

# Making Climate Change Make Sense to Business

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Thank you, Jim. It's an honor to address such a distinguished and diverse group this morning. Some of you have traveled great distances to be a part of this discussion, while others of us have simply crossed the street. For our visitors, allow me to join the chorus in welcoming you to the Queen City and to what promises to be a very productive and enlightening week.

That Charlotte is the venue for this global discussion on sustainable development says a lot about our city. It says even more about Dr. Inyang and the Global Institute for Energy and Environmental Systems. For many years, Duke Energy has supported the Global Institute, largely due to its practical approach in addressing energy and environmental problems.

It's this willingness to discuss pragmatic, effective solutions to many energy and environmental issues that has brought us here today.

I'll spend the next few minutes on one of the more challenging issues facing this conference, this country and our world: the issue of global climate change.

As a businessman, I'm not here today to talk about the science of climate change. Candidly, as I look around the room, I am a bit out of my league.

Instead, I'm here to talk about how addressing climate change with sound policies can make solid business sense.

As you know, much of the developed world is already addressing this issue through the Kyoto Protocol. Earlier this month, climate change was one of two issues which topped the agenda at the Group of Eight summit in Gleneagles, Scotland.

While much of the world moves, in the United States, we're at crossroads, and the alternatives don't include continued inaction. Activity already is occurring in this country, a response to the strong feeling of many that global warming represents an environmental crisis. The problem is that actions in themselves can be ineffective, inefficient or even counter-productive.

In the United States, concerns around the climate change issue have resulted in a variety of local, state and regional responses, as well as increased policy debate at the national level. To date, at least seven states have enacted some form of climate change legislation, and others may follow suit. California has passed legislation to limit CO<sub>2</sub> emissions from automobiles. While in New Hampshire, the state has enacted legislation requiring CO<sub>2</sub> from coal-fired power plants be capped at 1990 levels by 2010.

Unfortunately, a patchwork of inconsistent state and local actions will have little effect beyond complicating and increasing the cost of compliance. But in the absence of federal regulatory action, the results will likely be a patchwork of rules resulting in state by state chaos. That's the direction in which we're heading, and it has real economic implications.

Until broad-based federal policies are enacted, there will be uncertainty around expansion and capital investment in key sectors of the U.S. economy, including the energy industry, manufacturing and transportation. Businesses need to know what the rules are going to be – which behaviors will be rewarded and which will be taxed or regulated.

Depending on the approach taken to address greenhouse gas emissions, a company might be a late mover or an early mover; it might have a notable asset or a significant liability; it might be a prime target or it might dodge a bullet.

At Duke Energy, we have come to the conclusion that U.S. public policy on global climate change should encourage a transition to a lower-carbon-intensive economy through a broad-based, federal approach. We think a federal approach would be easier to integrate into a comprehensive global response, than would a hodgepodge of state rules. We believe that any U.S. climate policy should meet four criteria:

- (1) It should be economy-wide;
- (2) It should start now but reduce emissions gradually;
- (3) It should be economically efficient; and
- (4) It should align with other energy and environmental policy objectives.

A well-designed carbon tax can meet each of these criteria. We believe a carbon tax which addresses greenhouse gas emissions from all sectors of the economy is the best approach. "Tax" has become a four letter word in American politics, but if the federal government is going to influence behavior it should do so through the most efficient means; and in this case, a carbon tax is a better approach than alternatives such as a cap and trade regime. The tax can be structured to be revenue neutral, that is in aggregate to take no new money from the economy.

Let's start with the first characteristic desired: an economy-wide solution. In the debate about global climate change, you hear a lot about power plants and the electric industry, but that's only one piece of the story. Sixty percent of U.S. carbon dioxide emissions are from other sources. So we shouldn't kid ourselves that we can easily address the issue through the electric sector alone.

In fact, the U.S. emissions reduction that would have been required if we had joined the Kyoto Protocol is almost as much as the total 2002 CO<sub>2</sub> emissions from U.S. power plants.

There's no technology available yet to reduce those emissions. So for the electric sector alone to achieve Kyoto reductions, we'd essentially have to shut down all of the country's fossil-fueled plants! We cannot eliminate the use of coal or other fossil fuels for power generation in the near term without serious disruption to our economy.

That's why a viable policy to address global climate change must encourage reduced carbon emissions from all sources and all segments of our economy -- not just a few.

Thirty percent of U.S. carbon dioxide emissions are from the transportation sector. And just like with power plants, there's no existing pollution control device that can cut the carbon dioxide coming from our gasoline engines. The only way to reduce emissions is to consume less fuel. Yet U.S. government fuel efficiency standards for cars haven't changed since 1990. And, the average fuel efficiency for new cars and trucks fell from 22.1 miles per gallon in 1988 to 20.4 miles per gallon in 2001. We're heading in the wrong direction!

The remaining 30 percent of carbon dioxide emissions comes from other segments of the economy—segments as varied as high-tech manufacturing to residential heating. That's why we need broad-based incentives – not prescriptive regulation – to address the issue. We need an economy-wide approach that sends the right signals to companies and individual consumers alike to reduce energy consumption and greenhouse gas emissions from all sources.

The enormity of this task and the paucity of available technological tools make it critical that we get the most efficient solutions possible. That's where the carbon tax comes in. The greatest attraction of a carbon tax is its simplicity and the fact that it allows us to share the cost of reducing greenhouse gas emissions across all sectors of the economy – minimizing economic disruption in any one area.

And given the long-term nature of the climate change issue and the capital intensity of energy investments, most economists recommend that a carbon tax start at a modest level and increase slowly over time. This speaks to the second characteristic of a workable policy: start now but reduce emissions gradually.

This approach would minimize disruptive jolts to the economy while sending clear price signals to the marketplace about the need for long-term investments in practices and technologies that reduce emissions. By way of illustration, one tax rate approach that the U.S. Congressional

Budget Office (CBO) has cited with approval would begin at approximately \$12 per metric ton of carbon (mtC) and rise to \$17/mtC over a ten-year period.

The revenues from the tax could be used to reduce or eliminate other taxes to make it revenue neutral.

A revenue neutral carbon tax would act as a new kind of consumption tax on the sale of fossil fuels based on their carbon content. It could be efficiently assessed upstream.

A well-crafted carbon tax would provide everyone incentives for conservation. It would also promote higher utilization of today's power plants that are low emitters of carbon and encourage low-carbon fuel choices for the future. It would also encourage the development of new technologies.

This brings me to the third premise: a good policy must be economically efficient. By setting a carbon "price," a carbon tax would provide financial motivation for firms and households to take least-cost steps to shift or reduce energy consumption and thereby reduce greenhouse gas emissions. For this reason, many economists believe that a carbon tax is more efficient than regulatory mechanisms for addressing climate change.

The CBO recently concluded that a policy approach that fixes costs, such as a carbon tax, is much more likely to be cost-effective over the long-term than a regulatory approach that fixes levels of emissions regardless of cost, such as a cap-and-trade program.

The CBO study also noted that a carbon tax would be "relatively simple to administer." After all, measures of carbon content in fuels are readily available and the program could reach virtually all of the fossil fuel consumption in the economy by collecting the tax upstream from as few as 2,000 entities.

Even a modest tax on the carbon content of fuels would send an economic signal. If global warming is being aggravated by human activity, that signal corrects for what economists call an externality and represents the real cost of using fossil fuels. Moreover, a carbon tax sends a signal to everyone, enabling us to make those decisions as a society that reduce or altogether eliminate those uses of fossil fuels that are providing the least value, not those which are easiest for the government to regulate. This is the best approach to addressing climate change without jeopardizing economic growth and competitiveness with other countries.

What's more, a carbon tax program would avoid many of the transaction costs and inefficiencies associated with regulatory programs like cap-and-trade.

Studies from groups such as the National Commission on Energy Policy, suggest that a revenue-neutral carbon tax program can be 25-50 percent more efficient in reducing emissions than a comparable cap-and-trade program in which allowances are distributed for free.

Designing a cap-and-trade approach to cover any substantial part of the economy requires an "upstream" cap or additional regulatory standards. Systems of standards risk becoming outdated or irrelevant. Again, just look at fuel-efficiency standards and the proliferation of SUVs. Even some of the hybrid vehicles which qualify their owners for tax breaks save little more than two miles per gallon in fuel economy. A carbon tax would be simpler to administer and easier to adjust – avoiding the unintended consequences of rigid standards.

As to the fourth criteria, that climate policy should align with other energy and environmental policy objectives, a carbon tax would serve other national policy goals, such as encouraging energy efficiency and conservation, mitigating air pollution and decreasing U.S. dependence on foreign sources of energy.

A carbon tax could raise significant new revenues which some economists have argued the federal government needs. Many economists, however, have analyzed the use of a carbon tax as one element of a revenue-neutral tax reform policy – in particular, as a means to shift taxation away from activities that are good for society (such as labor and investment) on to activities that pose potential risks to society.

The CBO's analysis outlined a moderate carbon tax policy option that could generate \$208 billion in revenues over the 2006-2015 period. Such funds could be used to offset revenue losses from cuts in other taxes and/or to alleviate the impacts of the tax on particularly hard-hit groups.

In late April, Duke Energy submitted a proposal to the President's Advisory Panel on Federal Tax Reform outlining the tax reform opportunities of phasing in a carbon tax. The Panel is expected to issue its report by the end of September.

We recognize global climate change is an issue that needs to be addressed both nationally and internationally. If we don't take constructive action, others will.

From the standpoint of public policy and sound business, it makes more sense to act than to react. From Duke Energy's point of view, it makes more sense to advocate a revenue neutral

carbon tax – even if it directly affects our business and is hard to sell politically – than to accept unworkable alternatives that fall short of achieving real results in an equitable, efficient manner.

At Duke Energy, we are also committed to taking steps that will eventually lower our own greenhouse gas emissions.

We will do that through a balanced portfolio of nuclear, gas, hydro and coal – yes, even coal. It's worth noting that a new coal facility reduces carbon dioxide emissions by close to 20 percent when compared to today's average coal plant, just due to greater efficiency.

Electricity demand is critical to our economy, and to meet growing demand in the short term, we are looking at the construction of gas or coal-fired plants. Relatively higher fuel cost for gas plants will drive up power prices, as will controls associated with coal plants.

Our long-term strategy for addressing greenhouse emissions includes adding new nuclear plants, but the lead time won't make them available in time to meet our customers' most immediate needs. At the same time, we will be working with others in industry to evaluate new technologies.

As a company, we want to be part of the solution to global climate change. What we need from our regulators and legislators is to understand what the rules are going to be – which behaviors will be rewarded and which will be penalized. Only then will we know how to invest in the right solutions so that we do not disadvantage our customers or our shareholders.

Before I close, there's another important point I want to underscore: my great optimism about American innovation. Our international competitors – some motivated by mandatory emissions reductions – have gotten a head start. Europe leads in wind power. Japan is the world leader in solar and hybrid cars -- just look at all the Toyota Prius' tooling down any major highway for validation.

The mandate in this country to become less carbon intensive will spur the kind of technology innovation that we saw in the last century. Innovation that propelled us to become the world's leading economy.

You'll spend the next several days examining issues that could have a profound impact on future generations. As you listen, exchange ideas and debate, I encourage you to focus on finding workable solutions to these global problems. Set the right goals, and society will respond.

Thank you. And now I'd be glad to take any questions you might have.