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Eugene can lead way in addressing climate crisis

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Neither presidential candidate seems likely to meaningfully address the climate crisis. Hillary Clinton released a climate action plan, but probably won't do anything that upsets her Wall Street and corporate backers. Donald Trump lives in his own imaginary world, and so belittles the most pressing issue of our time.

In the next four years, it appears that state and local governments will need to lead the way. The city of Eugene offers a model.

In July, the Eugene City Council voted 7-0 to amend the City Climate Recovery Ordinance with a new target of cutting greenhouse gas emissions by 7.6 percent annually. Including the target in the ordinance is important. As Mayor Kitty Piercy told me, council members and mayors come and go, but the city is now committed for the long term.

The new target also highlights the urgent need to quickly cut emissions. The National Oceanic and Atmospheric Administration recently said that atmospheric concentrations of carbon dioxide have risen above 400 parts per million. This is the highest concentration in the last 3 million years. A new study in the journal *Nature* found that the Earth is now warmer than at any time in the past 115,000 years.

Our planet is only going to get hotter. We must prepare for escalating damage to ecosystems and biodiversity, water and food systems, physical and mental health, communities and economies.

Scientists say it is still possible to prevent the most devastating effects of climate disruption, and to eventually bring atmospheric CO₂ back down to safer levels. Doing so will require big, rapid changes. This is where Eugene's new annual emission reduction target could be helpful. This target is based on the best available science, which says atmospheric CO₂ must be no higher than 350 parts per million to avoid irreversible catastrophic climate disruption. City staff members calculated that if everyone on the planet reduced emissions by 7.6 percent annually, CO₂ would eventually drop to that level.

No other city has adopted this type of annual reduction target. Portland, for example, is considered a leader in the field but its emission goals focus on 2030 and 2050. Springfield and many other cities have never even formally discussed the issue.

Eugene won't need to start from scratch. Matt McRae, the city's former climate and energy analyst, told me that even as the city's population has grown, for the past decade locally generated emissions have dropped by just over 3 percent annually. The reductions resulted from energy conservation and efficiency efforts, the use of more clean renewable electricity, and other changes. The new target requires that emissions be cut at more than twice that rate.

Research, experience in other cities, and McRae's analysis indicates that achieving the larger yearly reduction will require changes in three interconnected areas.

First, total energy use must drop. Existing buildings will need to become even more energy efficient. All new residential, commercial and industrial buildings should be designed to meet zero net energy consumption goals: The total amount of energy a building uses annually should be equal to the amount of renewable energy it generates onsite from solar or other renewable energy sources. In addition, every resident should learn to recognize how much energy he or she uses to power electronic devices, lighting and other things, and eliminate wasteful consumption.

Second, Eugene must become 100 percent electrified. Electricity must soon power all buildings as well as commercial and industrial processes. Germany recently voted to ban all vehicles powered by gas and diesel by 2030. Eugene, the Lane Transit District and other agencies should adopt a similar policy and begin to redesign the transportation infrastructure to expand electrically powered public transport and support electric vehicles.

Third, and closely aligned with the previous need, all of the city's electricity must come from clean renewable energy sources. The Eugene Water & Electric Board will need to drop the small amount of coal and other non-renewable sources of energy it purchases. Natural gas must be rapidly phased out because it is not a long-term ecologically viable substitute for coal or oil. Eugene can make many of these changes on its own. Others steps, such as changes in building codes, will require assistance from the state.

Eventually, national policies will also be needed such as a revenue-neutral price on carbon. Local efforts will accelerate if money paid for fossil fuels reflects the actual costs they impose on society and our planet.

Even if Washington, D.C., remains dysfunctional, Eugene can offer a prototype for states and cities on how to cut additional emissions every year.

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