

Electricity Prices Going Up!

Why and What Can You Do?

(Editor's note: Following is the first in a series of articles being published over the next several months in an effort to address the reasons behind the extremely large increases in energy rates that have recently been experienced. The goal of these articles will be to provide informational and educational material for readers to be able to better understand the historical background of energy issues in the Tennessee Valley, take a look at energy supply and demand issues and anticipate to the best of our ability the potential impact of the environmental issues and proposed legislation being considered by Congress. The articles will also assess the latest technology advancements, and give you suggestions and recommendations on what action you can take to lower your energy use and have an impact on "our energy future.")

A Look At the Last 50 Years

Consumers of Duck River Electric Membership Corporation (DREMC), as well as other electric ratepayers throughout the Tennessee Valley, recently received word that the Tennessee Valley Authority (TVA) increased electric rates by 20% effective October 1. This is on top of a 7% increase TVA imposed in April, 2008. Together, these increases represent the largest increases imposed by TVA in the last 30 years. And many observers say the projected future cost of electricity, along with all forms of energy, looks pretty bleak in the foreseeable future for all ratepayers.

But, before we look to the future it's often beneficial to look to our past and analyze where we've been. TVA is a product of the Great Depression of the 1930s and the brain child of President Franklin Roosevelt. Its early mission was multi-faceted, including flood control, power production, navigation, reforestation, erosion control, malaria prevention and more.

Shortly after the end of World War II in the early 1950s, TVA had become the nation's largest electricity supplier. And even at that time, its capacity to generate

electricity by means of its original source - hydroelectric dams on the Tennessee River and its tributaries - was being surpassed by industrial growth and increased demand for more power. In 1959 Congress passed legislation to make the TVA power system self-financing and opened the door for it to seek non-government methods of financing for construction of its growing fleet of coal-fired generating plants, which by this time exceeded more than 50 percent of its total generating capacity.

The 1960s were years of unprecedented economic growth in the Tennessee Valley. Electric rates were among the lowest in the nation and TVA was building larger, more efficient generating plants to meet the growing demand for electricity. Due to advancements in technology, the cost of electricity from each new plant built cost less than the one before and this drove power rates down. Anticipating continued growth into the next decade, TVA started plans and construction of nuclear generating plants as a new source of economical power. At that time many viewed nuclear power as being so economical and efficient that it would be "too cheap to meter." Another reason to look at nuclear was that environmental concerns about pollution from its coal-fired generators began to mount and Congress responded with legislation to limit such emissions.

But significant changes in the economy of the Tennessee Valley, as well as the nation, came in 1973 with the Arab oil embargo. The price and availability of all forms of fuel had a dramatic impact on the United States and the average price of electricity in the Tennessee Valley increased fivefold from the early 1970s to the early 1980s. The demand for electricity was dropping and interest and construction costs on the nuclear plants were rising dramatically. TVA brought its nuclear construction program to an abrupt halt as it cancelled numerous units. In 1985 TVA shut down five functioning nuclear generating plants due to regulatory concerns. As a result of the cancellations and shut downs, TVA was left with billions of dollars of debt to recover from its ratepayers. By the late 1980s TVA had stabilized the price of electricity by cutting costs and improving the efficiency of its generating plants, but not before the end use cost of electricity had risen significantly.

The 1990s brought discussions of restructuring, deregulation and competition within the electric utility industry. Strapped with such a huge debt, TVA cut operating

costs and reduced its workforce by more than half in order to remain competitive. By 1997, TVA claimed production costs that it said were the third-lowest among the nation's 25 largest electric utilities but with the huge fixed costs and debt still left over from the nuclear program its total costs were still relatively high. With excess capacity now available in the industry and the nation's economy seeing lower interest and inflation rates as well as falling and stable fuel prices, TVA met the early 2000s with stable and increasingly competitive electric rates that were actually dropping in real terms when compared to other goods and services over the same time period.

Conservation and energy development initiatives were re-started in 2000 (these had first been implemented at TVA in the 1970s but had been later abandoned as cost cutting efforts became paramount) as TVA again began to explore means to produce electricity from the sun, wind and landfill gas, and by 2001 plans were unveiled to upgrade two nuclear power plants in order to meet growing demand for electricity. But TVA's previous nuclear construction program and enormous debt continued to impact its financial position as TVA ultimately wrote off \$3.4 billion in assets from unfinished nuclear reactors.

Stable electric rates and a surplus of generating capacity continued throughout the 2000s with very little interest among power generators, including TVA, to begin construction of new generating facilities. A strong economy prevailed during the mid-2000s which supported economic growth and a growing demand for electricity. And that brings us to today, when power demand has grown to where it meets (and at times in parts of the U.S. exceeds) current generating capacity, fossil fuel prices have skyrocketed, there is a need for new generating capacity to meet projected needs and environmental issues have taken center stage.

The next article in this series will deal with the current status of electricity supply in the United States and the Tennessee Valley and will appear in the December issue of *The Tennessee Magazine*.