



# **Fuel Cost Pressures TVA is Facing**

*Tom Kilgore  
President and CEO  
TVA*

*August 6, 2008*



# The Big Picture

---

- Prices for fuels commonly used to make electricity are skyrocketing.
- Increases driven primarily by global supply and demand challenges.
- TVA region not immune to these cost pressures.
- Historic drought continues to reduce low-cost hydro generation.
- Potential impacts on next Fuel Cost Adjustment (FCA).



# How TVA Recovers Fuel Costs

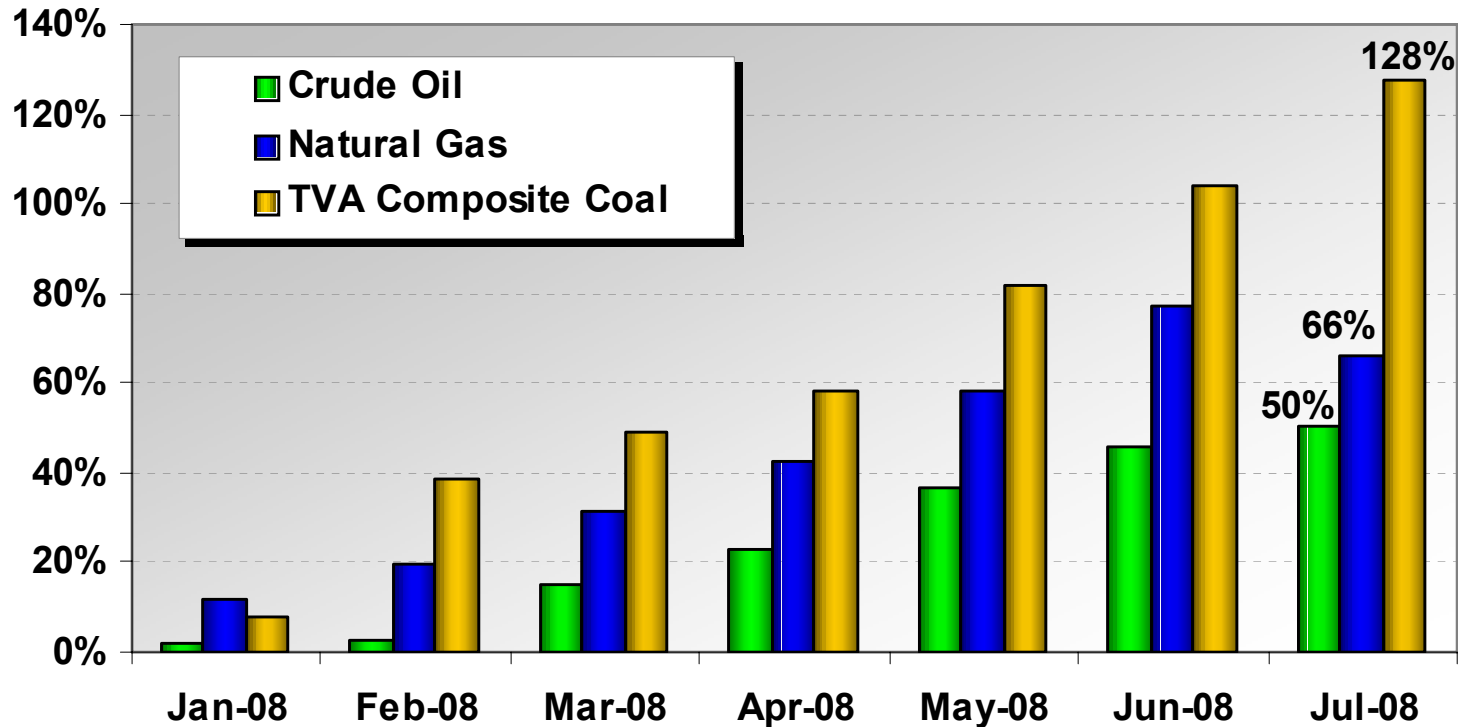
---

- Quarterly Fuel Cost Adjustments (FCA) began in October 2006.
- Sound business practice to help TVA match revenue with costs for fuel and purchased power in a timely manner.
- Recovered through monthly consumer power bills, depending on individual energy use.
- Many utilities across the U.S. – including most of TVA’s neighbors – use FCA mechanisms routinely to adjust their rates for fuel and purchased power charges.



# Fuel Prices Are Soaring

Cumulative Percent Increase in Market Fuel Prices\*



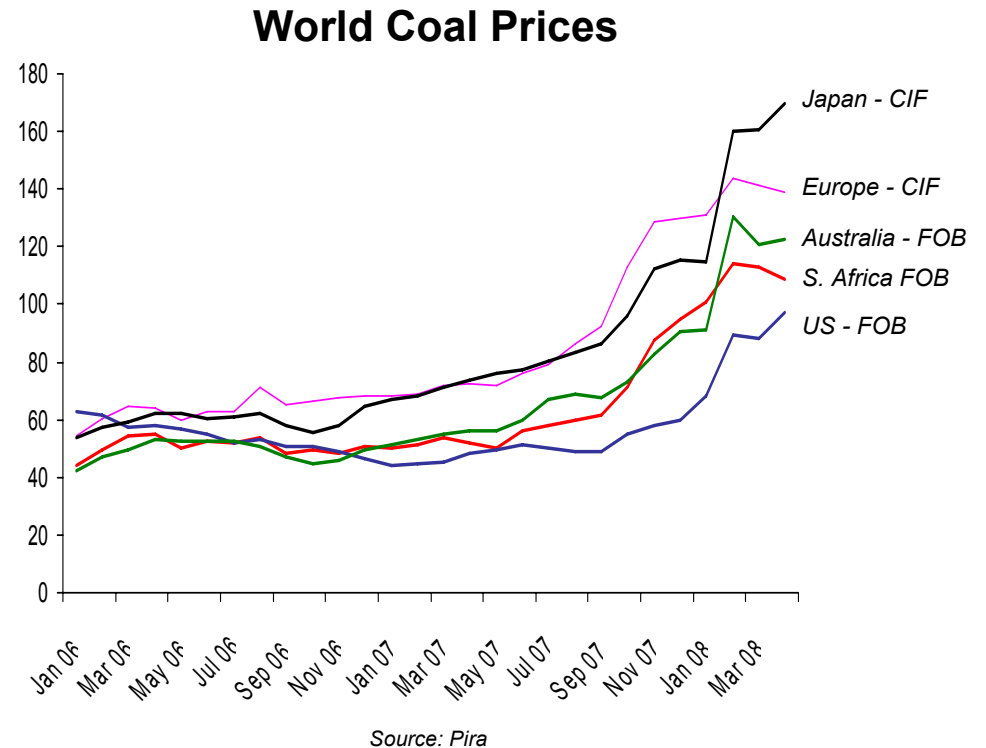
\* Price comparison from Dec. 07 through July 24, 2008.

**Oil prices make national news, but market prices for coal have increased twice as much as oil in the same period**



# Increasing Global Coal Prices

- As demand has grown, disruptions have driven prices higher in all markets:
  - European coal is up 92% since May 2007.
  - Coal delivered to Japan is up 124% over the same period.



**U.S. prices are very likely to increase as the gap closes between markets**



# Cost Pressures: Coal

---

## *Growing Demand*

- Dramatic increases in demand for coal by Asian markets tightening worldwide supply and demand balance. In 2007 alone, China added the equivalent of about six total TVA coal-fired systems – or about one plant every 7 to 10 days.

## *Tightening Supply*

- Recent flooding in Midwest slowed or stopped deliveries of coal. A major new rail construction project under way through 2010 will cause traffic to be rerouted, increasing congestion and delays.
- European countries are buying more U.S. coal because of the devaluation of the dollar.

## *Rising Price*

- Coal prices are up more than 100% in the U.S. in the last year. Virtually all transportation companies (truck, barge, and rail) have fuel surcharges that TVA is subject to; these have all doubled in the last year.



# Cost Pressures: Natural Gas

---

## *Growing Demand*

- Since 2000, more than 166,000 megawatts of gas-fired generation have been built in the U.S.; demand for gas-fired electricity has grown **55%**.

## *Tightening Supply*

- Higher priced markets – China, India, Japan and Spain – are attracting Liquefied Natural Gas (LNG) shipments. The result is a **65%** decline in LNG imports to the U.S. since last October.

## *Rising Price*

- Natural gas prices have increased by more than **65%** since December 2007.



# Cost Pressures: Purchased Power

---

## **Growing Demand**

- Over the past six months, TVA purchased **12%** more power from the market than it did during this same period last year.

## **Tightening Supply**

- Bulk of purchased power on the market comes from natural gas plants. Utilities, like TVA, are buying natural gas plants to serve their system needs. This reduces the amount of power available on the market and increases the price.

## **Rising Price**

- TVA's purchased power totaled \$701 million during the first six months of 2008, up \$220 million from the same period last year. Peak prices for June and July of this year have been **63%** higher on average than the same months of last year.

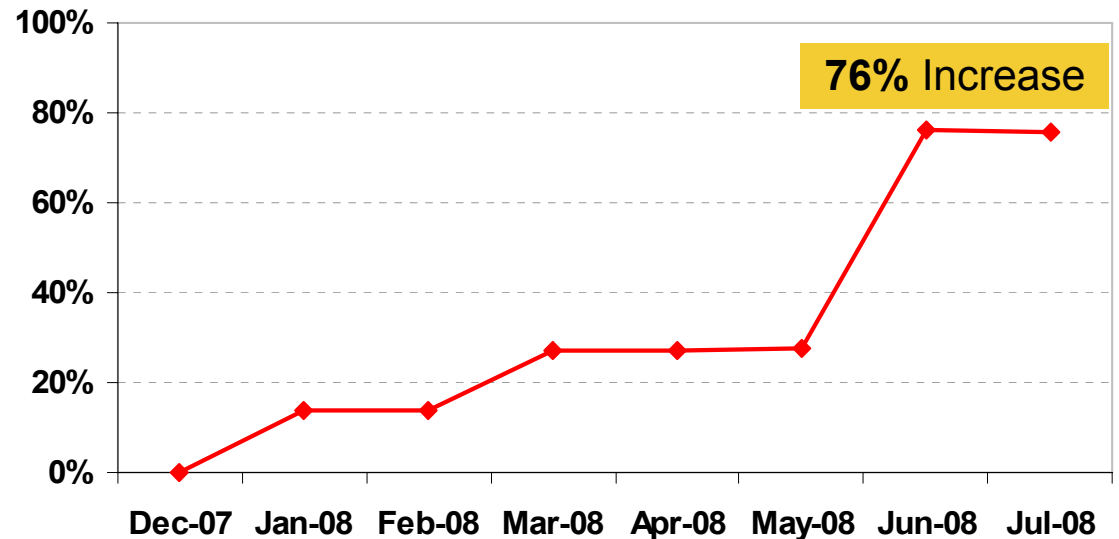




# 2008 Purchased Power Increases

- The Valley's demand for power and the regional drought mean that TVA is having to buy more power from the market.
- Higher natural gas prices are pushing up the price of purchased power.

2008 Cumulative Market Price Increases for Purchased Power

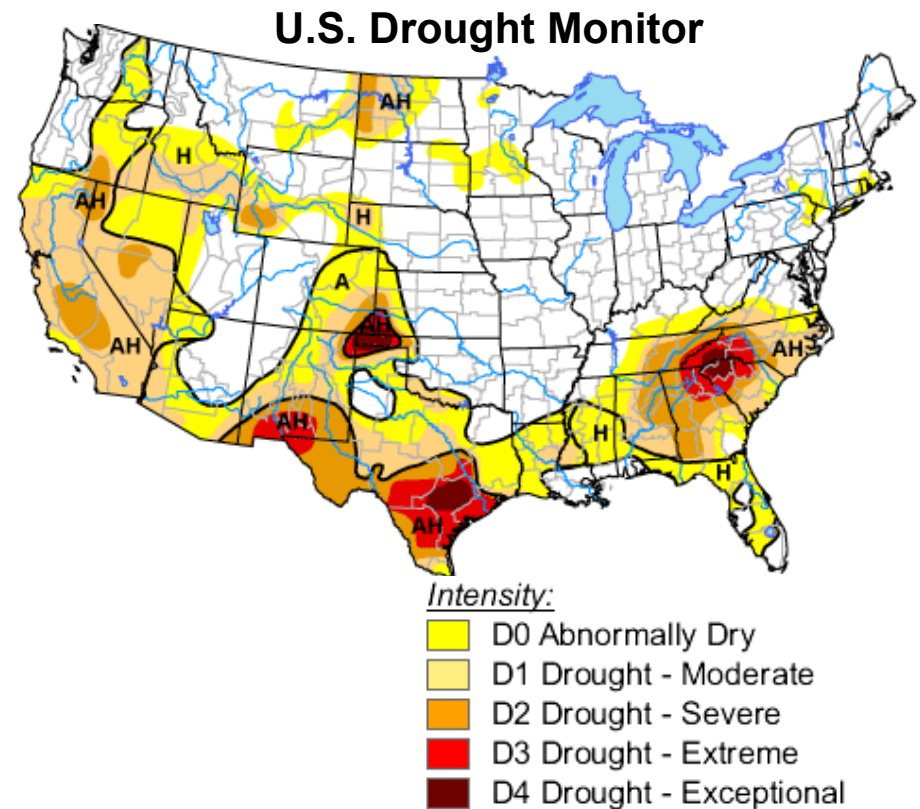


**Since January, the price of on-peak purchased power is up more than 75 percent**



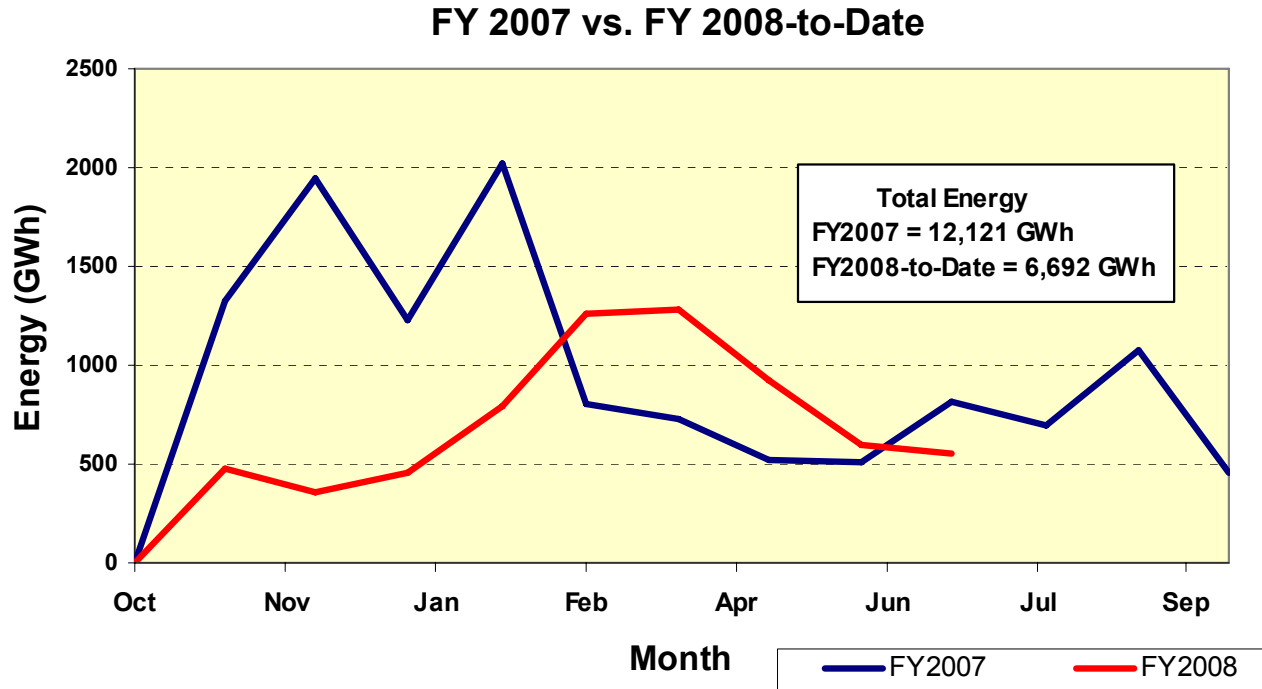
# Historic Drought Continues

- TVA region is in a third year of drought.
- TVA hydro generation is down **50%** in FY 2008.
- TVA is buying more purchased power than originally planned because of the drought.
- This summer TVA is buying more than 1,000 megawatts of power on a daily basis – the equivalent of one nuclear unit – to replace the loss of hydro power.



**Historic drought conditions in the Valley are forcing TVA to replace its lowest-cost power source with one of the most expensive – purchased power**

# TVA Total Hydro Generation Comparison



**Due to the drought, 2008 rainfall to date is 23% below normal in the Eastern Tennessee Valley. Runoff—which is needed to fill the reservoirs—is 52% below normal.**



# National Rate Pressures

---

**THE WALL STREET JOURNAL.** - *May 7, 2008*  
**Expect a jolt when opening the electric bill**

**THE WALL STREET JOURNAL.** - *June 24, 2008*  
**Coal producers struggle to meet demand**



- *June 16, 2008*  
**Price jolt: Electricity bills going up, up, up**

**San Francisco Chronicle** - *May 27, 2008*  
**Supply-demand imbalance boosts oil prices**

**The Virginian-Pilot** - *June 25, 2008*  
**Dominion's 18 percent increase likely only the beginning**

The  
**COMMERCIAL APPEAL** - *July 28, 2008*  
**Entergy Urges Electricity Conservation in Passing Along 28 Percent Rate Increase**

**U.S. electric utilities are seeing rate increases up to 30%**



# What TVA is Doing

---

## Mitigation Strategies

- TVA's overall fuel strategies help limit exposure to volatile energy markets.
- Disciplined purchasing approach. Securing long-term coal and purchased power contracts to reduce TVA price exposure. For example, at one of our plants, a coal contract expiring later this year at \$35 per ton will need to be replaced – and coal at the current market is running \$125 per ton.
- Proactive hedging strategies. Hedged a portion of expected gas needs for 2009.
- Increased storage. TVA doubled the amount of gas storage this year, reducing spot market purchases.

**While TVA's coal costs are up 43% over the past five years, if TVA had purchased that coal on the spot market, costs would be up 240%**



# What TVA is Doing

---

## Long-Term Strategic Planning

- TVA's plan for energy efficiency and demand reduction seeks to reduce the growth in peak demand by up to **1,400** megawatts by the end of 2012.
- Local power distributors are partnering with TVA to help raise consumer awareness on energy efficiency.
- TVA's new generation will help reduce dependence on purchased power:
  - Browns Ferry Unit 1
  - Nuclear uprates will increase capacity of plants
  - Watts Bar Unit 2
  - **2,535** megawatts of combined cycle and combustion turbine generation acquired in the past two years
  - Considering future options for Bellefonte Nuclear Site

**TVA is strategically building its nuclear generation portfolio, which will reduce the Valley's exposure to volatile commodity fuel prices**



# Fuel Cost Adjustment Impacts

---

- Coal, natural gas, and purchased power costs are increasing rapidly and will increase future Fuel Cost Adjustments.
- The continued drought causes a double hit to TVA:
  - Significant loss of hydro generation
  - Replacing this least-expensive source with higher-cost power
- Electric utilities across the country are seeing increases up to **30%**.
- Expect escalating fuel costs and the effects of the persistent drought to result in a significant FCA increase beginning October 1, 2008.



# What Consumers Can Do

---

- Visit [TVA.com](http://TVA.com) to learn simple steps to help reduce energy use and help offset rising electricity costs.
- Take online or mail-in Home Energy Audit and receive a Free Conservation Kit.
- Low-interest financing available to Valley consumers looking to replace heating and cooling systems for a high-efficiency heat pump through *energy right* program.