

## Climate Change Background

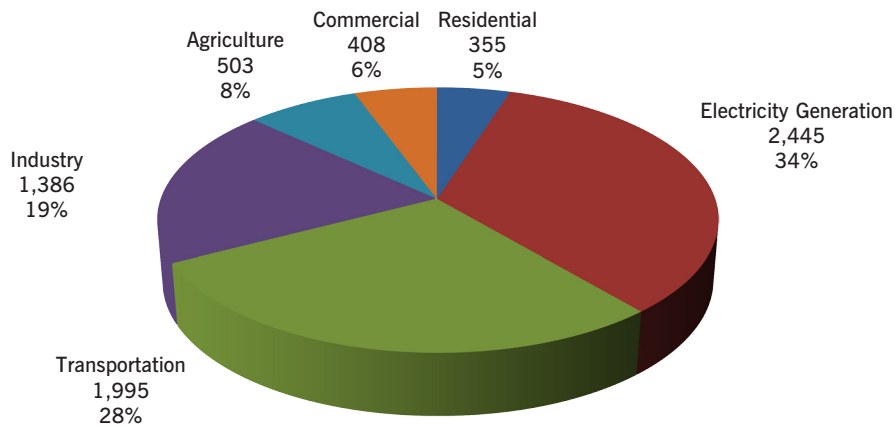
Carbon dioxide and other greenhouse gases have always been present in the atmosphere, keeping the earth hospitable to life by trapping heat. Research over recent years indicates that since the Industrial Revolution human activity has increased the concentrations of these gases, resulting in increasing average annual global temperatures.

A body of scientific evidence now paints a picture accepted by a growing majority of the public and policy-makers: climate change is happening, caused in part by human activity. Scientists say to avoid the worst effects of climate change, we need to stabilize and then reduce greenhouse gas concentrations in our atmosphere.

## Where Greenhouse Gases Come From

Greenhouse gas emissions come from many sources. The chart below shows the largest contributors of total U.S. emissions are the transportation sector, electric generation, agriculture, and commercial and residential sectors.

### 2007 U.S. Greenhouse Gas Emissions by Sector (Million Metric Tons CO<sub>2</sub> Equivalent)



Source: EPA: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007

Greenhouse gases are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride.

## A Call to Action

Duke Energy supports passage of federal legislation mandating economy-wide regulation of greenhouse gas emissions. We believe Congress should act immediately to establish a program that would cap greenhouse gases emitted from all U.S. sources, including power generation, industrial and commercial sources and motor vehicles.

A "cap-and-trade" program using emission allowances minimized the costs of complying with the successful Clean Air Act Amendments of 1990 and dramatically reduced emissions of sulfur dioxide. A similar approach should be used to address greenhouse gas emissions.



A cap-and-trade program would set a price for greenhouse gases, establishing necessary economic signals to the marketplace. It would also provide clear financial incentives for more aggressive development of technologies to reduce greenhouse gases.

To prevent sudden energy price shocks that will damage the U.S. economy, consumers, and the long-term success of the program, we believe the greenhouse gas cap-and-trade program should start three to five years after Congress adopts the legislation. To permit the economy to adjust to the changes ahead, legislation should first focus on slowing the growth of greenhouse gas emissions, and later transition to a declining national cap. This has been a successful approach used with other major environmental programs.

All sectors that emit greenhouse gases should be candidates to receive emission allowances under a cap-and-trade system. The allocated allowance value should flow directly to customers. However, care must be taken to ensure that certain regions of the country do not bear a disproportionate economic impact from the program. Congress should take special care to ensure appropriate allocations are given to electric utilities in states and regions that rely heavily on coal for electricity supply, such as the Southeast and Midwest.

### **There Is No Silver Bullet to Address Climate Change**

At Duke Energy, we are making long-term decisions for how best to meet our customers' demand for electricity. We are moving ahead on all fronts – energy efficiency, renewable energy, advanced nuclear power, advanced clean coal plants and retiring older, less efficient power plants – while also minimizing the environmental footprint of our operations. We need more regulatory clarity regarding climate change as we make these investment decisions – often involving billions of dollars – on behalf of our customers.

Congress should adopt climate change legislation as soon as possible based on the proven cap-and-trade approach. This will provide the necessary regulatory framework our nation needs to ensure utilities like Duke Energy can make the best long-term decisions on behalf of our customers and the environment.