

ENVIRONMENTAL FOOTPRINT

Reduce our environmental footprint

CHALLENGES

- Ensure reliable and cost-effective energy supplies for customers while minimizing our impact on the environment
- Help address and meet the challenge of reducing greenhouse gases

OPPORTUNITY

- Share our expertise, ideas and leadership to demonstrate that the new energy equation can be solved through multiple supply and demand options

GOALS

- Promote U.S. federal policy mandating economy-wide reductions of greenhouse gas emissions
- Create the option to build new nuclear (carbon free) generation
- Pilot clean coal and other innovative technologies
- Secure cost-effective alternative sources of energy
- Reduce, avoid and/or sequester at least 10 million tons of carbon dioxide (CO₂) equivalents over the next eight years (2007-2014)
- Continue to focus on safe, reliable and efficient power plant operations
- Model energy efficiency internally
- Deliver on our commitment to reduce nitrogen oxides and sulfur dioxide emissions
- Develop next generation environmental goals in 2007 to further reduce our footprint

OUR IMPACTS ON THE ENVIRONMENT

Like any business, our operations leave an environmental footprint. We use natural resources such as coal, uranium, natural gas, oil and water to generate electricity for our customers. We also use tens of thousands

of gallons of gasoline and diesel fuel for our service trucks and cars. We create waste streams in the process of generating electricity. And, our transmission and distribution systems are made of wood, steel and aluminum. Given our company's reliance on these materials, it is essential that we use natural resources as efficiently as possible.

Duke Energy has developed a comprehensive environmental, health and safety policy and management system to guide our actions. As a result, we:

- Establish processes to ensure compliance with environmental laws and regulations
- Set goals and measure performance
- Engage with stakeholders to advance mutual environmental objectives
- Proactively manage public policy issues such as climate change
- Emphasize environmental stewardship.

REDUCING AIR EMISSIONS

Emissions of sulfur dioxide (SO₂), nitrogen oxides (NOx) and mercury from coal-fired power plants continue to be a major focus area for lawmakers, regulators and the public.

Duke Energy has taken, and continues to take, aggressive action to reduce its emissions:

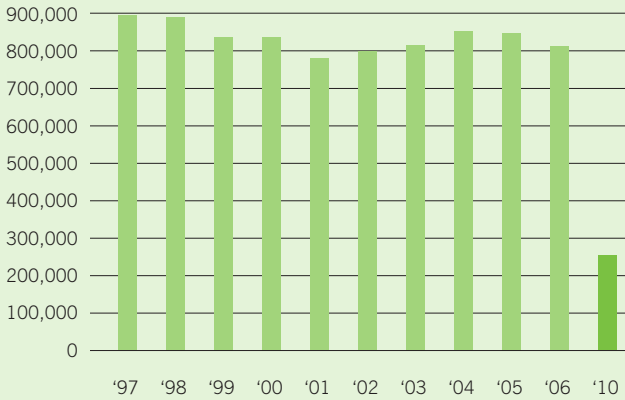
- Between 1998 and 2011, we are investing nearly \$5 billion in controls to reduce our SO₂, NOx and mercury emissions.
- By 2010, we project that both our SO₂ and NOx emissions will be about 70 percent lower than they were in 1997.
- The technologies we're installing to reduce SO₂ and NOx also significantly reduce mercury emissions. Our current estimate places mercury removal at between 70 and 80 percent. We will report further on the effectiveness of these controls to reduce mercury emissions when we have more data.

Engineered wetland to treat wastewater at Marshall Steam Station, near Terrell, NC.

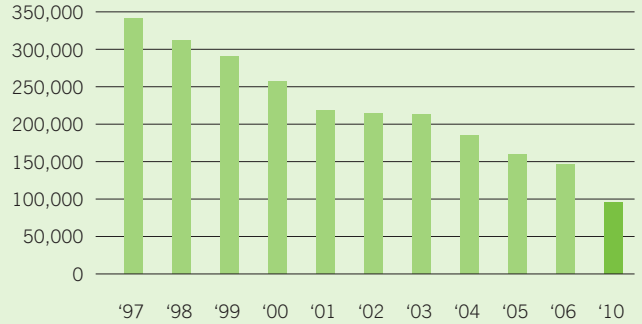
ENVIRONMENTAL PERFORMANCE

We continue to install pollution control equipment on our electric generating plants. NOx emissions have declined sharply as shown below, and SO₂ is expected to show a similar decline as more “scrubbers” come into service. 2010 data is projected.

Sulfur Dioxide Emissions (Tons)



Nitrogen Oxides Emissions (Tons)



SO₂ and NOx reported from electric generation only, and based on ownership share of stations. Combustion turbines not equipped with continuous emission monitors and facilities operated but not owned by Duke Energy Generation Services are not included.

Sulfur Dioxide Emissions (Tons)*	
2005	844,500
2006	812,600
Nitrogen Oxides Emissions (Tons)*	
2005	160,400
2006	148,600

* SO₂ and NOx reported from electric generation only, and based on ownership share of stations. Combustion turbines not equipped with continuous emission monitors and facilities operated but not owned by Duke Energy Generation Services are not included.

Coal Consumption (Tons)	
2006	46,500,000
2006 Coal Combustion Byproducts (Tons)	
Beneficial Reuse	2,870,000
Land Disposal or Pond Stored	1,990,000
Flue Gas Desulfurization (FGD)*	670,000

* FGD material is primarily a mixture of lime, fly ash and calcium sulfite created by the SO₂ scrubber process.

2005 Toxic Release Inventory* (Pounds)	
Releases to Air	80,172,829
Releases to Water	247,542
Releases to Land	15,234,393
Off-Site Transfers	77,123
Total	95,731,887

* 2006 data will not be available before July 2007. Data pertains to Duke Energy ownership share of facilities.

2006 Regulatory Citations*	
13 Citations with \$12,713 paid in fines/penalties	

* Includes Notices of Violation and similar infractions of permits or licenses at facilities operated by Duke Energy.

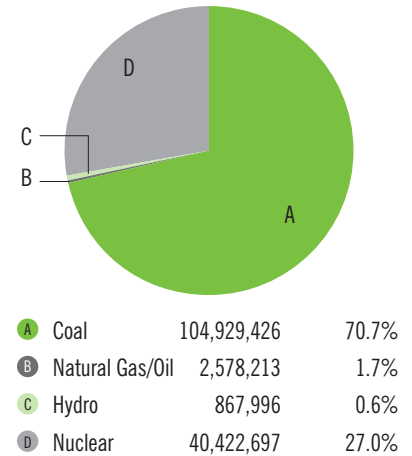
2006 Oil Spills (Gallons)	
75 Spills	3,251

Approximately 70 percent of the electricity Duke Energy produces for customers comes from coal, so CO₂ releases are unavoidable. By using nuclear energy instead of coal for a portion of our generation, Duke Energy has avoided the release of approximately 1.1 billion tons of CO₂ since the three nuclear stations entered service.

Carbon Dioxide Emissions (Tons)*	
2005	107,400,000
2006	105,400,000

* Emissions are for U.S. and Latin American electric generation facilities.

2006 NET MEGAWATT-HOUR GENERATION PERCENTAGES BY FUEL*



* Data based on Duke Energy's ownership share of all facilities.

More information on our air emissions is available at www.duke-energy.com/environment/air-quality.asp.

ENVIRONMENTAL FOOTPRINT

CLIFFSIDE STATION

Duke Energy proposed building two new 800-megawatt power plants using supercritical coal technology at our Cliffside Station in North Carolina. This is the most environmentally efficient pulverized coal technology available today, typically burning 10 percent less coal than conventional units and emitting significantly less sulfur dioxide and nitrogen oxides.



In March 2007, we received the formal Order from the North Carolina Utilities Commission, which authorized building one of the two units. The Commission also accepted our commitment to invest 1 percent of our revenues in the Carolinas for energy efficiency, subject to appropriate regulatory treatment, and our plan to retire older, less efficient units.

Cliffside's cost estimates were based on two units, and we still need an air permit for this project. We are studying the economics to determine whether we should proceed with the Cliffside project or consider other alternatives, including natural gas-fired plants. We won't make a decision until we have a clearer understanding of the overall costs, as well as the conditions of the air permit.

THE NEED FOR NEW BASE LOAD GENERATION

It's been many years since Duke Energy has had to build a new "base load" power plant – that is, a plant that operates continuously.

In fact, the last base load station built in the Midwest was the Zimmer Station in 1991. In the Carolinas, it has been over two decades since the Catawba Nuclear Station entered service in 1986.

We've been able to meet rising demand for electricity without building new base load power plants by:

- Making our existing stations more efficient at producing power, despite adding pollution control equipment that requires more electricity
- Working closely with large customers to reduce their electric consumption during times of high demand

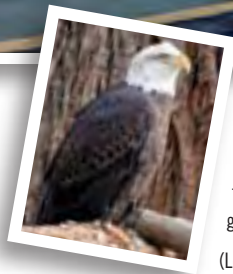
- Implementing a variety of demand-side measures for large and small customers
- Adding combustion turbines to provide peak power when needed during hot summer days or cold winter mornings
- Buying power from other generators when cost and reliability conditions are favorable.

While these measures have delayed the need for new generation, they cannot offset entirely the rising demand for electricity. Regulated utilities are required by law to meet the energy needs of their customers. "Running out of power" simply is not an option. In the fast-growing Carolinas, 40,000 to 60,000 customers join our system each year. Our service areas in Indiana, Kentucky and Ohio are adding 11,000 to 16,000 customers a year.

Forecasts indicate that our customers in the Carolinas will need an additional 2,120 megawatts by 2011, increasing to an additional 6,120 megawatts by 2021. For perspective, Duke Energy Carolinas' generating capacity is currently about 20,000 megawatts.

New Resource Requirements* (Megawatts)				
Year	Indiana	Carolinas	Kentucky	Ohio
2011	275	2,120	No new generation is planned at this time	Plans are being reviewed
2016	612	4,180		
2021	797	6,120		

* Figures represent cumulative totals to maintain a 15% reserve margin (Indiana) or 17% reserve margin (Carolinas) that may come from purchases, company-owned assets, and/or additional demand-side management.



LEVERAGING ALL FIVE FUELS

Even with the aggressive actions our company and customers have taken, we will need all five fuels – coal, nuclear, natural gas, renewables and energy efficiency – to meet customer needs. As an outcome of the Integrated Resource Planning process, we are considering several options, each with its own implications for the company’s environmental footprint:

- Constructing a nuclear power plant in South Carolina
- Constructing a modern, state-of-the-art pulverized coal-fired plant at our Cliffside Station in North Carolina
- Constructing an integrated gasification combined cycle (IGCC) plant that transforms coal into a synthetic gas to produce electricity at our Edwardsport Station in Indiana
- Building or buying additional natural gas-fired plants
- Designing additional energy efficiency and conservation measures
- Pursuing renewable (wind, solar or biomass) power plant technologies where feasible.

(Above) Gibson Station, near Mt. Carmel, IL, shows steam from its SO₂ scrubbers. The cooling pond is in the middle ground and the Cane Ridge Wildlife Area is in the foreground. The two islands provide nesting habitat for the federal endangered Interior Least Tern.

(Left) Cayuga Station, near Cayuga, IN hosts Eagle Viewing Days one weekend each year. This event draws up to 2,000 visitors for an opportunity to see this American icon in its natural setting.

ENVIRONMENTAL STEWARDSHIP

Every action counts in reducing our environmental footprint; no effort is too small. In addition to improving local habitats, many of our environmental stewardship projects provide our customers and communities with opportunities to experience nature. Here are just two examples:

- **Cane Ridge Wildlife Area** – Over 450 acres adjacent to the Gibson Station cooling pond were converted into an exceptional wildlife habitat, becoming one of the most successful conservation efforts in the Midwest.
- **Nature Trails, Butterfly Gardens and Wildlife Food Plots** – With the help of area garden clubs, civic groups, Boy Scouts and Girl Scouts, all three nuclear stations in the Carolinas – and several other Duke Energy facilities – host natural areas to support local wildlife.

More information is available at www.duke-energy.com/environment.

WIND POWER

In September 2006, Duke Energy Indiana entered into a 20-year power



purchase agreement with Benton County Wind Farm LLC to purchase the electricity produced by a 100 megawatt wind power facility to be constructed in Benton County, Indiana. This project will add a clean, renewable energy source to Duke Energy’s portfolio, help boost the local economy and encourage innovative ways to generate power within the state. This agreement paves the way for the first significant wind power project and long-term purchase of wind power in Indiana.



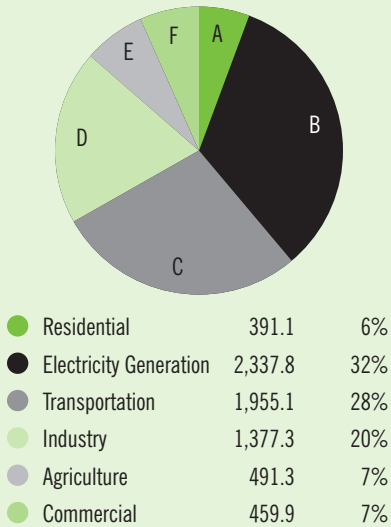
HYBRID BUCKET TRUCKS

Duke Energy is among the first utilities in the nation to test diesel-electric service trucks. Three hybrid trucks are being tested for fuel economy and emissions-reduction benefits. Independent tests show the hybrid trucks may provide 40 to 60 percent fuel savings and reduced air emissions because the vehicles can operate the buckets in electric-only mode.

ENVIRONMENTAL FOOTPRINT

2004 U.S. GREENHOUSE GAS EMISSIONS

By sector (Million Metric Tons CO₂ Equivalent)*



* Source U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2004. April 15, 2006.

Greenhouse gas emissions come from many sources. This chart shows that the largest contributors to total U.S. emissions are the electric generation, transportation and industrial sectors.

CLIMATE CHANGE AND DUKE ENERGY'S CALL TO ACTION

As the third largest consumer of coal in the U.S., Duke Energy is taking a leadership role in addressing global climate change.

OUR THREE-PRONGED APPROACH

Our approach to greenhouse gases and climate change has three components:

- Promoting mandatory greenhouse gas reduction regulations
- Voluntarily reducing our greenhouse gas emissions
- Advancing technological innovations

Policy Leadership – Duke Energy supports passage of federal legislation mandating economy-wide regulation of greenhouse gas emissions. We believe Congress should act now to establish a market-based program that would cap greenhouse gases emitted from all U.S. sources, including power generation, industrial and commercial sources and the transportation sector. Climate change is a global issue; therefore, it would be counterproductive for each state in our country to pass its own legislation with different requirements and incentives.

A national cap-and-trade program is our preferred approach. This type of program would set a price for greenhouse gases, thereby estab-

lishing necessary price signals for the marketplace. Prices would also provide clear financial incentives to more aggressively develop technologies to reduce greenhouse gases. 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.

Congress should adopt economy-wide climate change legislation as soon as possible based on the proven cap and trade approach used in the Clean Air Act Amendments of 1990 and more recent regulatory programs. 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.

Voluntary CO₂ Reduction – Duke Energy believes it is important to continue reducing greenhouse gas emissions even before these emissions are regulated. Our goal is to reduce, avoid and/or sequester 10 million tons of CO₂ equivalent emissions by 2014. We will be investing \$3 million per year on various types of greenhouse gas reduction projects to achieve this goal. In the past, we have invested in wind and solar power demonstrations, reforestation, power plant improvements and lighting upgrades, among other projects.

We are convinced that voluntary actions are not enough – a mandatory policy is needed to address climate change in a fair and economically sound manner. More information about our commitment is at www.duke-energy.com/environment/climate-change.asp.

Technological Innovation – New technology will play an important role in achieving the country's climate change objectives. We are supporting research and development on both supply-side and demand-side options. We have plans to build state-of-the-art coal and nuclear plants, and have been awarded significant federal investment tax credits for our Edwardsport Integrated Coal Gasification project and our Cliffside supercritical pulverized coal project.

In addition, Duke Energy is involved in three of the seven Department of Energy regional carbon sequestration partnerships. Our East Bend Generating Station in Kentucky was chosen as a Phase II geologic sequestration project for the Midwest Regional Carbon Sequestration Partnership. The purpose of the project is to investigate the safety and effectiveness of carbon sequestration.

Because geologic sequestration is not feasible in many parts of the U.S., we are working

with other companies and the Electric Power Research Institute (EPRI) to evaluate the use of chilled ammonia to permanently capture and remove CO₂ from flue gas. The goal is to continue using coal as a secure and affordable fuel for electric generation while reducing CO₂ emissions.

Duke Energy is also partnering with Southern Company on a potential new nuclear station in Cherokee County, SC. Additionally, we are actively involved in the NuStart Energy consortium, which will develop first-of-a-kind engineering for new nuclear reactors.

SUPPORT FOR RESEARCH AND DEVELOPMENT

Much of Duke Energy's research is done collaboratively. In 2006, we invested approximately \$12.5 million in research on power generation, power delivery and environmental sciences. The largest portion of our research budget – approximately \$10 million – went to EPRI. Founded in 1973, EPRI is an independent, nonprofit center for public interest energy and environmental research; its members represent over 90 percent of the electricity generated in the U.S. For every dollar we invest in EPRI, Duke Energy receives about \$30 worth of collaborative research and knowledge.

CLIMATE CHANGE POLICY PARTNERSHIP

As a founding corporate sponsor, Duke Energy pledged \$2.5 million to support climate change policy research at Duke University. The Climate Change Policy Partnership (CCPP), formed in August 2005, includes corporate partners, the Nicholas School of the Environment and Earth Sciences, the Nicholas Institute for Environmental Policy Solutions and The Center on Global Change. More information is at www.nicholas.duke.edu/institute/ccpp/.

