

Local utilities uncertain over climate change

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The effects of global warming, such as extreme weather, will play out at the local level. Many of the solutions to the climate crisis, including reductions in carbon dioxide emissions induced by improved energy efficiency, must be implemented locally. Local agencies will therefore play a key role in mitigating and preparing for climate change.

About 50 percent of the Eugene-Springfield area's emissions come from residential, commercial and industrial sources. Local utilities supply energy to those sectors, so they will play a key role in responding to global warming.

I asked five questions of local utility officials: Do they believe the Earth is warming beyond natural levels? Do humans play a role in today's warming? Should their agency play a role in reducing local emissions? What type of role? And, should their agency prepare for the consequences of climate change?

Their responses were illuminating. With the exception of the Eugene Water & Electric Board, utility officials were significantly less forthcoming in answering the questions than were local government officials who received the same questionnaire. Only one Emerald People's Utility District board member responded, although a senior manager also replied. Both answered yes to all of the questions.

No Springfield Utility Board member responded, although I did speak eventually with a senior manager who said SUB did not want to be on record on these issues.

In contrast, four of the five EWEB commissioners responded to the questionnaire. Three answered yes to all five questions. One said he did not know enough to answer.

An official from Lane Electric Cooperative responded for the utility's board and said that although it is fairly clear that temperatures were above historic levels, they were uncertain about how much was natural or human-caused. This official then said that their uncertainty did not matter, because from a practical standpoint state officials have given direction to the utility so they "see it as their responsibility

to execute and try to reverse the situation.”

A number of common themes emerged.

Many officials are uncertain about how to reduce their emissions because the power they purchase from the Bonneville Power Administration — which in 2007 was dominated by hydropower (84 percent) and nuclear (10.4 percent) — is essentially carbon free. The BPA power mix, however, may not be so benign. Between 3 percent and 11 percent of the agency’s annual total power sales are from “market purchases” outside the Columbia River system. The BPA is working with the Western Climate Initiative on calculating emissions from market purchases, but they remain unknown.

In addition, power supplies from the BPA hydro system are maxed out, additional dams are unlikely and some small dams are being dismantled. Climate change-induced drought is likely to reduce water flows, and thus power supplies, from the Columbia during certain years. BPA’s capacity most likely will shrink.

Local utilities must determine how to replace the power lost from BPA as they also plan for rising electricity demand from trends such as the likely increase of plug-in hybrid vehicles. The least-cost path is energy conservation and efficiency. Renewable energy, such as wind and solar sources, also will be vital.

Another issue that came up was the belief that many utilities have almost exhausted their ability to capture efficiency improvements. Local utilities have had aggressive energy conservation and efficiency programs since the 1980s, primarily focused on the residential sector. More efficiency is possible in this sector, especially now that energy prices are rising.

The mother lode of improvement, however, lies in the commercial and industrial sectors. Significant energy can be saved here, often at about 10 percent of the costs of residential improvements, through turning off unused computers, lights and machinery; more efficient lighting, heating and cooling; right-sizing motors; and constructing and remodeling buildings to higher standards. Efficiency improvements are not maxed out.

Finally, some utility officials seem uncertain about how to prepare for climate change. Utilities traditionally plan by looking at historic patterns. However, under changing climatic conditions, planning requires examining likely future climate scenarios.

EWEB is examining the effects of climate change on the McKenzie River. Results so far indicate that as it warms, low-elevation precipitation that once fell as snow will fall as rain. This shift will reduce late summer stream flows in the McKenzie by 10 percent to 20 percent. Not only will Eugene’s power supply be affected, it

will ripple northward because the McKenzie provides about 60 percent of the Willamette River's water in Portland during summer months. These are the type of effects that utility planning now must take into account.

Utility officials have the responsibility to protect their customers against excessive risk. That means they should plan as if global warming is real and make sure they are prepared. While some understand this, the comments I received, and the silence of others, suggests that not all utilities have come to this conclusion.

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