and in some states it may increase greenhouse gas emissions (e.g. coal-based electricity states).

The failure to deal with carbon uniformly across states and across sectors (e.g. utilities and transportation) creates inefficient, ineffective and distorted outcomes. Driving up electricity costs in states with low greenhouse gas emissions creates a perverse outcome by creating disincentives for the use of relatively lower carbon electricity. As mentioned above, approximately 36 states have developed RPS standards. Part of the development of RPS standards created what are called renewable energy credits (RECs). In addition to RPS and RECs, the federal and several states created a variety of tax credits for renewable power. All of these policy tools were intended, among other policy objectives, to create incentives to produce more renewable power that was non carbon producing. These were all indirect means to create disincentives for carbon-based greenhouse gas emissions. While perhaps noble in intent, these indirect policy tools have created serious distortions and problems in the utility sector.

First, they have created cost challenges that have yet to be fully realized or built in to utility rates. EWEB believes we are just beginning to see the full cost of these standards built in to utility rates. In some cases, state initiatives (e.g. Washington's I-937) have caused utilities to purchase renewable power in advance of actual need which is putting increased pressure on utility rates in that state. In many respects, we are

creating a carbon price indirectly without really understanding that price.

Second, it appears that this indirect approach is generating surplus energy that is variable in nature. While renewable resources like wind and solar are carbon-free they are also variable in nature which means that utilities must still have other power resources to “back-up” these variable resources. Utilities must always have sufficient “capacity” to meet customer loads. EWEB does not believe that our Integrated Electric Resource Plan (IERP) and situation is unique among the utility sector. Conservation (both energy efficiency and demand response) is our least cost option and is a more efficient solution. We suspect that some utilities in the state and region are somewhat similarly situated. We recognize, however, that there are clear exceptions in the state where certain utilities are short of capacity. However, for the region as a whole, we are flooding the energy market with variable energy while creating greater demand for capacity to back it up which leads to further building of new peak generation technology, all to meet RPS quotas, not to serve load in the most efficient and lowest carbon intensive manner possible. EWEB believes that we must consider true lifecycle analysis of resources in terms of cost and carbon production that includes resources and carbon to either support or manufacture those resources.

Third, the indirect methods have created operational problems for operators of the transmission grid. Large amounts of wind and solar power have come on line. These resources are variable in nature and are not controllable like traditional utility resources such as fossil-fuel or hydroelectric generation. EWEB was an early adopter of wind and other renewable power so our statements here are not “anti-renewable” statements. Rather, EWEB is pointing out that the indirect methods are creating serious reliability issues and imposing new costs on consumers due largely to the subsidies that have been implemented to support the nation’s RPS policies. The operational problems are caused not only by the magnitude of the variable renewable power coming in to the grid, but by the distortions created by policies such as production tax credits and RECs that contribute to what have become regular market distortions such as negative pricing in the wholesale market. In the Pacific Northwest, this has created the so-called “over-generation” or “high water-high wind” syndrome that has led to operational problems as well as litigation and competing interests between renewable energy goals and environmental goals such as protection of endangered salmon. For the record, EWEB was financially harmed on both sides of this dispute and has no particular axe to grind. We are both a BPA customer and own or contract for wind generation and suffered wind curtailments ourselves. Our objective is to see more sound policy put in to place to end the market distortions that create this problem to begin with.

A fourth area is the disparity or unlevel playing field issue where different RPS standards are in place for different states (or in some cases, no RPS standards) or where there are even differences among utilities within the same state. This creates distortions in cost among utilities that are not natural cost differences and it results in fundamental distortions in where electricity-intensive businesses now even choose to locate. Utilities and states that are not subject to RPS standards now have an unnatural competitive advantage that is driven by regulatory advantages rather than natural advantages. Ultimately, this does not reduce greenhouse gas emissions. It just creates distortions in a marketplace that relocate the emissions.

A fifth area of distortion and disparity is due to the failure to regulate or price greenhouse emissions across sectors either directly and more thoroughly. The current approach is an incomplete and indirect means and it is not efficient or effective. Making electricity more expensive by indirectly pricing carbon for electricity relative to fossil-fuel based transportation does not make economic or scientific sense.

A Different Approach:

While EWEB supports the general policy objective of reducing greenhouse gas emissions, our concern is that our current incomplete and indirect methods are inefficient, ineffective and perhaps even unfair.

EWEB believes it is time to reconsider this serious issue with a different approach. Pricing of greenhouse gas emissions, whether through a carbon tax or a cap and trade model, is something that warrants serious consideration at least on a state level.

EWEB believes that a policy that directly puts a price on emissions broadly across the economy must be at the heart of any government's greenhouse gas reduction plan. The two main policy options that do this are a cap-and-trade system and a carbon tax system. They both are generally referred to as "carbon pricing" policies. Cap and trade and carbon taxes each have pros and cons. In either case, EWEB believes the most efficient and effective carbon price will be one that directly covers the overwhelming majority of greenhouse gas emissions, can be effectively monitored and administered and minimizes loopholes and exceptions. While such a pricing concept would be best done on a federal level, EWEB recognizes the political realities, hurdles and barriers in place today. However, doing nothing is not an option either. It is time for a new approach.

What Direct Carbon Pricing Might Look Like:

EWEB recognizes that two large governments in Western North America have moved toward a carbon pricing approach. One example is the Province of British Columbia which has developed a carbon tax applied to various fossil fuels (gasoline, diesel, natural gas, coal and other fossil fuels) that is approximately equal to \$30/ton of CO₂. Another example is the State of California which has adopted a cap and trade approach to pricing carbon with a floor price which is somewhat like a carbon tax (i.e. a hybrid). At this time, EWEB believes that Oregon should further evaluate the pros and cons of the two fundamental policy options of cap and trade versus carbon taxes.

EWEB expresses its general preference for a carbon pricing mechanism at the federal level; however, recognizes the great political inertia to overcome. A federal point of carbon pricing could offer advantages compared to state and regional approaches, in that emissions can be regulated further upstream and with increased transparency, ease of administration, and lower risk of manipulation. Additionally, a federal approach could have better tools to address emissions, economic activity, and investment simply fleeing outside of political boundaries subject to carbon pricing without an actual emissions reduction. EWEB believes that federal policy could also insure that greenhouse gas emissions have a level playing field across international boundaries through the use of tariffs or treaties which fall under federal jurisdiction.

However, as time moves forward without signs of progress in the establishment of a greenhouse gas emissions or carbon pricing mechanism at the federal level, EWEB understands the rationale for taking a fresh look at the feasibility of a state carbon pricing mechanism in concert with other states or provinces, perhaps as part of a regional carbon pricing program. EWEB believes that in the absence of a comprehensive federal approach that a state or regional approach may be viable and certainly more rational than doing nothing or continuing with incomplete and indirect methods that EWEB believes are neither efficient nor effective.

EWEB believes that such an approach should be developed based on sound science, economics, policy and politics so that the result is reasonable, efficient and effective and deals with important transitional issues that most certainly will emerge with any new approach to pricing of greenhouse gas emissions. EWEB believes that the "end-state" is important, but that transitional issues need to be addressed upfront to overcome resistance that often develops not to the "end", but to the "means."

For example, the concept of a "revenue neutral" carbon tax might have certain political appeal at a high or macro level because it is "neutral" from an overall taxation standpoint. A revenue neutral carbon tax means that all revenues from the tax are directly repatriated back to taxpayers, rather than adding to the

overall tax revenue of the state. For example, residents who already have a large portion of their income going to fuels/energy such as rural, low income residents have the potential to be impacted more from a carbon tax than those who are largely insulated from direct and indirect fuel costs. Similarly, larger players such as energy intensive industries and utilities will fare differently depending on their existing energy supply mix, and as a result so will their customers. However, while neutral at a high or “macro” level, it could be anything but neutral at a local or “micro” level where winners and losers could result. Regardless of the most rational arguments that policy-makers, academics, environmentalists, engineers and economists might make, we will have to deal with political realities of winners and losers.

More Thought on the Topic is Needed:

EWEB hereby expresses its willingness and strong preference to participate in a comprehensive statewide work group process to consider the design and administration of an economy-wide state carbon pricing mechanism. The work group must examine many things simultaneously: the feasibility and impact of a carbon pricing mechanism, the need to keep Oregon economically competitive and an affordable place to live and do business, and the efficacy of the mechanisms in addressing important environmental issues. EWEB supported, in part, the recently released carbon tax study done by PSU. EWEB believes that additional study and design work that builds off of this work and that is rooted in sound science, economics and policy with a clear stakeholder process could serve as the most effective means to create and present viable options. EWEB supports at least a state-wide process and if such an approach was taken to a more regional level, EWEB would support such a development. Whether state-wide or regional, EWEB would like to participate and is prepared to provide some additional funds for solid and independent research and evaluation as well as committing its own internal resources to participate in the development and vetting of policy options.

EWEB believes that part of a study and work group’s mission must also be to evaluate which state climate change and policies would no longer be necessary in a carbon price environment where the playing field for energy and fuel sources has been leveled, in order to ensure that the efficiencies of a carbon price mechanism are realized. For example, EWEB believes that direct methods of pricing greenhouse emissions (e.g. “carbon tax” or “cap and trade”) could ultimately eliminate the need for the indirect methods that are being used today (e.g. RPS and RECs). Furthermore, EWEB believes it is critical to extend policies across all sectors. EWEB believes that uniform approaches such as greenhouse gas emission pricing must transcend sectors of the economy such as utility, transportation, and industry; commercial, agricultural and even residential. Carbon pricing approaches that target only some sectors or some players in some sectors of the state’s economy are perhaps expedient, but ultimately are not efficient or effective. EWEB believes that any approach to pricing greenhouse gas emissions must look across all sectors our economy and not just the “politically expedient” sectors that are easy to get at.

Key Questions and Next Steps:

The recently performed PSU carbon tax study evaluated a revenue neutral carbon tax approach. EWEB supports continued study of policy options that more directly address the issue of efficiently and effectively regulating and pricing greenhouse gas emissions. EWEB believes that it is important to expand the scope of this study effort and to create a stakeholder process to examine a variety of options and to address and answer important policy, political, legal, economic and technical questions. Some of these questions include:

- What are the “cap and trade” versus “carbon tax” options and what are the pros/cons?
- Would a tax approach be revenue neutral? If neutral on a “macro” basis, what about on a “micro” basis (individuals, individual businesses, sectors, etc)? How do you handle winners and losers?
- How is the level of a carbon tax set? How does it change over time?
- If it is a cap and trade approach, how are the initial allocations set? Are they “free?” Is it fair to “reward” the largest legacy polluters and “penalize” the cleanest players by providing “free” initial allocations?
- Who “owns” clean air?
- How would any Oregon-based system work along-side other states or regions? For example, if Oregon went with a carbon tax that is different than the approaches of California and British Columbia how does it work when electricity moves between these regions?
- How does Oregon levelize the playing field to avoid harm to Oregon-based businesses that would pay for greenhouse gas emissions when other regions do not? Since the federal government regulates treaties and tariffs can Oregon develop an effective alternative such as a carbon sales tax applied to products produced in states or regions where carbon is not priced?
- How does a carbon pricing approach extend to all sectors of the economy in the most efficient and effective manner? Does it make sense to capture it in different ways based on point of consumption/retail sale versus point of production?
- Does it make sense to have a transitional plan to soften the inevitable transitional impacts of “winners” and “losers”? What might a transitional plan look like?
- Ultimately, will it make sense to retire the old indirect means of pricing carbon (e.g. RPS, RECs, etc.) as more comprehensive and direct means are put in place? If policy changes render old policy approaches unnecessary, is there an appropriate transition plan to retire those instruments over time?
- Does it make sense to have indirect and direct means of regulating greenhouse gas emissions operating in parallel? What does a graceful transition from indirect to direct regulatory methods look like?
- How would greenhouse gas emissions from biomass plants be viewed in light of the difference in biomass fuel stock compared to fossil fuels? (Note: biomass plants may actually produce more CO₂ per kWh than fossil fuel when measured at the stack, but biomass fuel stock more quickly absorbs CO₂ than fossil fuels).
- Should “offsets” play a role?

- What role, if any, would alternative markets such as forest carbon markets play? For example, a carbon tax might apply to production of greenhouse gas emissions only. Would forests that absorb CO2 play a role in a “pollution/production tax only” approach? Would they play a role in cap and trade approaches? Is such an approach potentially in the interest of Oregon which has substantial forests?

EWEB believes that there are many other important questions that need to be addressed as part of a comprehensive approach. As one can see by the very nature of even these initial questions, the issues range from economic to political to technical. Issues of efficiency, effectiveness and equity will certainly need to all be addressed in any carbon pricing approach.

Summary:

- Global climate change is a real problem that needs to be addressed through comprehensive policy. If not on a national level then let’s start on a state level and work with other states and provinces.
- Indirect and incomplete approaches used today are not particularly efficient or effective. EWEB favors a more direct and comprehensive approach to pricing greenhouse gas emissions and carbon.
- Cap and trade or carbon taxes are two possible carbon pricing mechanisms. EWEB believes that any approach must apply across all sectors of our economy to be efficient and effective.
- EWEB favors a work and study group approach that engages stakeholders to develop fair, efficient and effective solutions for policy-makers to consider.
- EWEB welcomes being part of such an approach.

Thank you for considering EWEB’s statements and policy positions on carbon pricing proposals. We stand ready to work with policy makers and other stakeholders in evaluating the path towards Oregon reducing greenhouse gas emissions as efficiently and effectively as possible.

TBL analysis

If the Board approves continued exploration of this concept, EWEB will conduct a Triple Bottom Line analysis before bringing back a final proposal.

Recommendation

Management recommends the Board provide general direction so that EWEB management and staff can begin to work with legislators and other parties on the exploration of a formal coalition and working group to propose more definition about how this might be implemented.

Requested Board Action

Provide general direction on EWEB’s draft policy position and direct management and staff to conduct outreach and identify allies and utilities with similar views. Work with local and state representative to form a working group for possible 2015 legislation.