

A History of Effective Environmental Progress

TVA's Commitment to Environmental Stewardship

Throughout its history, TVA has focused on environmental stewardship as one of the three elements in its historic mission of public service through energy, the environment, and economic development.

A Pioneer in Emission Control Technologies

TVA has played an instrumental role in developing major emissions control technologies in use by the utility industry today.

- In partnership with the Environmental Protection Agency, the Department of Energy and the Electric Power Research Institute, TVA developed scrubbers for controlling sulfur dioxide emissions and installed its first scrubber at its Widows Creek Fossil Plant in 1977.
- TVA has installed scrubbers on seven large coal units. Three more will be operational by 2011, and plans are moving forward for two more to be in operation in 2012. These controls can require investments of more than \$300 million each.
- Nitrogen oxide reduction technologies have been tested and refined at TVA plants, and a new nitrogen oxide reduction technology is currently in the demonstration phase on two TVA units. All 59 of TVA's coal-fired units have some form of nitrogen oxide controls, and 60 percent of TVA's coal-fired capacity is equipped with state-of-the-art selective catalytic reduction (SCR) equipment.

A Leader in Reducing Emissions, Improving Air Quality

TVA has invested more than \$4.8 billion in equipment to reduce sulfur dioxide, nitrogen oxide, and particulate emissions from its plants. TVA is in the process of installing another \$1 billion worth of controls by 2010 to further improve regional air quality and plans to spend from \$3 billion to \$3.6 billion during the next decade.

- Since 1977, TVA has reduced sulfur dioxide emissions by 82 percent.
- Since 1995, TVA has reduced nitrogen oxide emissions during the summer ozone season by 81 percent.

Meeting Commitments Ahead of Schedule

Goal: To reduce nitrogen oxide emissions below 1995 levels by 2005
The Result: TVA achieved this target a year ahead of schedule.

Goal: To reduce sulfur dioxide emissions below 1977 levels by 2010
The Result: TVA is on track to meet this target ahead of schedule.

Reducing Greenhouse Gas Emissions

TVA is a leader in supporting actions to reduce Greenhouse Gas Emissions:

- TVA has reduced, avoided or sequestered more than 305 million tons of carbon dioxide under the Department of Energy's Climate Challenge program.
- In 2007, TVA generated about 37 percent of its power from sources that do not emit carbon dioxide. These sources include nuclear, hydro, and renewable energy.
- TVA is working to generate at least 50 percent of its power from low-carbon and zero-carbon sources by 2020.

A Progressive Energy Policy

In May 2008, the TVA Board adopted a new Environmental Policy that will further reduce the carbon intensity of the power system by taking these actions:

- Promoting consumer energy efficiency and conservation to reduce the growth in demand for more electricity.
- Pursuing low-carbon generating technologies such as nuclear power and affordable renewable sources.
- Improving the efficiency of the existing power system.

In 2000, TVA was the first utility in the Southeast to launch a commercial Green Power program, offering consumers the option of purchasing electricity from renewable sources.

- Nearly 13,000 residential and business customers are purchasing blocks of electricity from generating sites fueled by the wind, sun and methane gas.
- The Green Power Switch program led to the construction of the first wind energy park in the Southeast, which is located on Buffalo Mountain near Knoxville.

Protecting Land and Water

TVA manages the Tennessee River, the nation's fifth largest river system, to reduce flooding, support navigation, produce power, improve water quality and supply, and support recreation and public land use.

- TVA manages the 652-mile Tennessee River system, 650,000 acres of surface water, 11,000 miles of public shoreline, 293,000 acres of reservoir land, and more than 100 public recreation areas.
- More than four million people in the region depend on the Tennessee River to provide a clean and abundant supply of drinking water.
- Anglers rely on area reservoirs for a diverse and abundant supply of healthy sport fish. For example, TVA and conservation partners have released more than 46,000 lake sturgeon into rivers near Knoxville, Tennessee, since 1998.
- TVA works in partnership with the U.S. Fish and Wildlife Service to protect habitats for threatened and endangered species.

In 2007, TVA adopted a new Land Management Policy that balances the public benefits of TVA-managed lands with TVA's responsibility as a steward of the Valley's natural resources.