

# Federal Climate Change Legislation

May 13, 2009

**To:** Michigan's Congressional Delegation  
**From:** Michigan College and University Researchers  
**RE:** Legislation to address greenhouse gas emissions

As scientists living and working in colleges and universities in the state of Michigan, we urge the Michigan Congressional delegation to support strong federal policies for rapid and deep reductions in emissions of carbon dioxide and other greenhouse gases. We are convinced that immediate action is necessary to avoid the worst consequences of global warming on Michigan's economy and environment, including the Great Lakes. While slowing the damaging effects of climate change poses enormous challenges, we also believe such action presents Michigan with real opportunities to reinvigorate our economy and improve the quality of life for all Michiganders.

Controlling carbon emissions is critical to the energy future of our state and nation. It will help Michigan and the United States take full advantage of the clean renewable resources and energy efficient technologies that are available today. A workable federal policy to combat global warming will also encourage researchers, investors, and businesses to accelerate development and deployment of next generation energy technologies. Putting a price on carbon is a critical step toward building a clean energy future for the US and right here in Michigan.

Federal climate policy offers a unique opportunity to protect valuable natural resources and stimulate the economy - the benefits to Michigan will likely far exceed the costs. A comprehensive federal climate and energy policy can provide the stable regulatory framework, appropriate market signals, and long-term investment commitment necessary to jumpstart new business, transition core industries, and enhance our global competitiveness. Recent studies have shown that capping carbon pollution and promoting energy efficiency could create millions of new jobs nationally and more than 150,000 new jobs in Michigan, nearly 50,000 of them in manufacturing. Michigan already boasts one of the nation's largest solar components manufacturers, and will be one of the first states to produce advanced automotive batteries. Michigan universities are already partnering with major industries and suppliers, as well as Silicon valley funded start-ups, to deliver next generation vehicles and fuels technologies, while we also put idled manufacturing capacity to work building components for wind turbines. Sound climate policy will accelerate this transition – it is a critical part of the stimulus our struggling economy needs.

Doing nothing is not a viable option for Michigan. Our state faces serious economic, social, and ecological impacts from global warming. If climate change continues on its present course, not only will we miss out on the new economic opportunities outlined above, but two of Michigan's biggest industries, agriculture and tourism, could suffer. Additionally, climate change could seriously impact water quantity and quality in the Great Lakes, leading to greater conflicts over water resources in the region.

Agriculture is Michigan's second largest industry, contributing \$60.1 billion to the state's economy annually and providing more than 1 million jobs, according to the Michigan State University Extension. About 24 percent of all Michigan workers are employed in the state's agriculture/food system. Many of the jobs and much of the economic impact provided by Michigan's agriculture industry could be lost if climate change continues on its present course. Conversely, Michigan universities are leaders in agriculture and bioenergy research, and Michigan farmers stand to gain from federal policy that promotes renewable energy and caps carbon pollution. Farmers, for instance, could realize new revenue by leasing land for wind turbines and assigning unproductive cropland to carbon offset programs and producing biomass for next generation renewable fuels.

Associated with warming temperatures, increased ozone concentrations can decrease crop production and damage one of Michigan's few economic bright spots. Intense rainstorms during spring planting season and summer droughts, both of which have increased in recent decades, will continue with greater intensity under "business as usual" carbon emissions and will likely reduce agricultural productivity and pollute our surface waters, including the Great Lakes. Hotter, drier summers and more droughts will require additional irrigation for crops that were previously rain-fed. Warmer winters will favor more southern insects, pests, and plant pathogens. Perennial fruit crops like Michigan's tart cherries are particularly vulnerable to increased climate variability caused by regional warming. All of these factors could dramatically reduce agricultural production and increase costs for farmers, agribusinesses, and others who have either direct or indirect ties to Michigan's important agriculture industry.

Left unchecked, climate change will also harm our state's tourism industry. Tourism contributes \$17.5 billion each year to Michigan's economy and provides 200,000 jobs, according to the Michigan Economic Development Corp.

Winter sports, such as skiing, snowmobiling, ice fishing, and snowboarding will suffer due to shorter, warmer winters. Warmer Great Lakes, rivers, streams, and inland lakes will change the distribution of fish species, and many species of cool-water fish — including all four of our trout species (Brook, Lake, Rainbow and Brown Trout) — could disappear from our region. Bird-watching activities will slow due to a decline in bird diversity, particularly among waterfowl and songbirds. Longer, hotter summers could increase beach use, but beach recreation could see a decline in activities because of more volatile weather and potential increases in pollution and waterborne- and insect- diseases.

Policymakers have a clear choice: allow climate change to continue on its present path and cause serious long-term damage to Michigan's natural resources and economy, or embrace an enlightened global warming solutions policy that will protect our air, water, land, and Great Lakes while spurring economic growth right here in Michigan.

For all these reasons, we urge the passage without further delay of reasonable global warming solutions policies that can give Michigan citizens, businesses, and farmers cost-effective, clean and affordable energy.

Sincerely,



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Donald Scavia  
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George Kling  
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**Total Signatures as of May 18, 2009 = 178**