

**TESTIMONY OF M. WILLIAM BRIER
ON BEHALF OF THE EDISON ELECTRIC INSTITUTE**

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

**HEARING ON
POLICIES TO MITIGATE ELECTRIC PRICE INCREASES
DOCKET NO. M-00061957**

JUNE 22, 2006

Mr. Secretary and Members of the Commission:

My name is Bill Brier, and I am Vice President of Policy and Public Affairs for the Edison Electric Institute (EEI). EEI is the association of U.S. shareholder-owned electric utilities and industry affiliates and associates worldwide. Our U.S. members serve 97 percent of the ultimate customers in the shareholder-owned segment of the industry and 71 percent of all electric utility ultimate customers in the nation. EEI appreciates the opportunity to testify at this hearing, *Policies to Mitigate Electric Price Increases*. My comments will provide a national perspective on rising electricity prices and the steps that utilities and regulators must take to ensure a reliable supply of affordable electricity in the future. Additional documentation is provided here to support the primary points that I will highlight in my oral testimony.

The Retail Electricity Environment Today

• **U.S. Electricity Rates Are Below the Rates in Other Industrialized Nations.**

From an international perspective, U.S. electricity rates are well below the averages of other industrialized nations. Like in the United States, rates in OECD (Organisation for Economic Co-operation and Development) nations are trending up. (See Slide 1.)

- **Electric Utilities Use a Diverse Fuel Mix That Varies Across the Country.**

While electric utilities use a diverse mix of fuels to generate electricity, natural gas and oil (in some regions) have a disproportionate influence in wholesale markets because they represent incremental generation during times of peak demand. (See Slides 2 and 3.)

- **Electricity Remains an Excellent Value.** Electricity price trends over the past few decades show that the national average price for electricity today is less than what it was in 1980, when adjusted for inflation. In fact, the Consumer Price Index increased 82 percent between 1985 and 2005, while electricity prices (in nominal dollars) increased 27 percent. (See Slide 4.)

- **Electricity Is the Lifeblood of the U.S. Economy.** Electricity intensity in the U.S. economy is significantly related to the general level of economic activity. In fact, of all energy sources, electricity growth most closely parallels U.S. economic growth. (See Slide 5.)

- **Electricity Use in the Typical U.S. Home Has Increased Over Time.** American homes use 21 percent more electricity today than they did in 1978. Going forward, electricity use will continue to grow as house sizes increase and consumers use more electric appliances and devices. (See Slide 6.) Yet, even as electricity use increases, the average American household's total spending on electricity has fallen over time. Average annual expenditures on electricity fell from 2.9 percent of total expenditures in 1984, to 2.5 percent of consumer expenditures in 2004.

Restructured Electricity Markets

- **The Role of the Federal Government in Restructuring Electricity Markets.** Regardless of any state activity, the federal government—over the past three decades—has, for all practical purposes, deregulated the sale of electricity in wholesale markets. (See Slides 7 and 8.)

- **Electric Utility Operation and Maintenance Expenses.** On an industry-wide basis,

fuel and purchased power costs account for approximately 95 percent of the 22-percent increase in operation and maintenance (O&M) expenses experienced by utilities in the last five years.

(See Slide 9.)

- **Expiring Rate Caps.** Policymakers imposed rate caps or rate reductions in several states as part of restructuring efforts in the late 1990s. The caps were in place for a period ranging from two to 10 years, as the actual costs to utilities were increasing. Now, as rate caps begin to expire, consumers are seeing the real cost of electricity for the first time in several years. (See Slide 10.)
- **Regulated vs. Restructured States.** Customers in both regulated and restructured states will be facing similar electricity price increases. In regulated states, fuel expenses for utility-owned generation are the core component of O&M increases. In restructured states, utilities face higher purchased power expenses. As a result, both regulated and restructured states have rate situations, with 12 regulated states now facing double-digit rate increases. (See Slides 11-13.)
- **Pennsylvania Retail Rates.** In Pennsylvania, the percentage change in retail rates from 1990 to 2005—for all classes of customers—is substantially less than the national average. (See Slide 14.)

Challenges Going Forward

The Energy Information Administration (EIA) predicts electricity demand will increase 45 percent by 2030. To meet this demand, electric utilities must reinforce the nation's electricity delivery infrastructure—the high-voltage transmission lines, substations, and distribution systems. This will require significant new infrastructure investment. In addition, the industry faces increasing costs to comply with environmental regulations. (See Slide 15.)

- **Generation Investment.** To meet this increasing demand for electricity and to ensure fuel

diversity and reliability, electric utilities must invest in new baseload power plants. If the industry builds the additional generation capacity needed to meet new demand—as predicted by EIA—the costs could total \$300 billion. It is likely that electricity demand could be 200 GW more than otherwise expected, were it not for energy conservation and efficiency programs. (See Slide 16.)

- **Transmission Investment.** Necessary transmission investments include building more high-voltage power lines, upgrading or rewiring existing lines, and replacing transformers. According to industry estimates, \$18.5 billion in transmission investments are planned through 2008—a 25-percent increase over the previous three years. (See Slide 17.)

- **Distribution Investment.** While the transmission system delivers high-voltage electricity from generators to substations, the distribution system reduces the voltage and then delivers the electricity to retail customers. In addition to substations, the distribution system includes metering, billing, and related support systems involved in the retail side of electricity delivery. Additional distribution investment will average \$14 billion per year over the next 10 years. (See Slide 18.)

- **Environmental Compliance Costs.** All electric utilities are subject to hundreds of environmental rules at the federal, state, and local levels. Continuous environmental improvements present a significant financial challenge for the industry. For example, according to the U.S. Environmental Protection Agency, complying with two new federal regulations aimed at further reducing utility emissions of sulfur dioxide, nitrogen oxides, and mercury—the Clean Air Interstate Rule and the Clean Air Mercury Rule—will cost the electric utility industry \$47.8 billion between the years 2007 to 2025. (See Slide 19.)

- **Cost Drivers.** Retrospectively, fuel and purchased power costs account for most O&M cost increases. Going forward, capital costs will drive cost increases—in order to meet growing electricity demand and increase environmental performance. (See Slide 20.)

EIA Forecast of Retail Rates and Rate Components. EIA projects a 19-percent increase in electricity prices over the next 10 years, compared to a general inflation forecast of 26 percent.

(See Slide 21.)

The Bottom Line:

Utilities must be able to make infrastructure investments to ensure fuel diversity, competitive power markets, cleaner generation, and increased customer choice in the future. (See Slide 22.)

Rising Electricity Prices: A National Perspective

Supplemental Information for the Testimony of:

M. William Brier
Vice President, Policy and Public Affairs
Edison Electric Institute

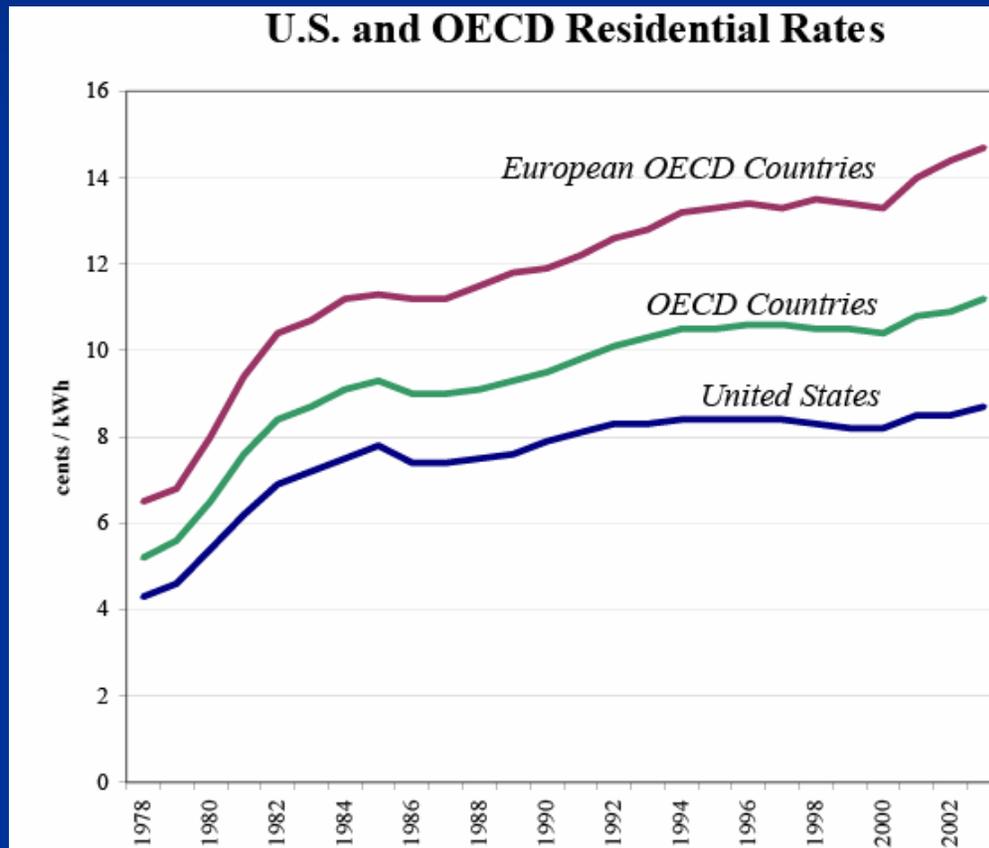
Before the
Pennsylvania Public Utility Commission
Policies to Mitigate Electric Price Increases
Docket No. M-00061957

June 22, 2006



Slide #1

Electricity Rates: U.S. vs. Other Developed Countries



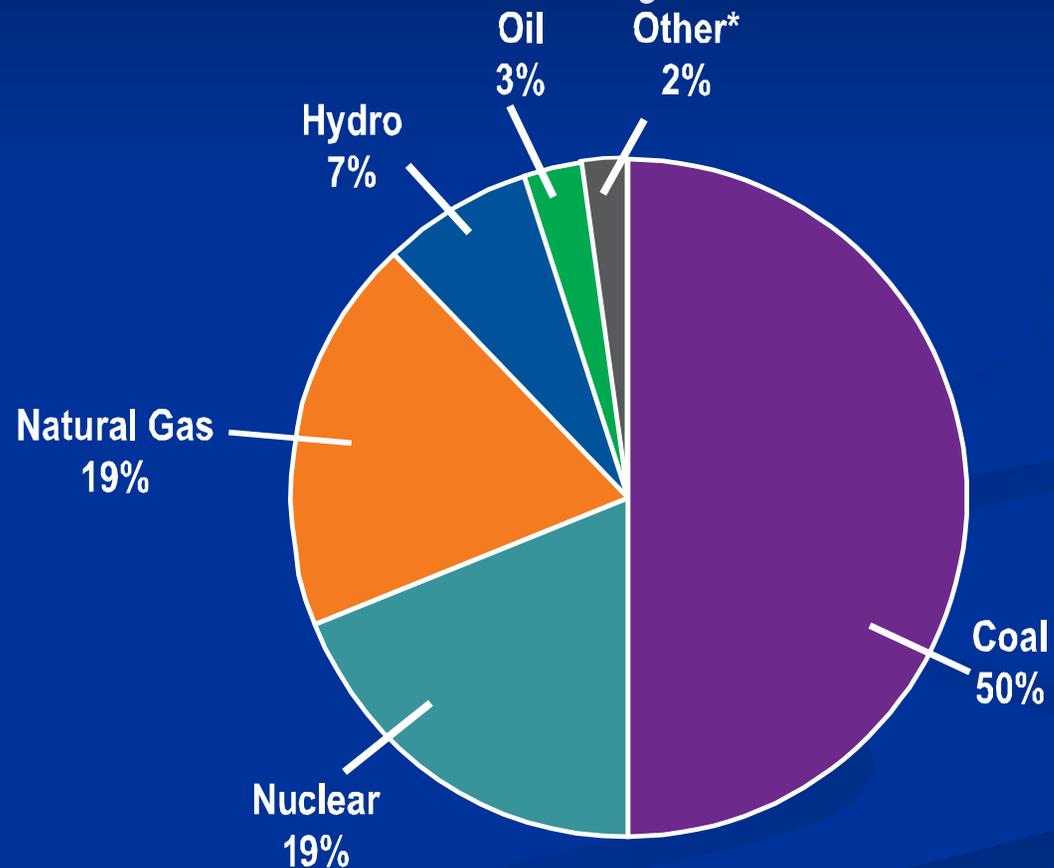
Sources and Notes: International Energy Agency. Rates converted to nominal US cents / kWh using purchasing power parity.

- U.S. rates well below European and OECD average
- Trends over time very similar, reflecting common fundamentals in global energy markets

Slide #2

Electric Utilities Use A Diverse Fuel Mix to Generate Electricity

National Fuel Mix



* "Other" includes generation by agricultural waste, batteries, chemicals, geothermal, hydrogen, landfill gas recovery, municipal solid waste, non-wood waste, pitch, purchased steam, solar, sulfur, wind, and wood.

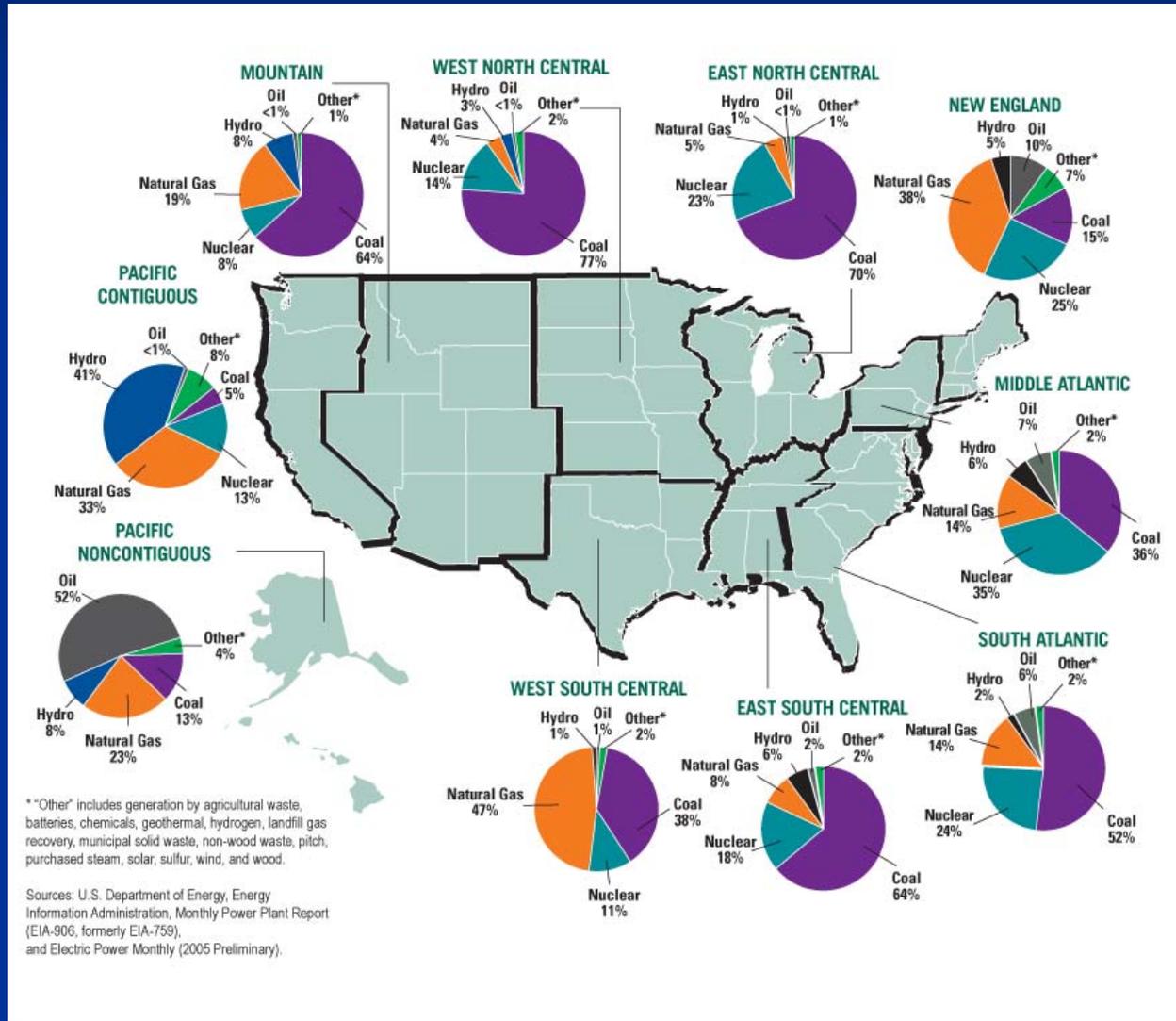
Note: Numbers exceed 100% due to rounding

Source: U.S. Department of Energy, Energy Information Administration (EIA), 2005 preliminary data



Slide #3

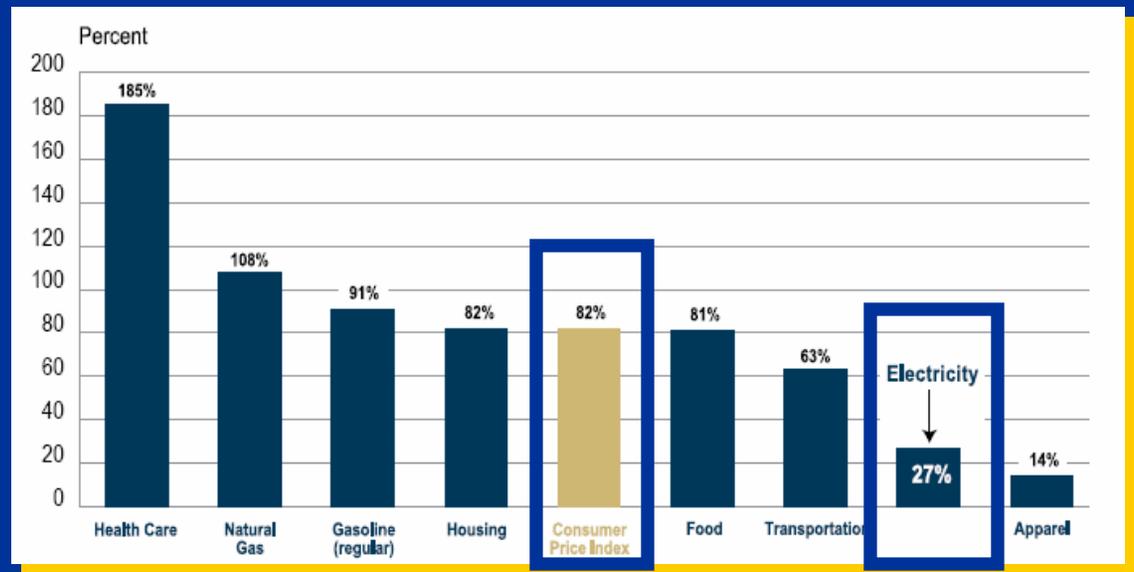
There Are Regional Variations in the Fuel Mixes Used to Generate Electricity



Electricity Price Trends

- The national average price for electricity today is less than what it was in 1980, when adjusted for inflation.
- Even with recent price increases, the growth rate for electricity prices remains comparable to, and even lower than, other important consumer goods.

Increase in cost of selected consumer goods
1985 – 2005 (nominal dollars)

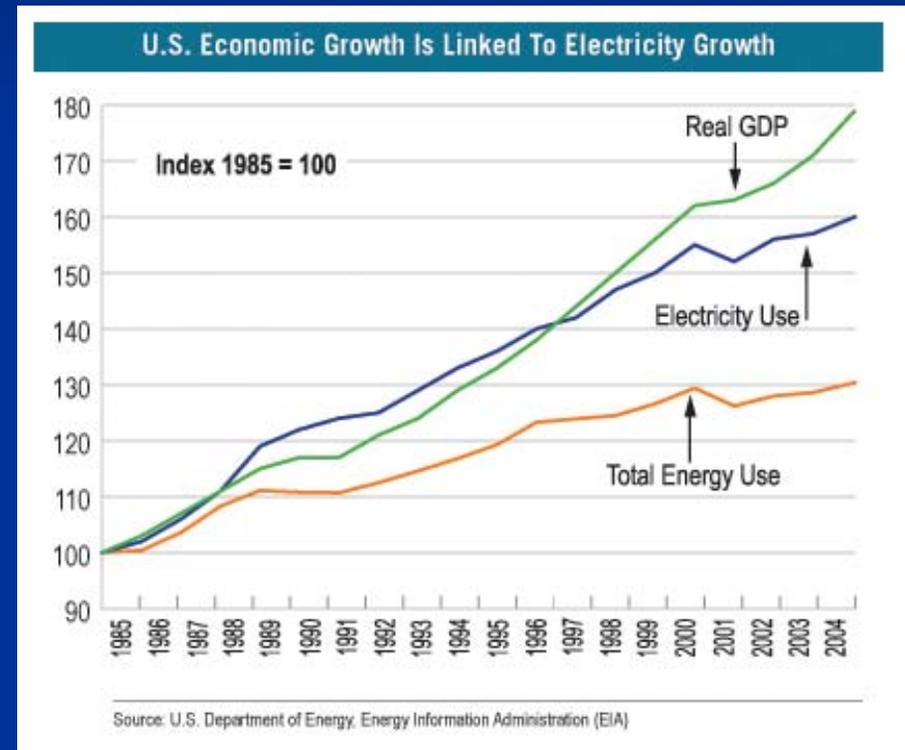


Sources: U.S. Department of Labor, Bureau of Labor Statistics, and U.S. Department of Energy, Energy Information Administration (EIA)

Slide #5

Electricity Is the Lifeblood of the U.S. Economy

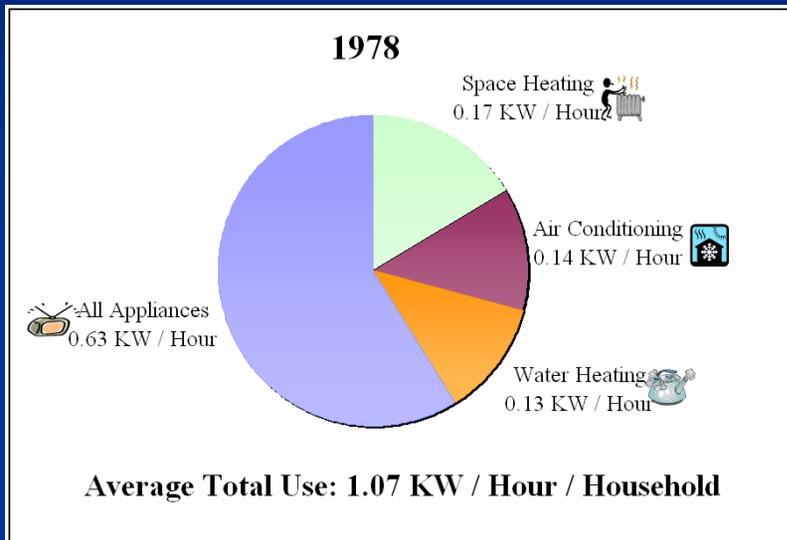
- Electricity intensity in the U.S. economy is significantly related to the general level of economic activity.
- Starting in the late 1990s, economic output grew faster than electricity use and much more rapidly than overall energy consumption.



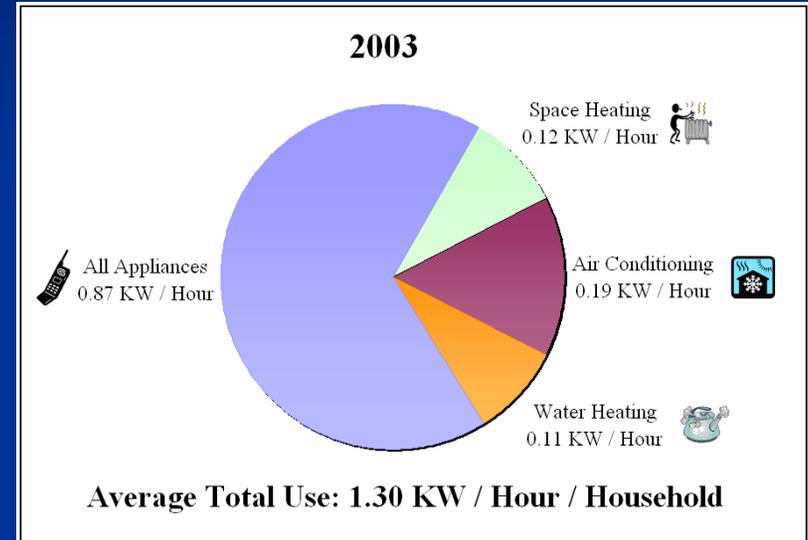
1985 represents the base year. Graph depicts increases or decreases from the base year.

Electricity Use in the Typical U.S. Home

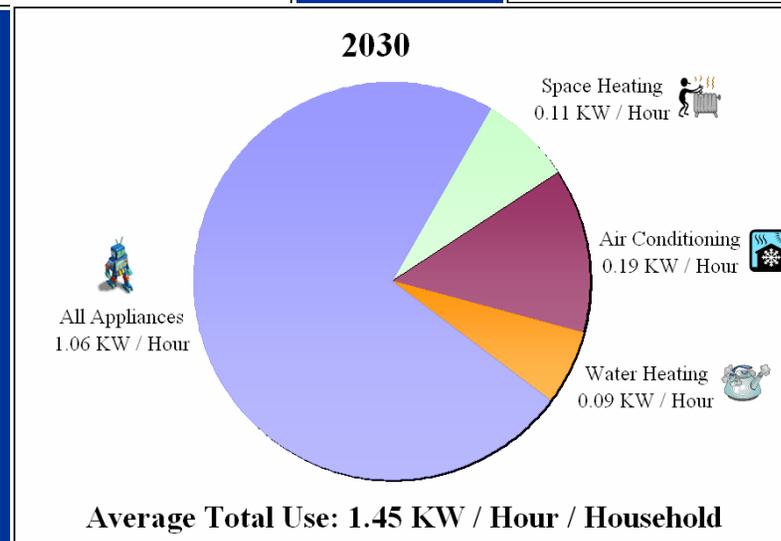
PAST



PRESENT



FUTURE



Role of Federal Government in Restructuring Electricity Markets

- Public Utility Regulatory Policies Act of 1978 (PURPA)
- Energy Policy Act of 1992
- Federal Energy Regulatory Commission Order 888 (open access order) – 1996
- Energy Policy Act of 2005

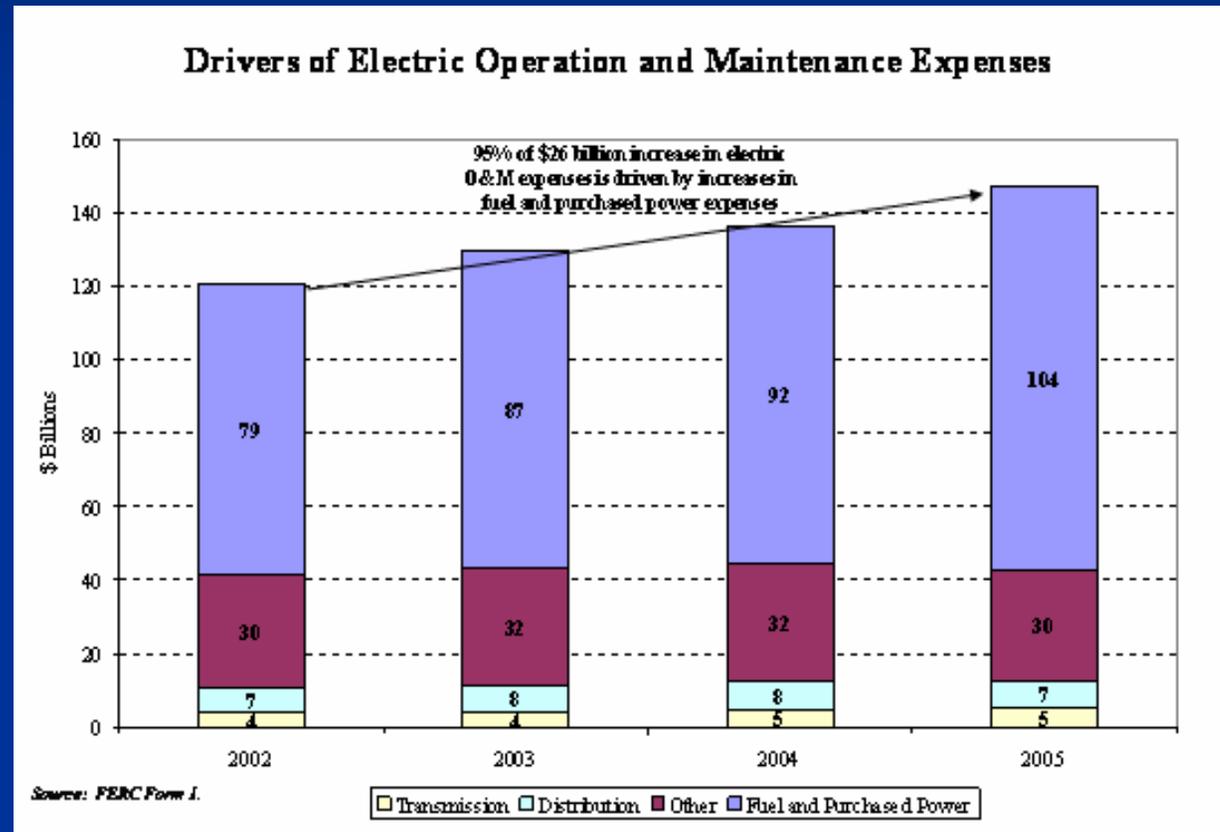
Result of Federal Role

- As the 1990s progressed, sales of electricity at market-based rates became common in wholesale power markets.

Slide #9

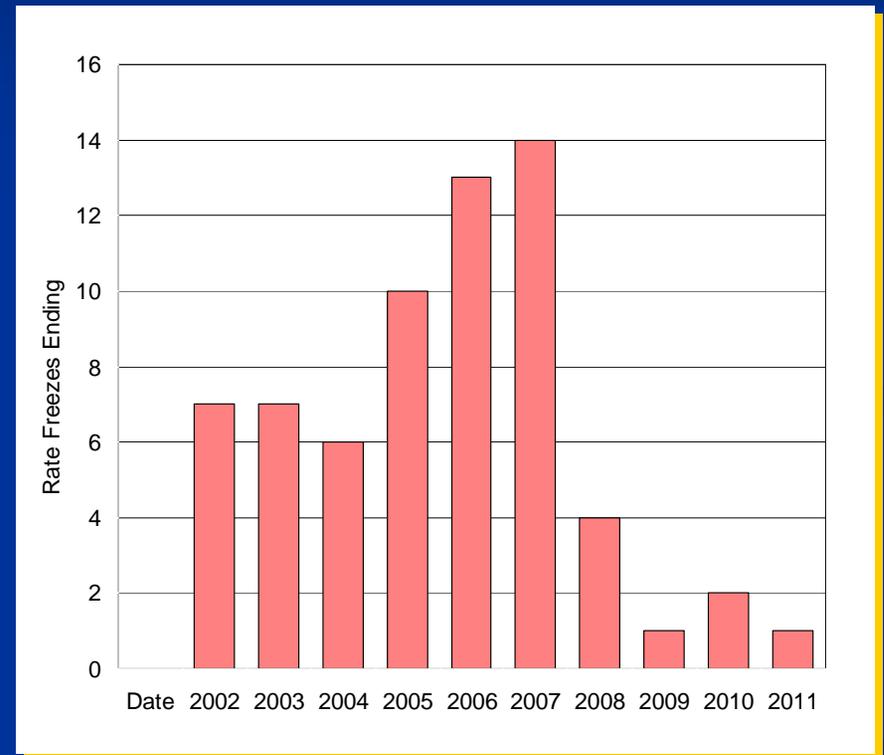
Electric Operation and Maintenance Expenses

- On an industry-wide basis, fuel and purchase power costs account for roughly 95 percent of the 22-percent increase in operation and maintenance (O&M) expenses experienced by utilities in the last five years.



Expiring Price Caps

- Significant rate increases prior to initiation of restructuring efforts.
- To make competition politically tenable, policymakers decreed rates would be frozen or reduced for a period ranging from 2-10 years.
- **Actual costs were increasing!**



Regulated vs. Restructured States

- Regulated States: Fuel expenses for utility-owned generation are the core component of O&M increase.
- Restructured States: Utilities face higher purchased power expenses.

Regulated vs. Restructured States

■ Regulated States:

- From January 2004 until present, there are 111 rate situations—51 of them (45.9 percent) are fuel increases
- 12 states, beginning late 2005, have double-digit rate increases pending

■ Restructured States:

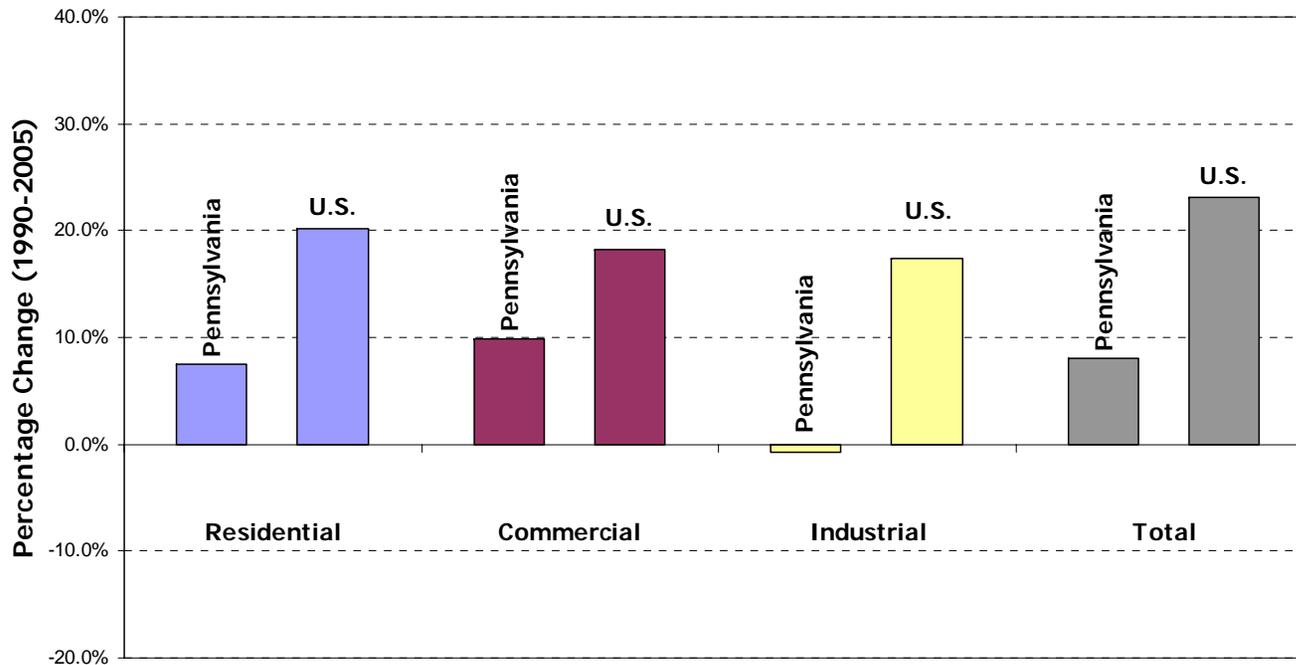
- From January 2004 until present, there are 125 rate situations—63 of them (50.4 percent) are fuel increases

What's Going On?

- Why are there similar increases in regulated and restructured states? All but 3 states have implemented some form of purchased power adjustment clauses.

Slide #14

Percentage Change in Pennsylvania and National Retail Rates: 1990-2005



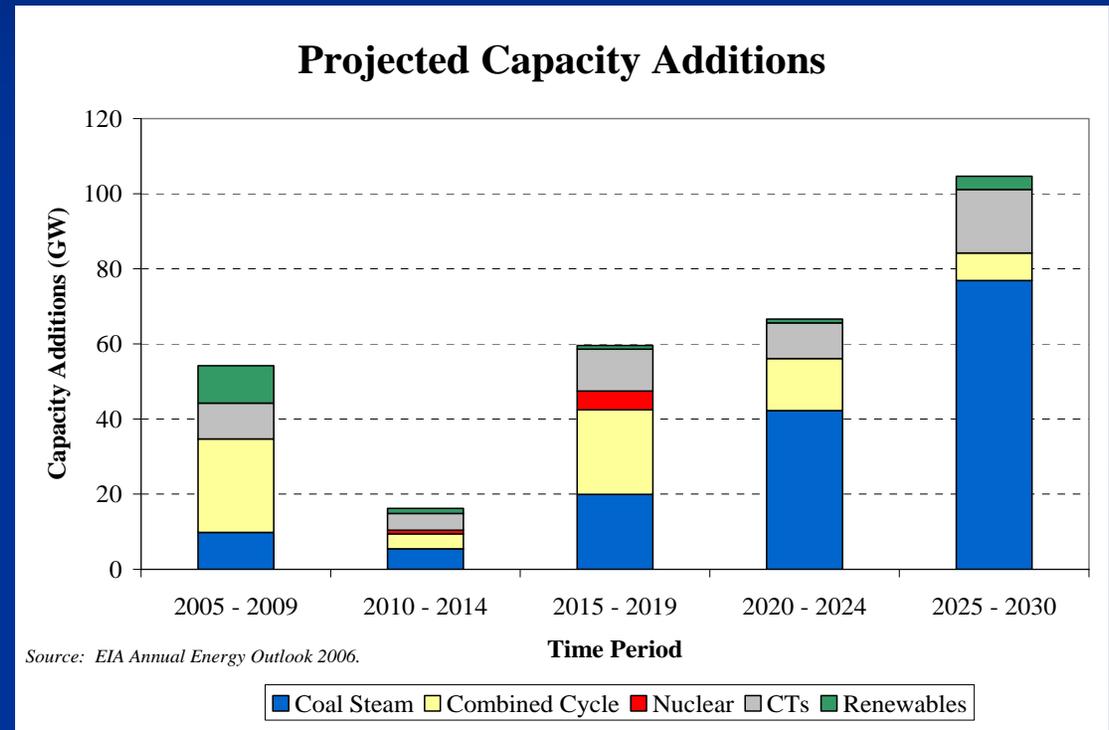
Source: EIA

Challenges Going Forward

- Significant infrastructure investment needs:
 - Generation
 - Transmission
 - Distribution
 - Environmental Compliance

Generation Investment

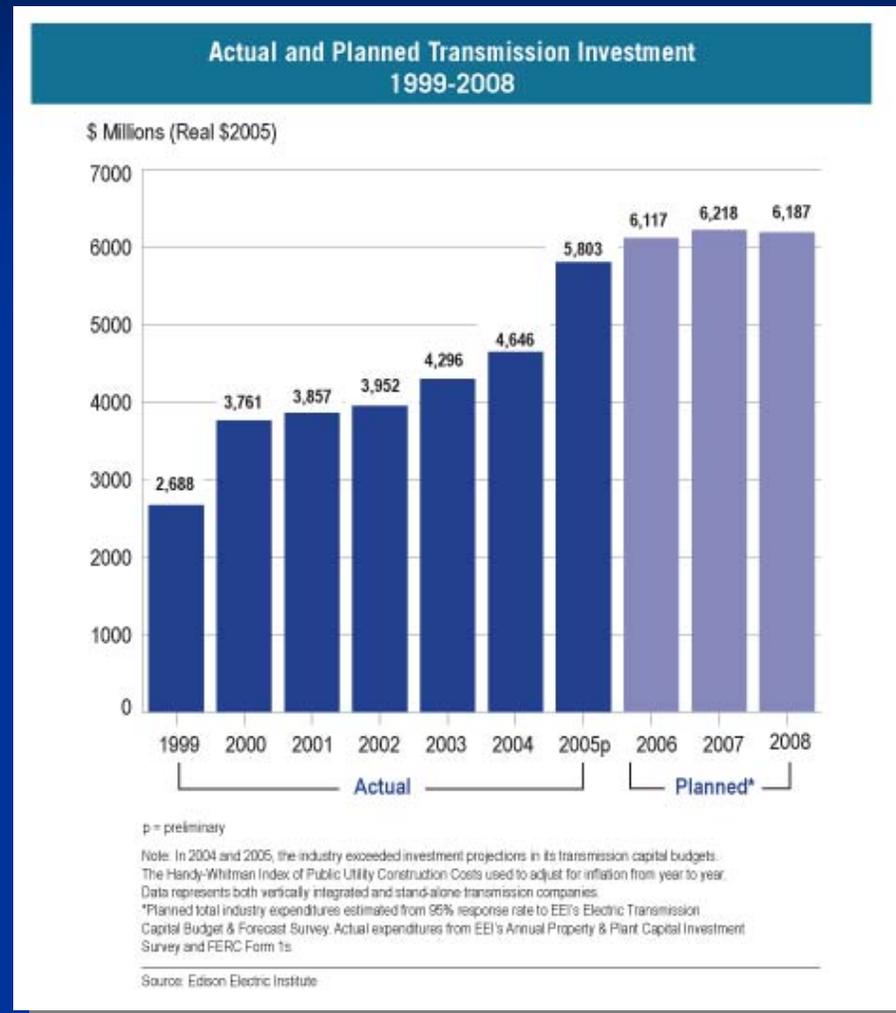
- Costs of EIA's projected capacity additions: \$300 billion
- 60 percent more capacity needed if it weren't for conservation and DSM efforts



Slide #17

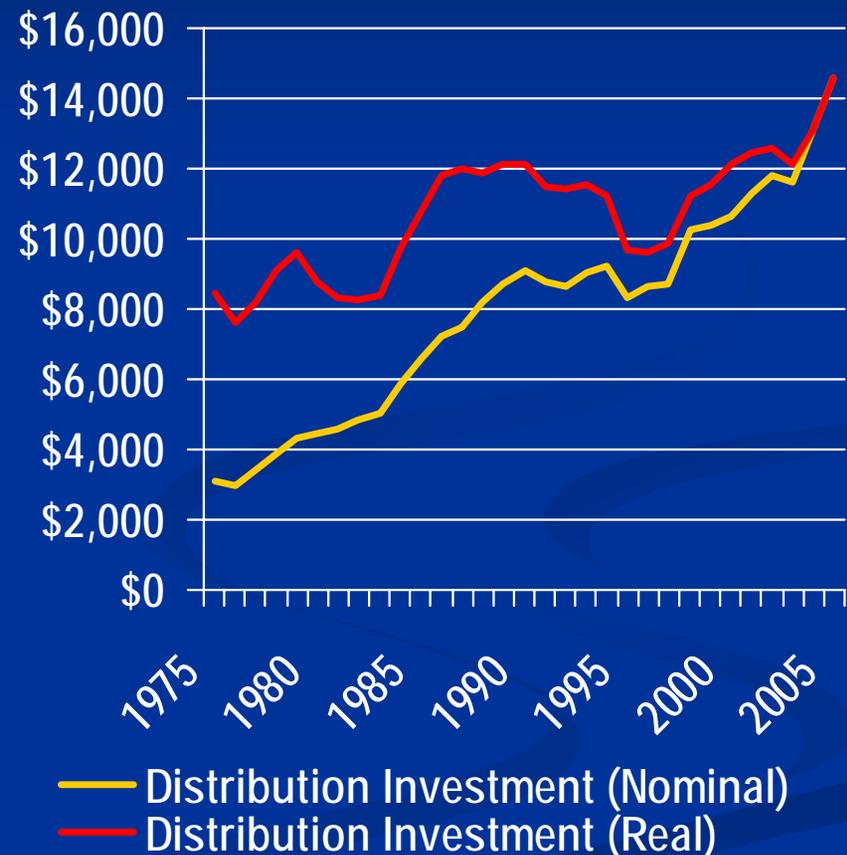
Transmission Investment

- Significant increase in investment since 2000, coinciding with surge in generating capacity.
- 116-percent increase since 1999.
- \$18.5 billion planned through 2008 on transmission infrastructure—a 25-percent increase over the previous three years.



Distribution Investment

- Average of \$14 billion per year over next 10 years
- To serve new load:
 - More than 1 million new residential customers and more than 180,000 new commercial customers added in 2004.
- To replace aging infrastructure
- To modernize system management and control



Environmental Compliance Costs

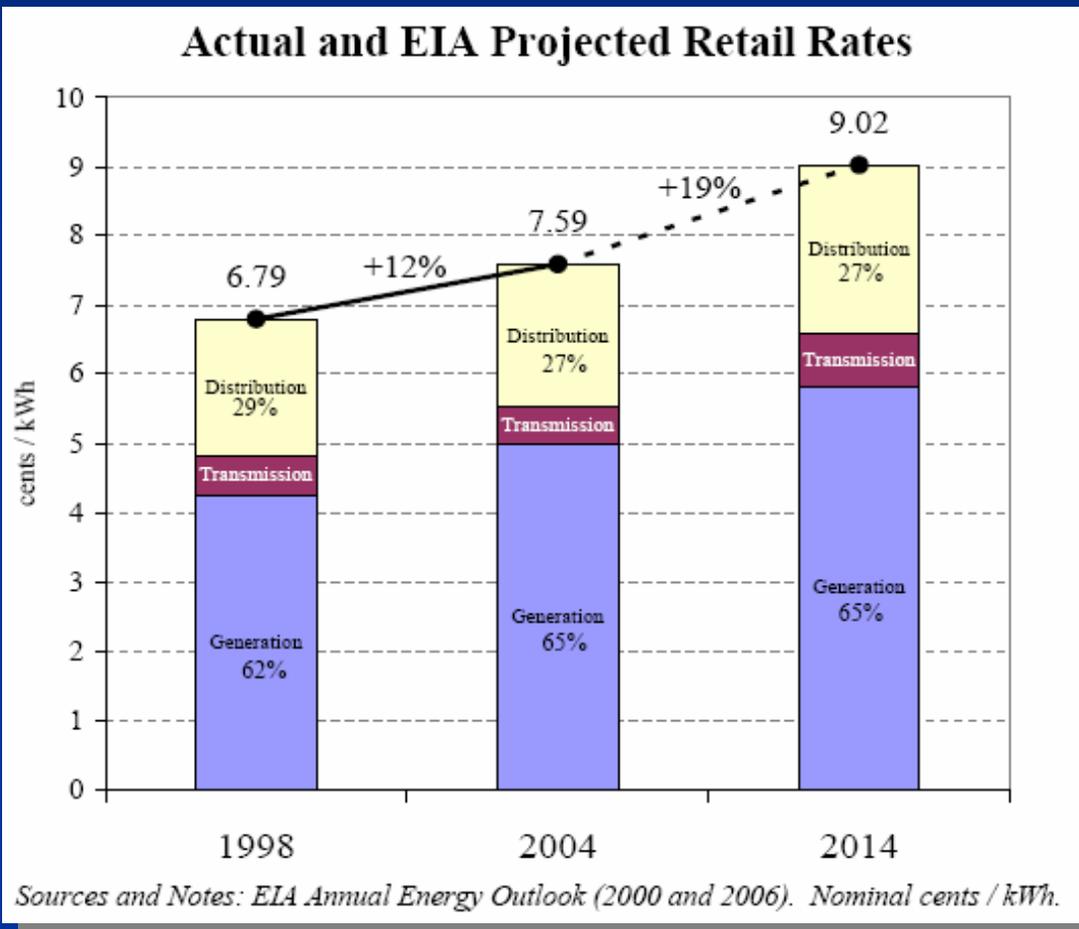
- From 2002-2005, the electric utility industry spent \$24 billion on compliance with federal environmental laws; state and local rules drive that total even higher.
- Two EPA rulemakings—the Clean Air Interstate Rule and the Clean Air Mercury Rule—will cost the electric utility industry \$47.8 billion in compliance costs between the years 2007 to 2025.

Cost Drivers

- Retrospectively:
 - Fuel and purchased power costs account for roughly 95 percent of O&M cost increases (totaling \$26 billion) over last five years. In 2005, fuel and purchased power expenses amounted to 71 percent of total O&M expenses.
- Prospectively:
 - Capital costs to meet increased electricity demands (45 percent growth by 2030 according to EIA) and to increase environmental performance.

Slide #21

EIA Forecast of Retail Rates and Rate Components



- EIA forecasts a 19-percent increase in electricity rates over the next 10 years, compared to a general inflation forecast of 26 percent.
- Rate increases are forecast for each service components: G, T, and D
- 10-year projection understates near-term increases triggered by fuel prices.

The Bottom Line

- If utilities are able to make investments in infrastructure improvements, benefits will include:
 - Increased diversity in fuel for generating electricity
 - Improvements in competitive power markets
 - Cleaner generation
 - Increased customer choice and control over energy use

References

- Gregory Basheda, Marc W. Chupka, Peter Fox-Penner, Johannes P. Pfeifenberger, and Adam Schumacher, *The Brattle Group, "Why Are Electricity Prices Increasing? An Industry-Wide Perspective."* Prepared for The Edison Foundation, June 2006.
- U.S. Department of Energy, Energy Information Administration (EIA)
- U.S. Department of Labor, Bureau of Labor Statistics

M. William (Bill) Brier

M. William (Bill) Brier is vice president, policy and public affairs, at the Edison Electric Institute. Bill's responsibilities include management of public policy and advocacy communication; public opinion research; advertising and exhibits; media relations and outreach; industry publications (including the award-winning magazine, *Electric Perspectives*); publicity and promotion; and electronic information services.

Bill joined EEI in 1983, and is recognized as an industry expert and spokesperson. Bill has been interviewed extensively by national and international media on industry issues, focusing particularly on restructured electricity markets. He has also testified before numerous state legislatures and utility commissions on behalf of EEI's member companies.

Prior to joining the Institute, Bill served as Vice President of Public Affairs at CF Industries, a chemical company. He also held a similar position with Energy Cooperative, an independent petroleum refiner. Bill has worked for RJR Industries and the National Council of Farm Cooperatives.

Bill served as an executive assistant to U.S. Congressman Larry Winn, Jr. (R-Kansas), and was a member of the Kansas House of Representatives from 1968-1970. He is a graduate of the University of Kansas.

