ENVIRONMENTAL ENTREPRENEURS

REDEFINING PROGRESS

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# EFFECTS OF GLOBAL WARMING ON THE STATE OF LOUISIANA

## GLOBAL WARMING WILL HURT LOUISIANA

The vast majority of the world's leading scientists now agree that human activities may lead to substantial impacts on the global climate. Consensus estimates warn of an average increase in temperatures of between 2 and 10 degrees Celsius over the next century, resulting in more severe drought, rising sea levels, shifting seasons, and increased disease.

**IMPACTS ON LOUISIANA**

- Rising sea levels
- More frequent heat waves
- Increased illness from insect-borne diseases
- Less reliable water supplies
- Coastal flooding
- Increased algal blooms
- Damage to agricultural and fishery economies

In Louisiana, this could lead to a number of problems. Projections show temperature increases of about 3 degrees year-round. These higher temperatures and more frequent heat waves could increase heat-related deaths and illnesses from insect-borne diseases like malaria and West Nile virus, which has already been detected in humans and birds across the state. Warmer and wetter conditions could increase mosquito populations, particularly by reducing the frequency of the winter frosts that help control population growth. Warmer conditions would also increase the frequency of algal blooms along the coast, damaging fish and shellfish populations with adverse impacts both on human health and on local economies. Rising sea levels would also impose dramatic costs on Louisiana ecosystems and human populations. Low-lying populations would be forced to relocate or devote substantial resources to adapting to new conditions. Coastal beaches and wetlands would be threatened, and drinking water supplies could be exposed to increased salt water contamination. The state's $4.5 billion agricultural sector is naturally sensitive to the weather. Storms and incessant rains, such as those that hit the state in 2002, could become more frequent and severe, imposing substantial human and economic costs.

## THE "CLIMATE STEWARDSHIP ACT"

The Climate Stewardship Act (CSA), introduced in the Senate by Senators McCain and Lieberman, and in the House by Representatives Gilchrest and Olver, is based on a similar and highly successful program implemented by the Clean Air Act that has led to large reductions in acid rain-causing pollution with a minimum of economic costs. The Act would create a market-based cap-and-trade system to reduce emissions of carbon dioxide (CO2) and other heat-trapping gases from electricity generators and other large industrial and commercial sources, covering 85% of the nation's emissions.

**CLIMATE STEWARDSHIP ACT**

- Cap and Trade
- Similar program reduced acid rain by 50% at 1/10 the estimated cost
- Lowest cost solution
- Protects rural electric co-ops

Under a cap-and-trade system, a fixed number of emissions allowances (permits) are distributed to emitters. One permit allows the holder to emit one metric ton of CO2 or an equivalent amount of other gases. Companies that can run their business without using all their allowances can sell their surplus to companies whose actual emissions exceed their allowances. Under such a system, emissions are reduced by those who can do so at the lowest cost, thus minimizing economic impacts. Cap-and-trade systems, such as the one proposed in the Act, make reducing pollution a potential source of profit for companies, giving them an incentive to devise new and even cheaper ways to cut their emissions.

Beginning in 2010, the Act would cap emissions at their 2000 levels. However, emissions could increase up to 15% beyond the cap if companies purchase offsets from other sources, such as "sequestration" credits from farms that increase carbon storage in soils and vegetation.

## ECONOMIC IMPACTS

**COST-EFFECTIVE FOR THE UNITED STATES**

- $250 billion benefits at cost of $150 billion
- 500,000 new jobs by 2015

Estimates show that the benefits of the Act outweigh its costs by a ratio approaching 2:1. While the Act's provisions would impose about $150 billion in emissions reduction costs, it would generate $250 billion worth of benefits nationwide in the form of increased energy efficiency, reduced energy expenditures and economic growth through 2025. Nationwide, the Act would create over 500,000 jobs by 2015. Our analysis of the job impacts is based on research from the Tellus Institute, a nonprofit research and consulting organization, which studied the effect of the Act's cap-and-trade program as well as energy efficiency and other technology incentive programs that would be funded through the Act.

Like the nation as a whole, our analysis shows that the net impact of the Act on jobs in Louisiana is also positive. By

2015 over 6,200 more new jobs would be created over a business-as-usual approach, growing to almost 10,000 new jobs by 2025. The gains would be spread throughout the state's economy, and while the oil and gas-related sectors sector could suffer some job losses statewide, these would be more than offset elsewhere through growth in construction, metals and other industries. In addition to these benefits, Louisiana stands to gain in a number of other ways. For example, the CSA would allow covered entities to buy emissions allowances from forest and agricultural carbon sinks, which could provide an economic boost to the state's agricultural and forestry sectors.

**IMPACTS ON LOUISIANA**

- Net increase of 6,200 jobs by 2015
- Farmland and forest sequestration credits
- Consumers save through energy efficiency improvements

Nationally, not all sectors of the economy would benefit. Reducing CO2 and other emissions would require reduced use of fossil fuels where carbon cannot be captured, leading to economic contraction in those sectors. Increasing energy efficiency, while providing substantial benefits to both residential and commercial energy consumers, leads to reduced demand for electricity, posing some costs on that sector as well. Overall, however, these costs are more than offset by gains in other sectors, like construction, which would see a substantial increase in demand for new projects spurred by the increased implementation of renewable energy and energy-efficient technologies. The manufacturing sector would also see increased employment with increased demand for energy-efficient machinery and renewable energy components like wind turbines.

Louisiana consumers also stand to benefit from the CSA. The energy efficiency provisions included in the Act will generate substantial savings in the form of reduced energy expenditures. While energy prices will increase moderately as a result of the pollution reduction requirements in the Act, these costs will be offset by reduced consumption and rebates coming from revenue raised by allowance sales. Energy savings for households and businesses free up substantial resources that can be reinvested in state and local economies.

**OTHER BENEFITS**

- Potential revenue from rice field methane reductions
- Large potential cellulosic ethanol industry

There are other benefits as well. For example, methane is a potent greenhouse gas, about 23 times more potent than CO2. Rice farms can emit substantial amounts of methane over the growing season. Altering growing methods and/or cultivars can reduce the amount of methane released. (For example, draining a rice field once during the growth cycle can reduce methane emissions by as much as 50%.) By reducing their methane emissions, rice farmers could sell their emission reductions to covered emitters, yielding an additional revenue stream for state farmers.

Louisiana also has abundant resources for renewable energy, especially celluosic ethanol. Sugar cane bagasse and rice straw, which are abundant in the state, are excellent feedstocks for ethanol. One pilot plant is already slated for construction in Jennings. By promoting the use of cleaner energy sources, the CSA could help foster such new industries in Louisiana. This would provide local benefits in the form of employment in construction and at ethanol facilities, as well as increased farm revenues. At the same time, it would help provide cleaner air for Louisiana's metropolitan areas without risking water contamination from chemicals like MTBE.

## DON'T UNDERESTIMATE ENTREPRENEURIAL INNOVATION

As the Climate Stewardship Act is debated, a handful of naysayers will undoubtedly claim that doing anything to reduce global warming pollution will be economically disastrous. A close look at these predictions will reveal that they have little merit. For example, one such prediction is based on a 1998 study of the Kyoto Protocol, a substantially different and more stringent proposal than the Climate Stewardship Act. The study was written by the same "hired guns" that produced the roundly discredited report claiming to show enormous economic benefits from opening the Arctic National Wildlife Refuge to oil drilling. Not surprisingly, both these studies were funded by the oil industry.

Studies predicting economic disaster from environmental protection invariably underestimate the ability of American businesses to innovate to solve new problems. We do this every day in reaction to global and local business conditions. Our ability to innovate is what makes the American economy the strongest in the world. When the Clean Air Act Amendments were debated in 1990, industry lobbyists predicted that the law would turn America into a third rate economic power. Not only have businesses survived the Clean Air Act, but we have thrived, finding new ways to address old problems. Climate change is a problem that needs to be addressed. Our leaders need to have confidence in our ability to innovate rather than trying to hide from problems. We have done it before, and we will do it again, but only if clear standards and appropriate incentives are established by legislation such as the Climate Stewardship Act.

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