



# NUCLEAR POWER IN TENNESSEE



The Tennessee Valley Authority (TVA) operates the two **Sequoyah** Westinghouse Electric ice condenser reactors about 10 miles from Chattanooga, along the banks of the Tennessee River. Sequoyah's two reactors began operation in 1981 and 1982. Sequoyah is slated as a back-up facility to produce tritium required to recharge U.S. nuclear weapons, another example of the increasing, dangerous crossovers between military and civilian nuclear operations.<sup>i</sup> *Photo of Sequoyah*

TVA's **Watts Bar**, also an ice condenser nuclear reactor along the Tennessee River, began operation in 1996 and is 10 miles south of Spring City, TN. It was the last and one of the most expensive commercial nuclear power plants brought online in the country, costing \$6.4 billion.<sup>ii</sup> Watts Bar was selected as the lead reactor to produce tritium, a radioactive form of hydrogen, and that program is currently underway. Additionally, ice condensers are considered to have serious design flaws.<sup>iii</sup> TVA is currently pursuing building a second reactor at Watts Bar, which was abandoned in 1994 after spending over \$1.7 billion.

Warmer water temperatures proximate to a nuclear power plant result in conditions that effect the feeding and breeding patterns of various species. For instance, nuclear power plants aggravate the problem of low dissolved oxygen levels through its heated discharge to lakes and rivers. The state of Tennessee voiced concerns to the U.S. Nuclear Regulatory Commission (NRC) about this impact on mussel beds downstream from the Sequoyah nuclear plant, which suffered from even lower oxygen levels as it is also downstream from the Watts Bar nuclear plant.<sup>iv</sup> Further, when shutdowns occur, large and rapid fluctuations in the water temperature can harm or kill aquatic species.<sup>v</sup>

Nuclear power is the only form of energy that could cause thousands of injuries and deaths. A 1982 Congressional report estimated that if a meltdown occurred at one of the reactors at Plant Sequoyah, it could cause up to 29,000 early fatalities, 61,000 immediate injuries, and cost nearly \$100 billion.<sup>vi</sup>

## What can you do to help?

- ✓ **Join Southern Alliance for Clean Energy** and contribute to our efforts to advocate for clean, safe, and affordable energy solutions. Donate online at [www.cleanenergy.org](http://www.cleanenergy.org).
- ✓ **Find ways to make your home more energy efficient** as this will help prevent the need to build new nuclear power plants while saving you money!
- ✓ **Write to your elected officials, local newspapers, and electric utilities and tell them to reject nuclear power expansion efforts!** Mention that there are better, safer ways to produce energy available TODAY!

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<sup>i</sup> Kenneth D. Bergeron, *Tritium on Ice: The Dangerous New Alliance of Nuclear Weapons and Nuclear Power*, (Cambridge, MA: MIT Press, 2002), pp. 5, 9, 45.

<sup>ii</sup> Atlanta Journal Constitution, *End of an Era for TVA*, 12/18/1994.

<sup>iii</sup> Edwin S. Lyman, Ph.D., "Plutonium Fuel and Ice Condenser Reactors: A Dangerous Combination," Nuclear Control Institute, (Washington, DC, Oct. 19, 2000). [www.nci.org](http://www.nci.org)

<sup>iv</sup> U.S. NRC, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Final Report*, NUREG-1437, May 1996, vol 1. p. 4-23.

<sup>v</sup> Power Scorecard, "Water Quality Issues of Electricity Production: Pollution of Water Bodies," August 14, 2002.

[www.powerscorecard.org/issue\\_detail.cfm?issue\\_id=6](http://www.powerscorecard.org/issue_detail.cfm?issue_id=6)

<sup>vi</sup> U.S. House of Representatives, *Calculation of Reactor Accident Consequences for U.S. Nuclear Power Plants (Health Effects & Costs)*, Nov. 1, 1982.

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