

# Book proposes 80 ways to cut carbon emissions

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Many people think that shifting to renewable energy is the key to minimizing the climate crisis. In reality, much more is needed. That's the main point of the new book "Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming."

The book claims that many economic and cultural patterns must be altered. Further, making the changes will not only protect the climate; they will also provide tremendous economic and health benefits.

"Drawdown" ranks 80 existing peer-reviewed technologies and practices based on the total atmospheric carbon reductions each can achieve by 2050. The "plausible" scenario, which is based on scaling up the solutions at "a reasonable, but vigorous rate," projects that global emissions would be slashed by 1,051 gigatons, which would go a long way toward containing the problem.

A key message of "Drawdown" is that while wind, solar, and other renewables are essential solutions, entire economic systems must decarbonize, not just the energy sector. Because it focuses on whole systems, some solutions might surprise people.

Another important point: Everyone — from farmers to refrigerator owners, women's rights groups and food consumers — have important roles to play in decarbonizing the economy. Further, "Drawdown" emphasizes the need to prevent new emissions and also capture carbon already in the atmosphere.

I can summarize only a few solutions here and have chosen some with particular relevance for our region. I encourage readers to review the entire list.

The solution ranked as having the greatest potential to reduce emissions is improved refrigerant management — especially the phaseout and effective

disposal of hydrofluorocarbons, which cause extensive climate heating. Success would prevent the release of 89.74 gigatons of carbon by 2050.

Most HFC emissions occur when refrigerators and freezers are discarded. Anyone who owns one can help protect the climate by demanding laws requiring HCFs to be carefully removed at the end of life and converted into benign substances.

“Drawdown” ranks more onshore wind power as the second most potent means of cutting emissions. Wind energy is already an important source of electricity in Oregon and is rapidly growing worldwide. If scaled up, it can generate more than 20 percent of world electric power and cut emissions by 84.60 gigatons.

Yet another startling assertion is that reducing food waste is the third most effective way to slash emissions. About a third of the food raised and prepared globally is never eaten, which leads to wasted “seeds, water, energy, land, fertilizer, hours of labor and financial capital” as well as unnecessary greenhouse gasses.

French law now prohibits supermarkets from throwing away or destroying unsold food. Similar policies here, combined with laws focused on the residential sector, can cut local food waste. Success would reduce global emissions by 70.34 gigatons.

Shifting to a plant-rich diet is ranked as the fourth most potent solution. By 2050, it would cut 66.11 gigatons of carbon. Meat-centric diets, which dominate here and in other Western nations, produce one-fifth of global emissions. Plant-rich diets are less carbon intensive — and better for your health. Even going meatless one or two days a week would substantially cut emissions.

The larger the population, the more emissions that are generated. Better educated girls, and women who have access to family planning methods, tend to have fewer children. That’s why “Drawdown” lists these as the sixth and seventh-most powerful ways to reduce emissions. If scaled up domestically and globally, not only will women’s health and well-being improve, the two solutions combined will reduce emissions by 119 gigatons.

The 12th most powerful solution for slashing emissions is protecting and restoring temperate forests such as those in the Northwest, which are among the most carbon intensive in the world. The Oregon Global Warming Commission recently said the state’s forests generate 45 percent of the 105 million metric tons of carbon produced by local transportation, construction, industry, agriculture and forests

combined. Protecting and restoring them will reduce emissions and enable greater carbon sequestration. Globally, this can cut emissions by 22.61 gigatons.

I have serious concerns about some of the proposed solutions, such as more nuclear power. But most seem sound and many have local application, ranging from changes in ranching and farming practices to better waste management.

“Drawdown” calculates that decarbonizing the global economy would generate a net gain of more than \$73 trillion by 2050 — and significantly improve public health. The rapid expansion of existing technologies and practices would likely also generate jobs for blue-collar workers and communities. This makes their whole systems-based approach to climate solutions worth pursuing.

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