



Clearing the Air

Facts about emission reductions at the Crystal River Energy Complex

CRYSTAL RIVER

- ▶ Environmental responsibility is a core value of Progress Energy. Our company is committed to excellence in our environmental practices and performance.
- ▶ The Crystal River Energy Complex is an industry leader in implementing state-of-the-art technologies to control emissions.
- ▶ As part of the 2005 EPA Clean Air Interstate Rule (CAIR), Progress Energy will invest over \$1.4 billion to reduce emissions from Fossil Units 4 and 5 at the Crystal River Energy Complex.
- ▶ By 2010, the Crystal River Energy Complex will reduce nitrogen oxides (NO_x) by approximately 93 percent, compared to 2008 levels. The complex will reduce sulfur dioxides (SO₂) by approximately 97 percent, compared to 2008 emissions.
- ▶ CAIR will permanently cap emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) in the eastern United States. When fully implemented, CAIR will reduce SO₂ emissions in these states by over 70 percent and NO_x emissions by over 60 percent from 2003 levels.
- ▶ The most visible change at the Crystal River Energy Complex is the construction of flue gas desulfurization units – or scrubbers.
- ▶ Construction on the scrubber project has already begun. The first scrubber will begin operations in the fall of 2009 and the second in the spring of 2010.
- ▶ Part of the installation process involves the construction of a 550-foot-tall stack.
- ▶ As coal is burned in a power plant, it emits flue gas. Scrubbers work by taking the flue gas and passing it through an absorber tower in which a water and limestone mixture is sprayed. The SO₂ in the flue gas reacts with the limestone to produce synthetic gypsum, a useful additive to concrete or for the production of wallboard. The remaining water vapor rises from the stack.

- ▶ The visibility of the water vapor depends on weather conditions – the more humid it is, the more visible the vapor.
- ▶ While the water vapor rising from the new stack at the Crystal River Energy Complex is more visible than in previous years, the clouds it forms represent a breakthrough in clean air for the region.
- ▶ In addition, the installation of a selective catalytic reduction system (SCR) for Fossil Unit 5 was completed in June 2009, and a second SCR is planned for Fossil Unit 4 in 2010.
- ▶ When all the improvements are completed, Fossil Units 4 and 5 at the Crystal River Energy Complex will be among the cleanest coal-burning plants in the country.



WATER VAPOR RISING FROM THE STACK WILL BE MORE VISIBLE ON HUMID DAYS, SIMILAR TO THAT SHOWN IN THE IMAGE ABOVE.