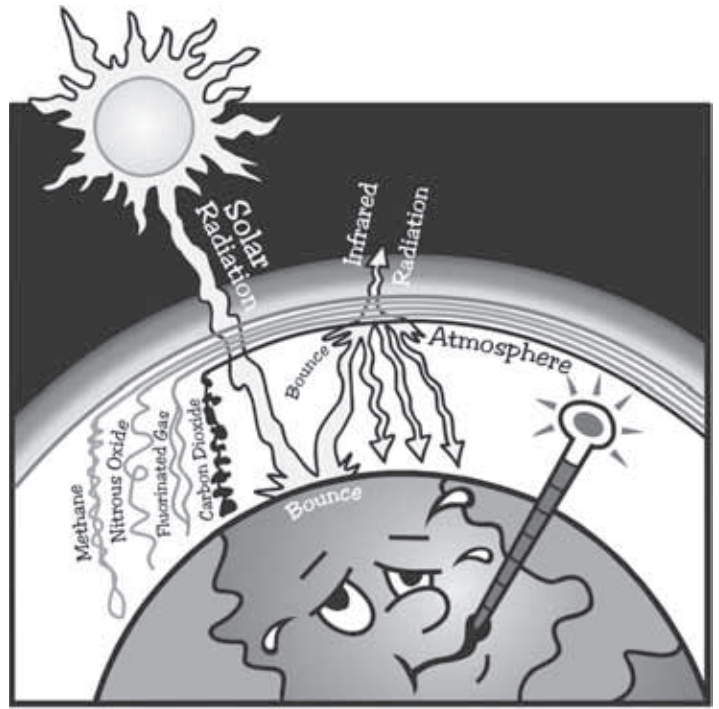
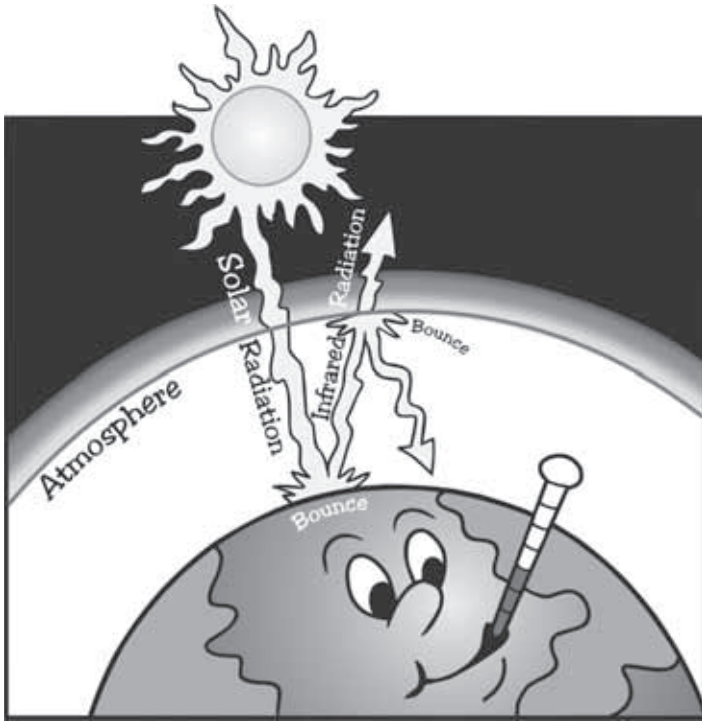


# Greenhouse Effect



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# Fair or Foul?

*Small utilities work to keep politics from clouding carbon emissions challenge*

*By Mike Federman*

The U.S. Senate has taken up the climate change debate as it ponders legislation aimed at reducing carbon emissions in the United States.

Senate Bill 2191, which passed out of committee in December, calls for mandatory limits on emissions of carbon dioxide and other greenhouse gases.

The legislation seeks a cap-and-trade system, where companies would have pollution credits they could sell if they are below emission limits, or buy if they don't meet emission standards.

Other legislation before Congress proposes a carbon tax.

The nation's power industry is the top producer of greenhouse gases,

according to the U.S. Electricity Information Administration, which is why there is "a large bull's-eye painted on us," says Kirk Johnson, vice president of environmental policy for the National Rural Electric Cooperative Association (NRECA).

Carbon emissions from coal-fired electric plants and other sources of fossil fuel consumption by the electricity, manufacturing and transportation sectors are the primary targets of S 2191.

"We are very likely facing a carbon constrained world in the future," Johnson said during a

national Internet conference in November.

Commercial, cost-efficient technology for carbon capture and storage does not exist—a reality that is "largely being glossed over by Congress," Johnson said.

NRECA, which represents consumer-owned electric cooperatives across the country, opposes S 2191 in its current form.

NRECA's position is that cooperatives are willing to work with Congress to develop responsible climate change legislation that addresses research and development, and has achievable goals that protect consumers and the economy.



Critical areas NRECA has identified to expand in order to reduce carbon emissions include renewable energy, energy efficiency, hybrid electric vehicles, nuclear generation, advanced clean coal generation and carbon sequestration.

In the Northwest, talk of coal and carbon sequestration might not resonate with members of public utilities, whose electricity comes almost exclusively from hydroelectric dams.

But that could change if legislation such as S 2191 is approved.

“It’s not going to have that much effect in the near term because we still get most of our power from hydro,” says Ray Ellis, general manager of Okanogan County Electric Cooperative in north-central Washington. “We have good growth in the Northwest, and it will have an effect over the long term.”

Like many small utilities in the Northwest, Okanogan is faced with increasing its load capacity at a time when the Bonneville Power Administration is changing the way it sells power in a region where the hydroelectric system has reached its capacity.

Nationwide, the U.S. Department of Energy predicts the demand for electricity will increase 40 percent during the next 25 years.

Where new sources of electricity will come from is further complicated by states that have enacted legislation that prohibits long-term power contracts with facilities that don’t meet emissions standards.

Small renewable energy projects will fill some of the need, but projects from sources such as wind and solar remain limited because no commercial storage capacity exists.

Which brings Northwest utilities back to the hydroelectric system.

“I would love to see it expand,” Ellis says. “The opposition says no more hydro, but they don’t want you to buy dirty power either. So they’re backing you into a nuclear corner.”

Ellis doesn’t discount a nuclear solution, but acknowledges it’s problematic.

## Global Warming Around the Globe

The greenhouse effect is a naturally occurring phenomenon that has been part of Earth’s physical chemistry since its formation.

Greenhouse gases, such as carbon dioxide and methane, allow sunlight to reach the earth, but trap some of the resulting heat before it radiates out of the atmosphere. Water vapor is the most prominent greenhouse gas.

Without the warming effect of greenhouse gases, Earth would be a frozen planet.

In February 2007, the United Nations’ scientific panel studying climate change released a report that says changes in the atmosphere, the oceans and glaciers, and ice caps now show “unequivocally” that the world is warming due to human activities.

The report says it is “very likely” that human emissions of greenhouse gases have caused most of the global temperature rise observed since the mid-20th century. The report says the effect of human activity since 1750—the start of the industrial revolution—is likely five times

greater than the effect of fluctuations in solar radiation.

In December, the United Nations sponsored a climate change conference in Indonesia to reach new international goals for limiting greenhouse emissions beginning in 2012, the year the Kyoto Protocol expires.

The United States has not ratified the Kyoto Protocol, which calls for a mandatory reduction of greenhouse gases by developed nations.

The Bush administration in December said it does not support mandatory limits, but said it will participate in further negotiations about cutting greenhouse gas emissions.

China and India also oppose mandatory limits. The two nations—which have greatly increased their use of fossil fuels in recent years—have pledged to pursue voluntary emissions reductions.

By 2030, China’s carbon emissions are projected to be nearly twice the amount produced by the United States, according to the International Energy Agency. ■

“There’s still a bad taste from the WPPSS (Washington Public Power Supply System) project that left a lot of people holding the bag monetarily,” he says. “It’s going to take a lot of education to get over that.”

Okanogan is pursuing increased load capacity through development of new hydroelectricity, which utilities consider clean and renewable energy.

A two-dam project on the Similkameen River is being researched by an intergovernmental steering committee that includes participation from British Columbia, where one of the dams would be built. The other dam would be built in Okanogan County.

“We would use it to meet growth in the future,” says Ellis, who notes the project is still years away from completion and faces numerous hurdles before it is approved.

Obstacles also block passage of S 2191, known as the Lieberman-

Warner bill for the senators who penned its content: Joe Lieberman, a Connecticut Independent, and John Warner, a Republican from Virginia.

The bill’s chief critic so far has been Sen. James M. Inhofe, a Republican from Oklahoma and ranking member of the Senate Committee on Environment and Public Works.

“The American people are being asked to pay significantly more for energy just so lawmakers in Washington can say they did something about global warming,” Inhofe said on his press blog in October.

In the rural Northwest, far from Beltway politics, Ellis takes a pragmatic approach to the future.

“Every energy system that is built has a negative impact on the environment,” he says. “It comes down to what you are willing to accept for your energy needs.” ■