

GEORGIA POWER'S PLANT BOWEN Environmental Management System



Plant Bowen Facts

- Plant Bowen is a four unit 3,200 megawatt electric generating plant owned and operated by Georgia Power Company.
- The plant was built between 1971 and 1975 at a cost of approximately \$400 million.
- The plant is one of the largest generating facilities in the nation and is continually rated among the top generating fossil-fueled sites in the nation.
- The plant generated over 22 million megawatt-hours of electricity in 2006, 3rd highest in the nation. Enough electricity to power over 1.75 million residential homes for a year.
- The Plant Bowen site covers more than 3,000 acres in Bartow County Georgia.

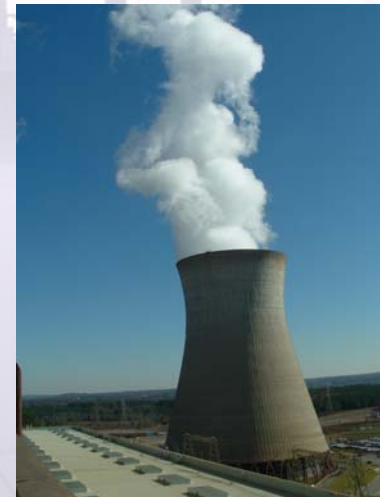
Plant Bowen Facts

- Georgia Power Co. employs over 400 full time workers at Plant Bowen. Additional craft and construction workers support outages and construction projects as needed.
- At full operation, Plant Bowen burns 1,100 tons of coal an hour, the equivalent of three 95-car trainloads a day.
- Each unit produces more than 5 million pounds of steam an hour and circulates more than 285,000 gallons of water per minute in its continuous closed-loop cooling cycle.
- Electrostatic precipitators remove more than 98% of particulates from the plants emissions.

Plant Bowen Facts

- Low NO_x (nitrogen oxide) burners and Separated Over Fire Air were installed in the mid 1990's. This pollution control technology reduced annual NO_x emissions by 27%.
- SO₂ emissions were reduced 40% by switching to low sulfur coal in the mid 1990's.
- Because cooling towers are used in a closed-loop cooling system, no thermal pollution from Plant Bowen reaches the Etowah River or nearby streams.

A cloud of water vapor drifts from one of Plant Bowen's four hyperbolic cooling towers.



Environmental Policy

- “The health of our employees, customers and the public and the protection of our natural environment are among our highest priorities”.



- “We are committed to doing our part in making sure the Southeast continues to be a great – and environmentally healthy – place to live, now and for future generations”.

Air Programs

- Objective: Reduce air emissions (beyond compliance)
- Target: Reduce ozone season NO_x 85% (achieved)
Reduce annual NO_x 85% by 2010
Reduce SO₂ 95% by 2010
- Action:
 - Install and operate SCRs beginning 2003 ozone season
 - Completed for \$400 million investment
 - Maintain optimum ESP performance
 - Begin scrubber operation 2008 - 2010
 - Estimated \$1.2 billion investment for four units
 - Begin year round SCR operation with scrubber commissioning

Air Programs



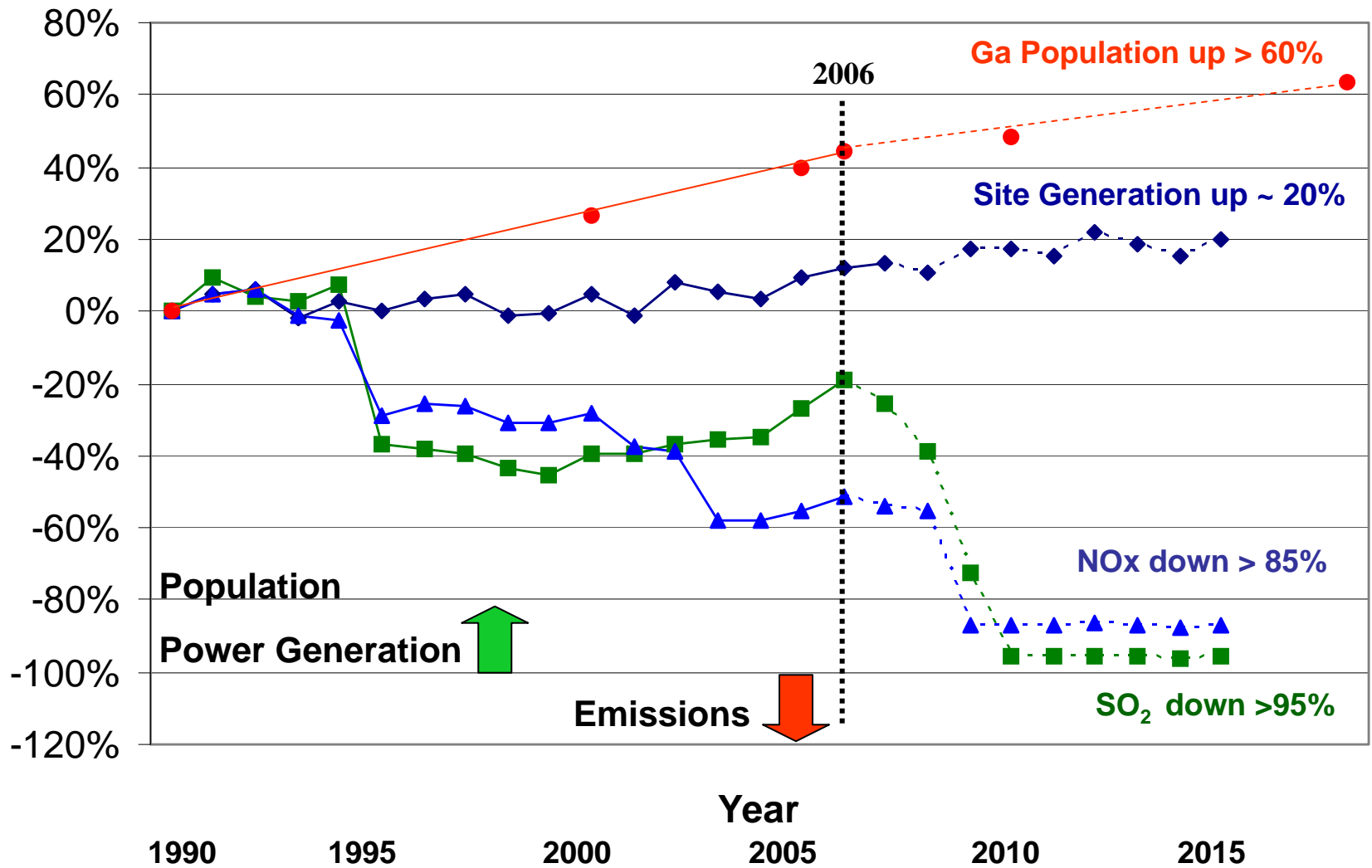
Plant Bowen's ESPs and SCRs.

Air Programs

Four Plant Bowen Scrubbers operational in 2010



Bowen Emission Trends



Water Management

- Objective: Meet or surpass all environmental laws and regulations
- Target: Minimize water consumption
- Action:
 - Closed loop cooling with cooling towers
 - Re-circulated water minimizes water consumption
 - Recycle ash transport water, maximize dry ash transport
 - Minimize water consumption
 - NPDES permit
 - System operations, sampling, inspections and reports ensure compliance
 - SPCC/SWPPP
 - Inspections, training, reports
 - Repair system leaks when detected

Solid Waste Management

- Objective: Reduce amount of waste sent to landfills.
- Target: Monitor data on recycling, increase quantities of materials reused or recycled. Reduce landfill use.
- Action:
 - Employee education
 - Recycling programs
 - Consumable product reuse

Solid Waste Management



Recycled aluminum cans are donated to Georgia firefighters burn foundation.



Used pallets and cardboard given to The Good Shepherd Foundation.

Solid Waste Management

- Results:
 - Solid waste to landfill
 - 2005: 1572.3 tons
 - 2006: 1308.9 tons
 - Solid waste reduction = 262.4 tons (16.7%)
- Recycling: 2006

Description	Quantity	Total cost savings (revenue + disposal cost savings)
Cardboard and paper*	13,120 lbs	(Good Shepherd Foundation) \$2909
Plastic bottles	2660 lbs	\$93
Scrap metal	3,185,770 lbs	\$367,670
Battery recycle/exchange	423 lbs	\$2216
Aluminum cans	1 trailer	(GA Fire Fighters Burn Fund.) **
Fluorescent light bulbs	11,110 each	\$256
Bottom Ash	175,329 ton	\$1,281,630
Top Ash	523,356 ton	\$1,917,406
Refurbish print cartridges	32 each	\$2,594
Total		\$3,574,774

Environmental Stewardship

Plant Bowen Employees dedicated 1720 hours to community service projects in 2006



Lake Allatoona clean-up: Plant Bowen Employees worked over a 3-day period supporting the annual lake clean-up.

Environmental Stewardship



Plant Bowen Employees
celebrate Earth Day at local
Schools.

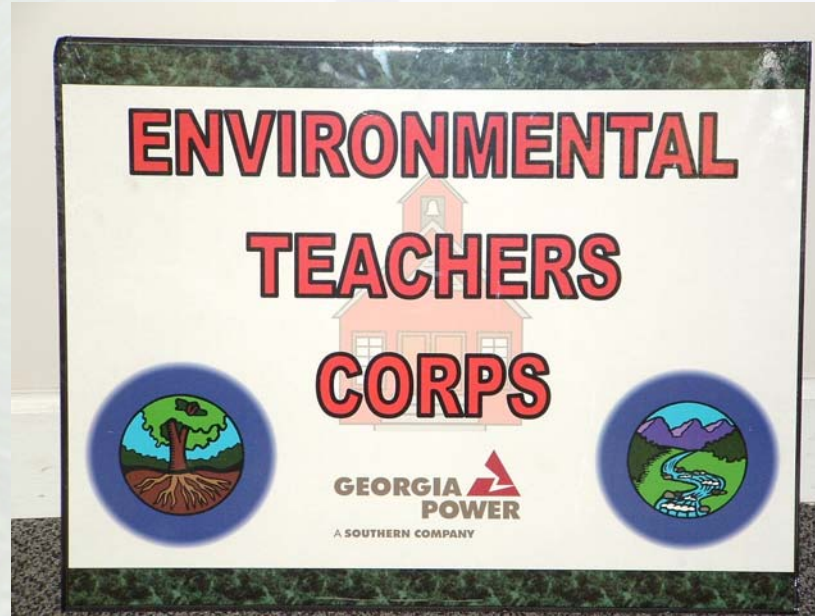


Environmental Stewardship



Plant Bowen employees pick up trash on Covered Bridge Road for KBB's "adopt a road program." Quarterly clean-ups removed over 1,000 pounds of trash from 2-mile stretch of road annually.

Environmental Stewardship



Plant Bowen members of the Environmental Teacher Corps spread the message about the importance of our environment to the schools and communities we serve.

Environmental Stewardship

Bluebird houses along with Wood duck, Woodpecker, American Kestrel and Purple Martin houses were erected on Plant Bowen property. During the 2006 nesting season 203 bluebirds were hatched.



Environmental Stewardship



Blight resistant, hybrid, American chestnuts were planted on Plant Bowen property in support of The American Chestnut Foundation's restoration project.