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*This publication includes information provided by the contacts listed above. Since issues change on a daily basis, please contact these groups for the most recent information.*

*The Montana Conservation Voters Education Fund is dedicated to building citizen involvement in the state's democratic process — to preserve and enhance Montana's water, air, open spaces, forests and wildlife for future generations.*

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# Global Warming and Montana

Of all the threats to Montana's environment, the threat of global warming is the largest. The advance of global warming puts agriculture, water availability, tourism, public health, forest health and our entire suite of wildlife and plant species at risk.

Though a vocal minority continues to try and cast doubt, a vast majority of climate scientists agree that global warming is happening. They also agree that it is being caused largely by human activities that release greenhouse gases, such as burning fossil fuels in power plants and cars and deforestation.

The impacts of global warming on Montana are predicted to be serious: more violent weather, shifting patterns of rainfall and drought, the spread of infectious diseases, and rapidly increasing extinctions of plant and animal species. Additionally, many of the rivers and streams that we rely on for our water supply are fed by mountain snow. But warmer winters are starting to cause less precipitation to fall as snow, which may cause serious future water shortages, and/or undependable water for Montana's agricultural community.

## Background

Naturally occurring carbon dioxide (CO<sub>2</sub>) surrounds the planet like a blanket, keeping in the sun's heat and making life on earth possible. But by burning fossil fuels (oil, gas, and coal) we are adding an extra blanket of CO<sub>2</sub> into the air, trapping heat in the atmosphere and altering its natural balance, which causes the planet to overheat. In the past century, we've raised levels of heat-trapping pollution in our atmosphere by 30 percent.

According to the Energy Future Coalition, most global warming pollution comes from burning oil, coal, and natural gas in our power plants, transportation vehicles, and factories. Power plants — especially coal-fired ones — are the single biggest source, responsible for 36% of global warming pollution in the United States. Cars, sport-utility vehicles and other light trucks account for another 20 percent<sup>1</sup>. Additionally, one-fifth of humankind's annual emissions of carbon dioxide can be traced to the destructive logging of forests<sup>2</sup>.

Although carbon dioxide produced by burning oil and coal is the primary culprit, a

*(Continued on page 2)*

1. Energy Information Administration: Emissions of Greenhouse Gases in the US 2002.  
<http://www.eia.doe.gov/oiaf/1605/ggrpt/>
2. Union of Concerned Scientists: Global Environment: Forests.  
[http://www.ucsusa.org/global\\_environment/biodiversity/index.cfm](http://www.ucsusa.org/global_environment/biodiversity/index.cfm)

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number of other chemicals produced by humans contribute to global warming. They include: methane (agriculture and burning natural gas), ozone (car exhaust and power plants), water vapor (naturally occurring), nitrous oxide (fertilizer use) and chlorofluorocarbons (refrigerants and aerosol)<sup>3</sup>.

With only 5% of the world's population, the U.S. emits 22% of the world's greenhouse gases, or 24 tons per person per year. Montana emits 35 tons per person per year and the state ranks eighth in the nation in per capita CO2 emissions.

Globally, fossil fuel production and use accounts for nearly 60 percent of the emissions that are causing the Earth's atmospheric blanket of carbon dioxide to thicken and trap more heat. In the United States, fossil fuels contribute an even larger share - 85 percent - of these emissions. The sources are oil (42%), coal (38%), and natural gas (22%) - split almost equally between use in transportation, industry, and buildings.

Since there are currently no U.S. limits on global warming pollution, industry can pump unlimited amounts of the pollution into our skies. A good step forward would be for Montana's legislators to encourage the federal government to pass nationwide limits on carbon dioxide

pollution and support legislation establishing appropriate emission restrictions or emission taxes for power plants.

## Recommendations for the Future

Montana has seen seven new coal-fired power plants proposed in recent years. One proposed plant, the 780 megawatt coal-fired Roundup Power Project, would produce 8.2 million tons of carbon dioxide each year, single-handedly increasing Montana's entire production of CO2 by 27%. The Montana Environmental Information Center recommends that if new coal plants are used to produce electricity, that they should be built to employ the least polluting technology available today (known as Integrated Gasification and Combined Cycle Technology or IGCC). IGCC plants convert coal into a synthetic gas that can be used as a fuel in a standard combined cycle power plant, with the result being 20% less carbon dioxide emissions than traditional coal plants because they are more efficient. Ultimately, Montana should work to gradually phase out dependency on dirty coal for energy generation.

Montana clearly needs to push for development of clean, renewable sources of energy. Montana ranks fifth in the nation in terms of developable wind power potential, enough to meet 15% of the nation's electricity demand. Last year, Montana

took a step towards increasing renewable generation in the state by passing Senate Bill 415, the *Renewable Power Production and Rural Economic Development Act*. The law requires that 10% of the electricity sold in Montana come from renewable sources by 2010 and 15% by 2015. Montana Governor Brian Schweitzer signed the bill, which, in addition to the targets, calls for a renewable energy credit tracking system and leaves open the option to trade renewable energy credits outside of the state. The legislation contains a cost cap that encourages utilities to invest in renewable generation that is cost competitive with conventional generation. (Read the legislation at: <http://data.opi.state.mt.us/bills/2005/billhtml/SB0415.htm>)

Another positive stride took place when Gov. Brian Schweitzer and Montana's Department of Environmental Quality formed a Climate Change Advisory Council in April 2006 to formulate recommendations for specific actions for reducing or sequestering greenhouse gas emissions. The Council will also identify opportunities to promote energy efficient technologies and clean, renewable energy resources that will enhance economic growth. The new council is expected to deliver Gov. Schweitzer a Climate Change Action Plan by July 2007. ✓

3. Energy Information Administration: Emissions of Greenhouse Gases in the US 2002. <http://www.eia.doe.gov/oiaf/1605/ggrrpt/>