



Energy Situation & Hot Topics

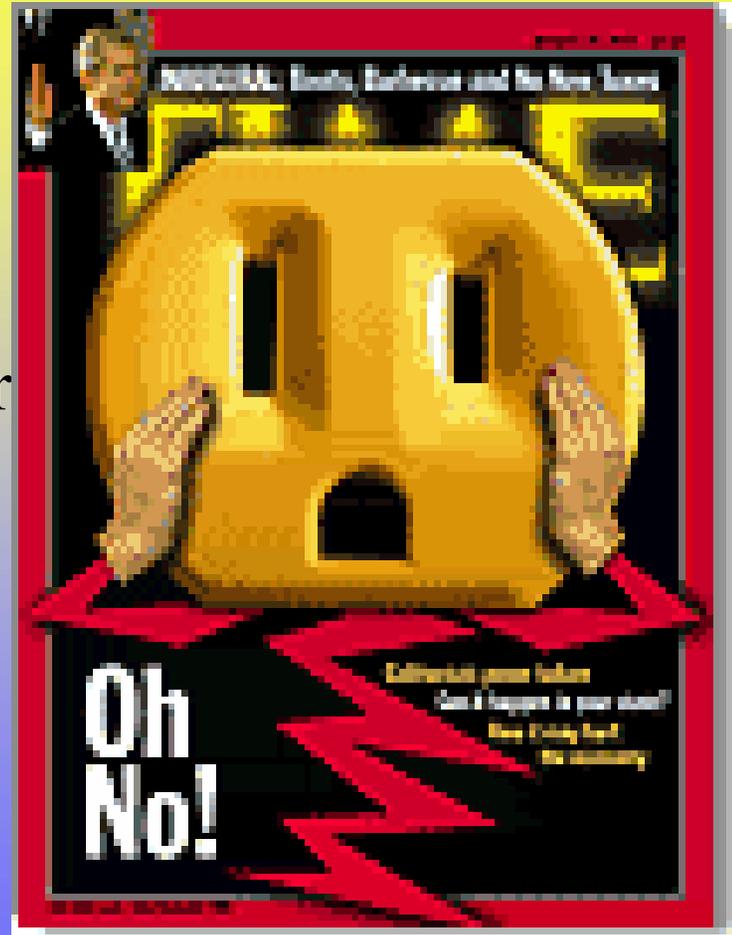
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Utility Energy Forum Director

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www.utilityforum.com

“May You Live in Interesting Times”





Interesting Times



August 17-20, 2003

www.energy2003.ee.doe.gov



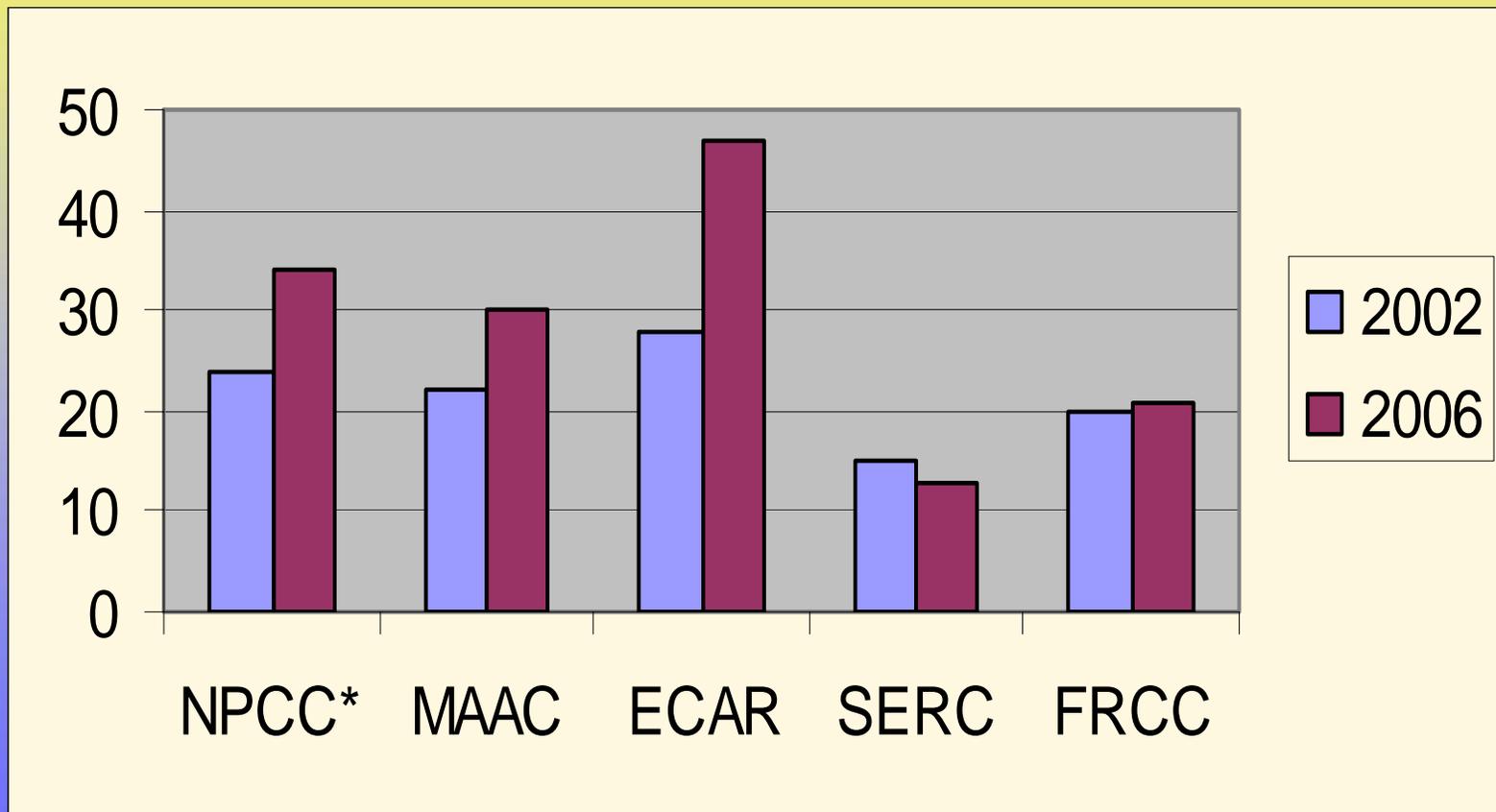
Presentation Outline

- Electric Load Forecasts
- Regional Capacity and Energy Prices
- Current Conditions
- Near Term Regional Changes
- Federal Energy Legislation and National Energy Policy
- Pace and Direction of Electric Re-regulation
- Energy Industry Financing and Investment



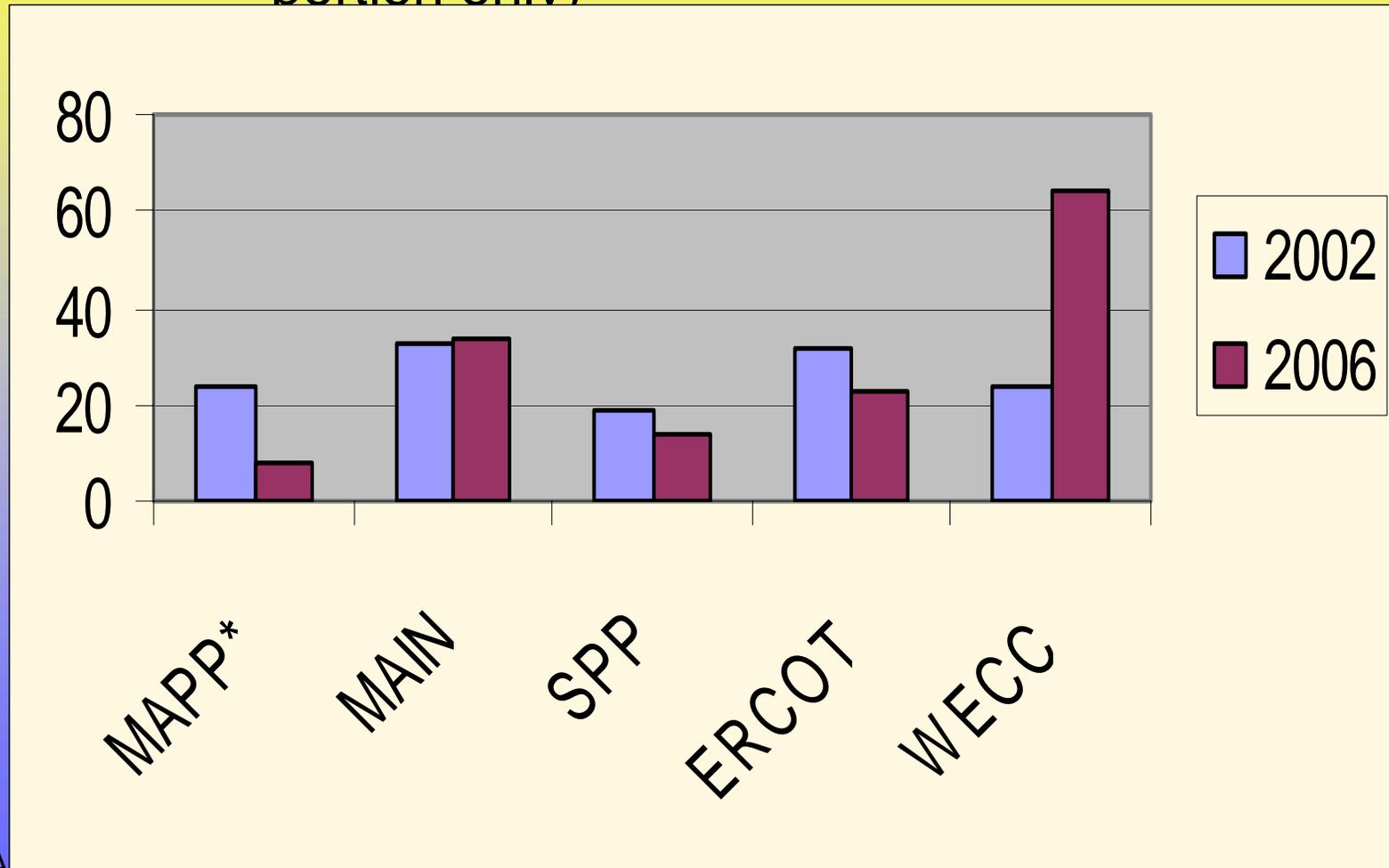
Eastern US Summer % Reserve Margins (NPCC

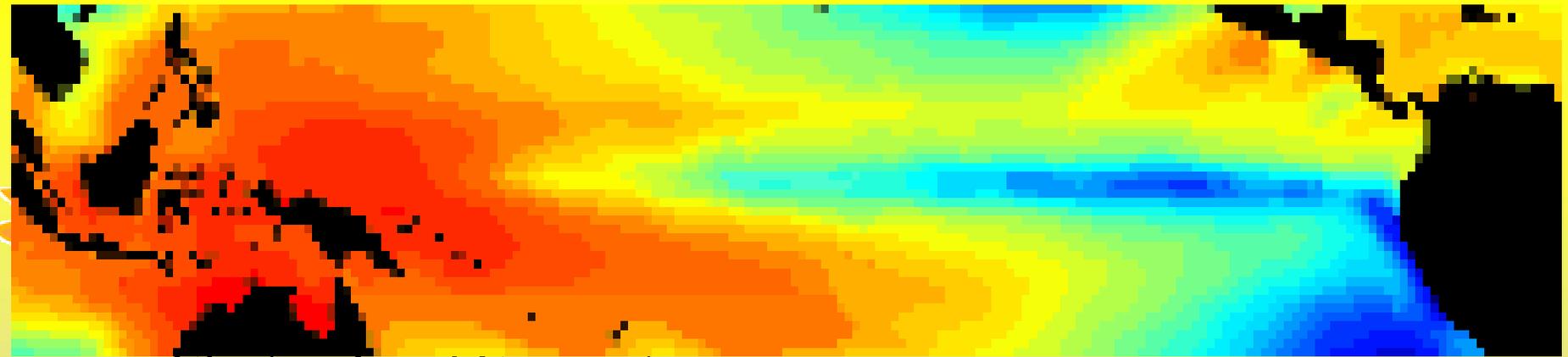
figures are US portion only)





Western US Summer % Reserve Margins (MAPP & WECC figures are US portion only)





- Electric Load Forecasts

- **Regional Capacity and Energy Prices**

- Current Conditions
- Near Term Regional Changes
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Regional Capacity and Energy Prices

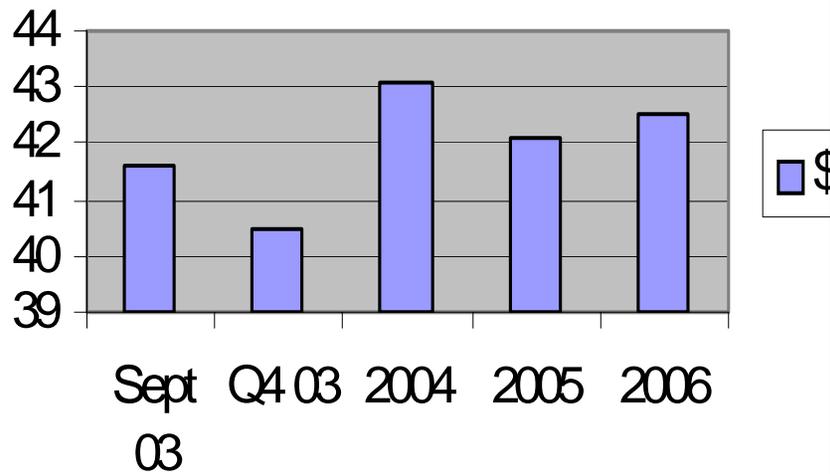
- o NYMEX Palo Verde
- o NYMEX Mid Columbia
- o NYMEX Cinergy
- o NYMEX Entergy
- o PJM Interconnection

Prices are for melded capacity and energy costs on peak. For off peak, assume 85% of on peak

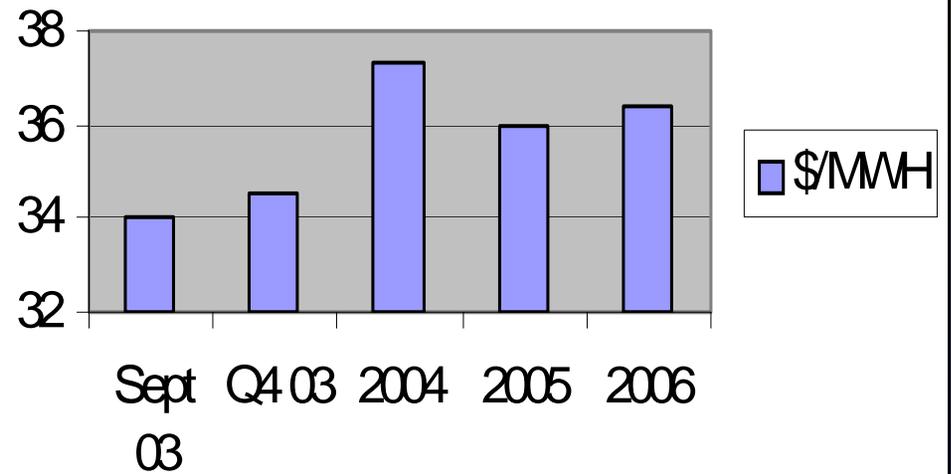


Regional capacity and energy prices MW Daily Platts News Service

PJM Futures



Entergy Futures





- Electric Load Forecast
- Regional Capacity

• **Current Conditions**

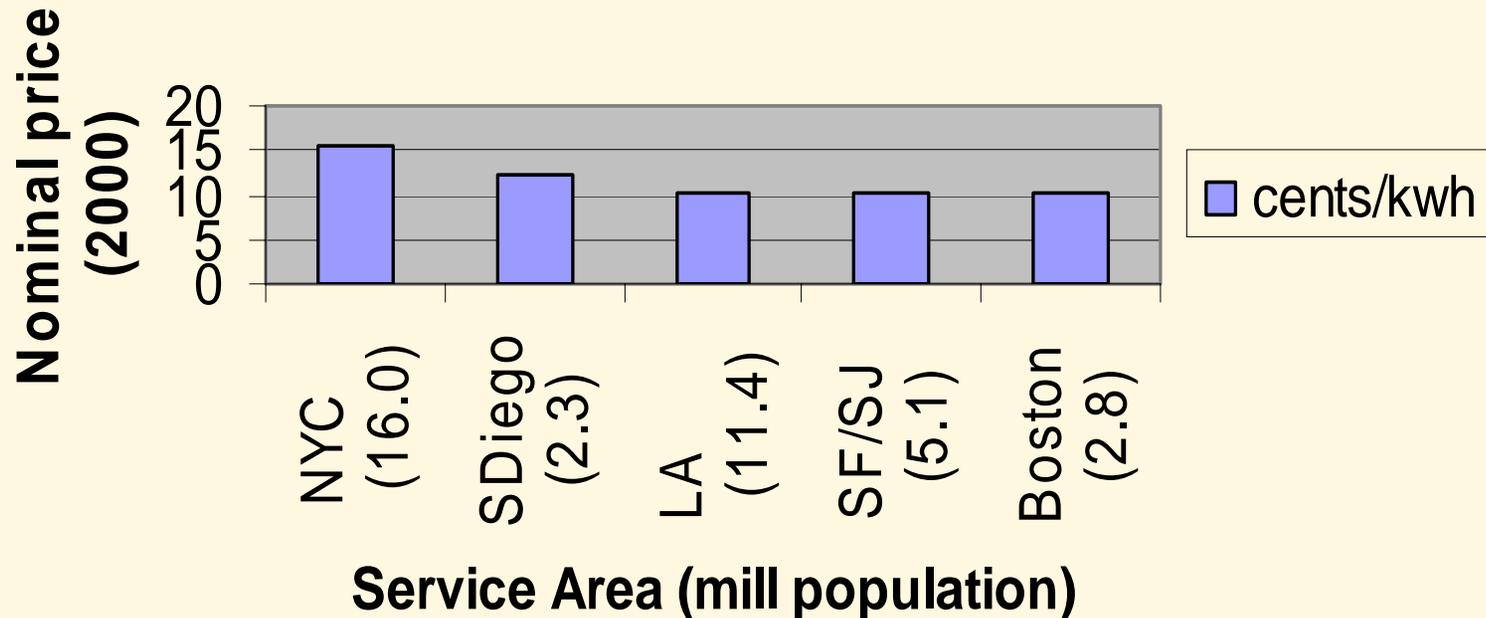
- Near Term Regional
- Federal Energy Legislation and National Energy Policy
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- Energy Industry Financing and Investment





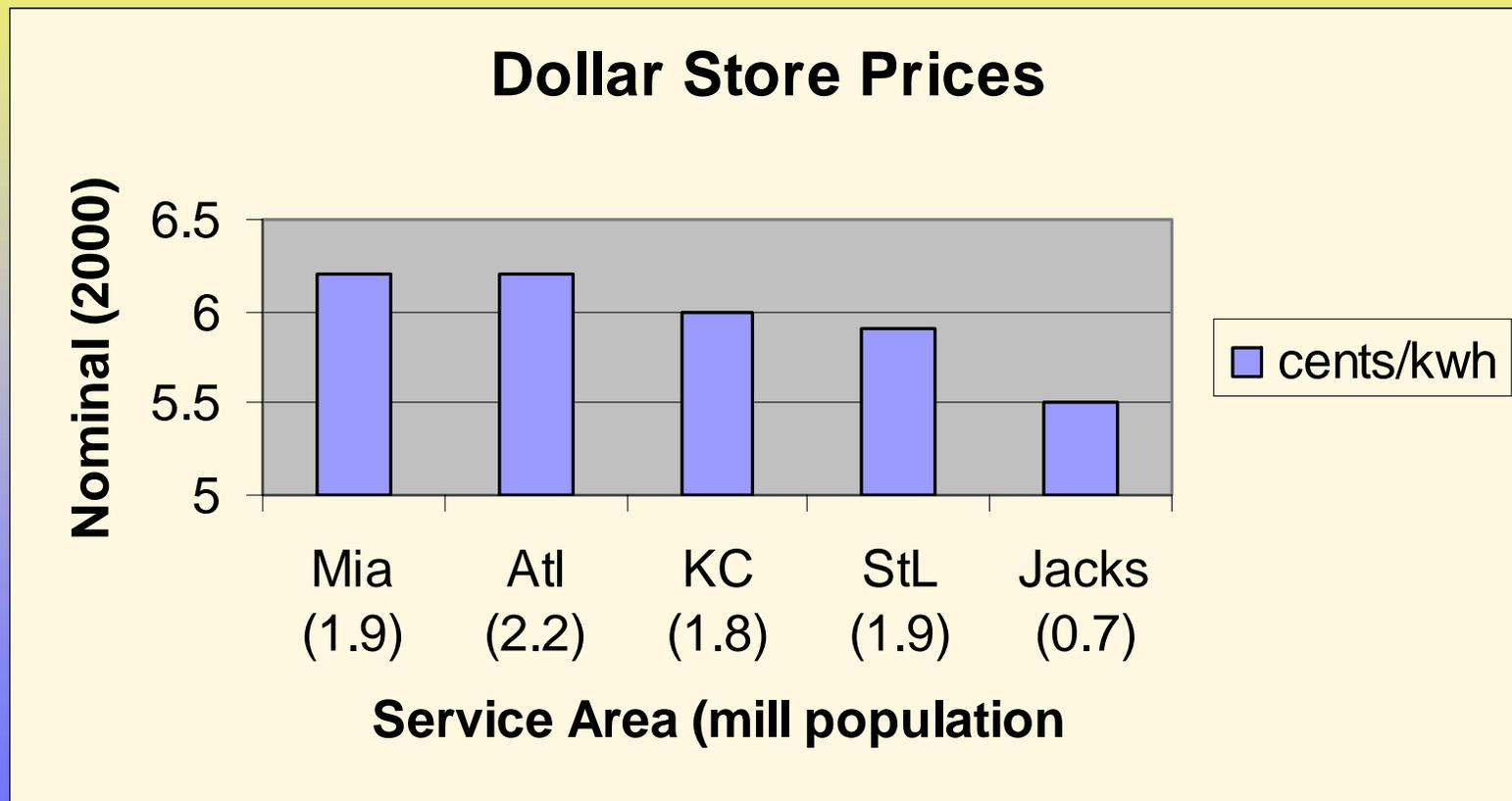
High Priced Commercial Electricity Areas

Top 5 Letterman Service Area Electricity Price





Commercial Electricity Prices – The Cheap Seats





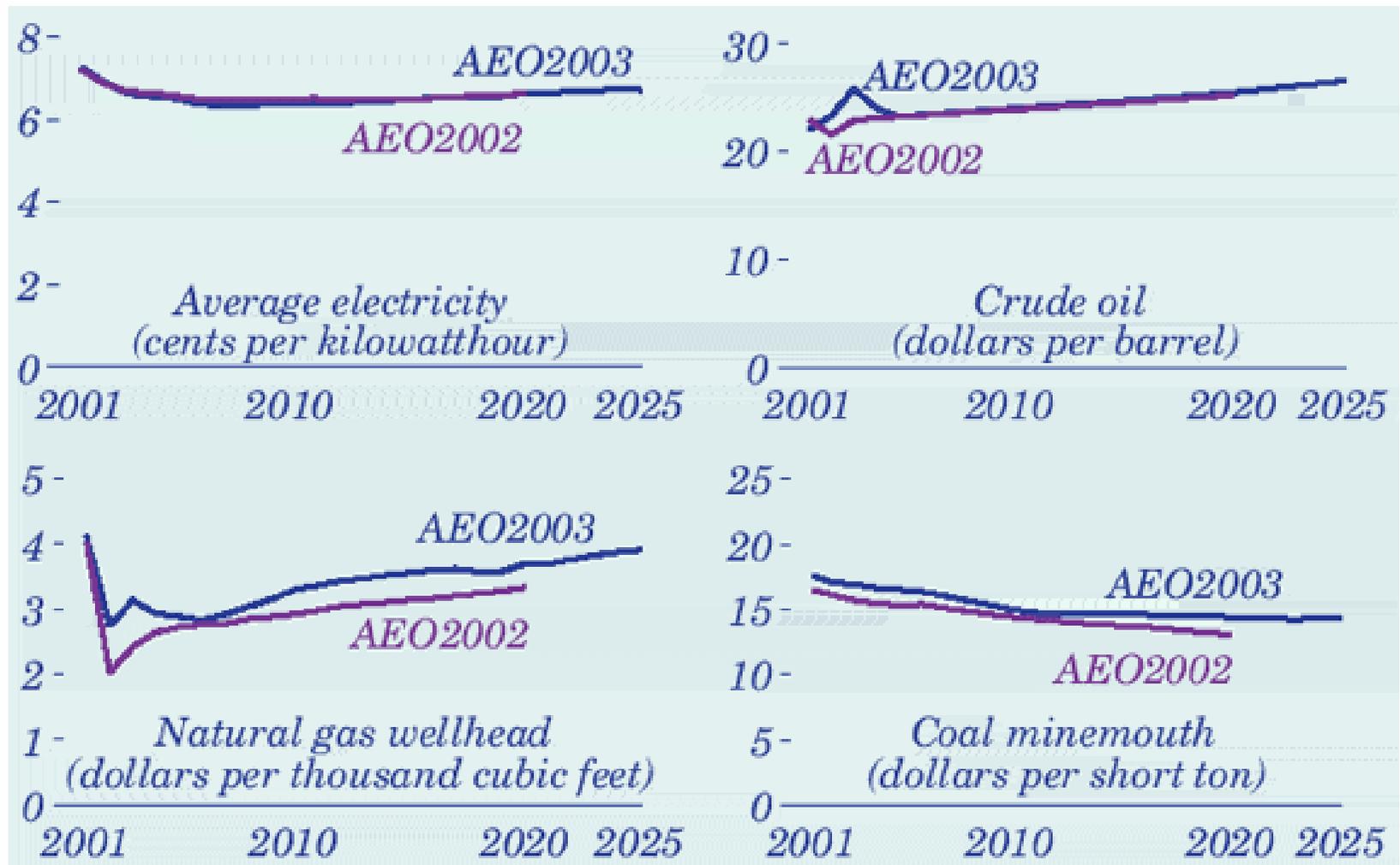
- Electric Load Forecasts
- Regional Capacity and Energy Prices
- Current Conditions

Near Term

Regional Changes

- Federal Energy Legislation and National Energy Policy
- Pace of Electric Re-regulation
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**Figure 1. Energy price projections, 2001-2025:
AEO2002 and AEO2003 compared (2001 dollars)**





Fuel Supply Adequacy

Hydroelectricity is are impacted by precipitation which cannot be accurately predicted

Most of the new generation is fueled by natural gas. The near-term and long-term adequacy of both the availability of natural gas and the infrastructure to move it to the generating stations is coming under increased scrutiny.

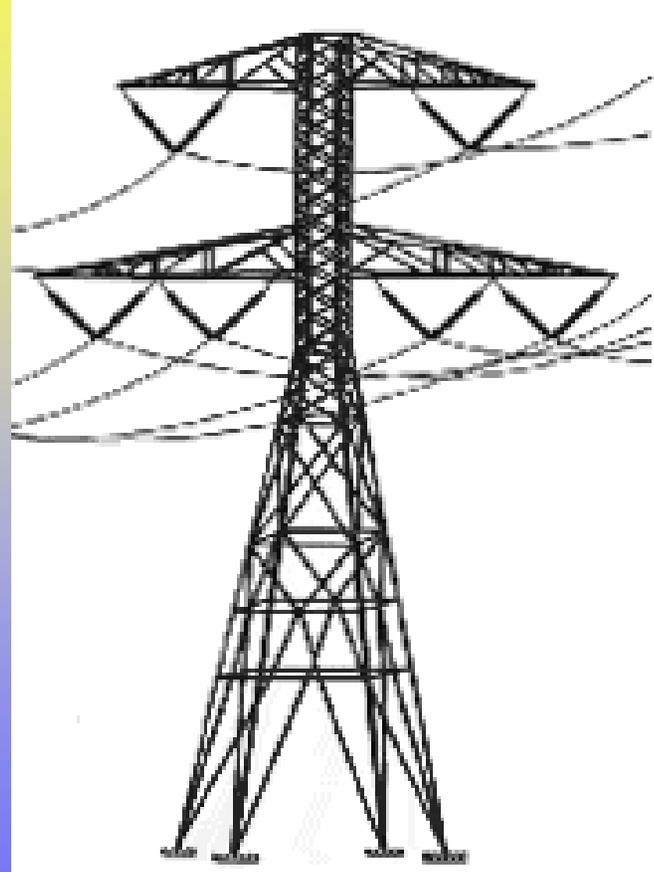


Transmission Adequacy

TX systems generally are expected to perform reliably in the near term

7,100 miles of new TX (\Rightarrow 230 kV) to be added in the near term 2003 - 2007

10,100 miles to be added during the 2003–2011 time frame (5% increase in the total amount of installed TX)





Two views of the AK Pipeline





Tx Reliability Solutions in

addition to new TX line construction

- Redispatch
- Load Shedding/Control
- Interruptible Services
- TX system improvements
- Distributed Generation



Six Commandments

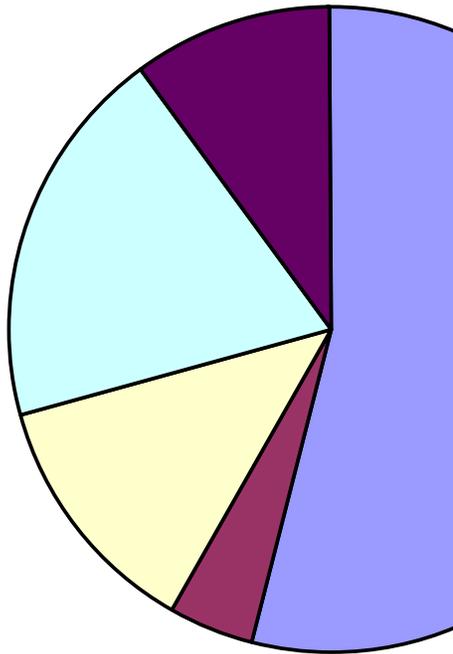
re: Upward Pressures on
Electricity Rates

- Poor re-regulation design and implementation
- Increase in demand that outstrips supply (new and expanding businesses, new power plants not built, and existing power plants do not perform as planned)
- Electricity Inelasticity (little storage options, few substitutions, and tied to productivity)
- High Fuel and/or Financing Costs
- Severe Weather
- **Transmission unreliability** (including primary fuel)

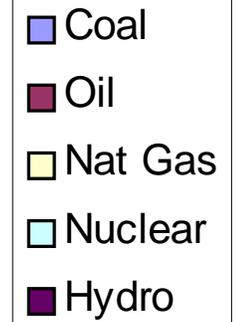
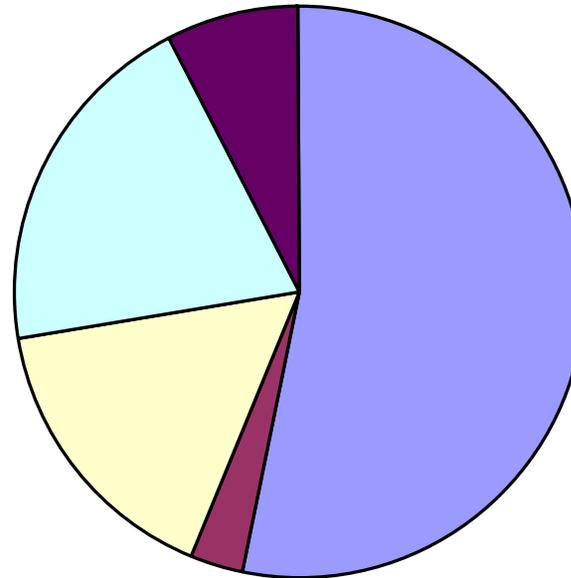


Resource Trends 1990-2000

1990



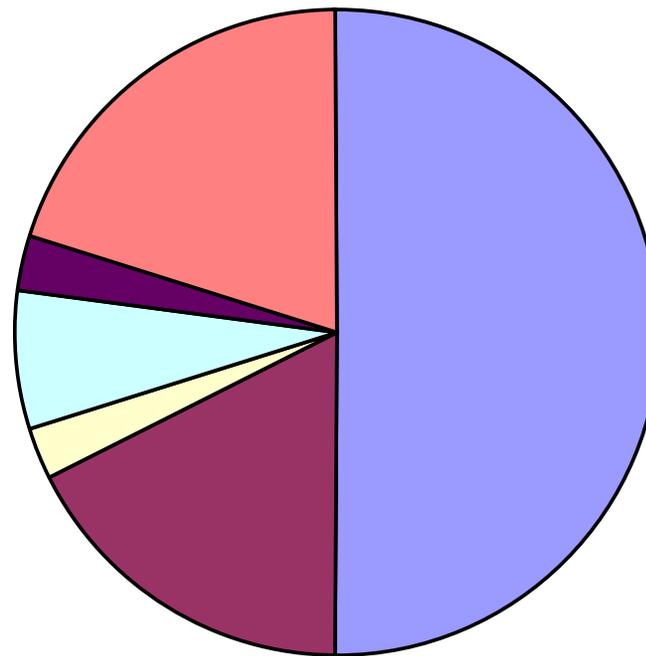
2000





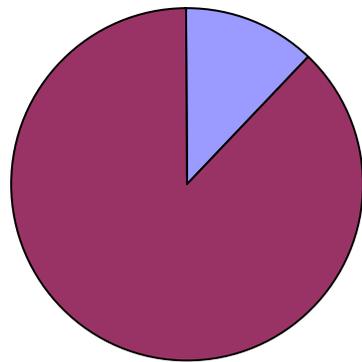
Renewables (2010 includes conventional hydro)

2002



- Coal
- Gas
- Oil
- Hydro
- Renewable
- Nuclear

2010



- Renewables
- Other

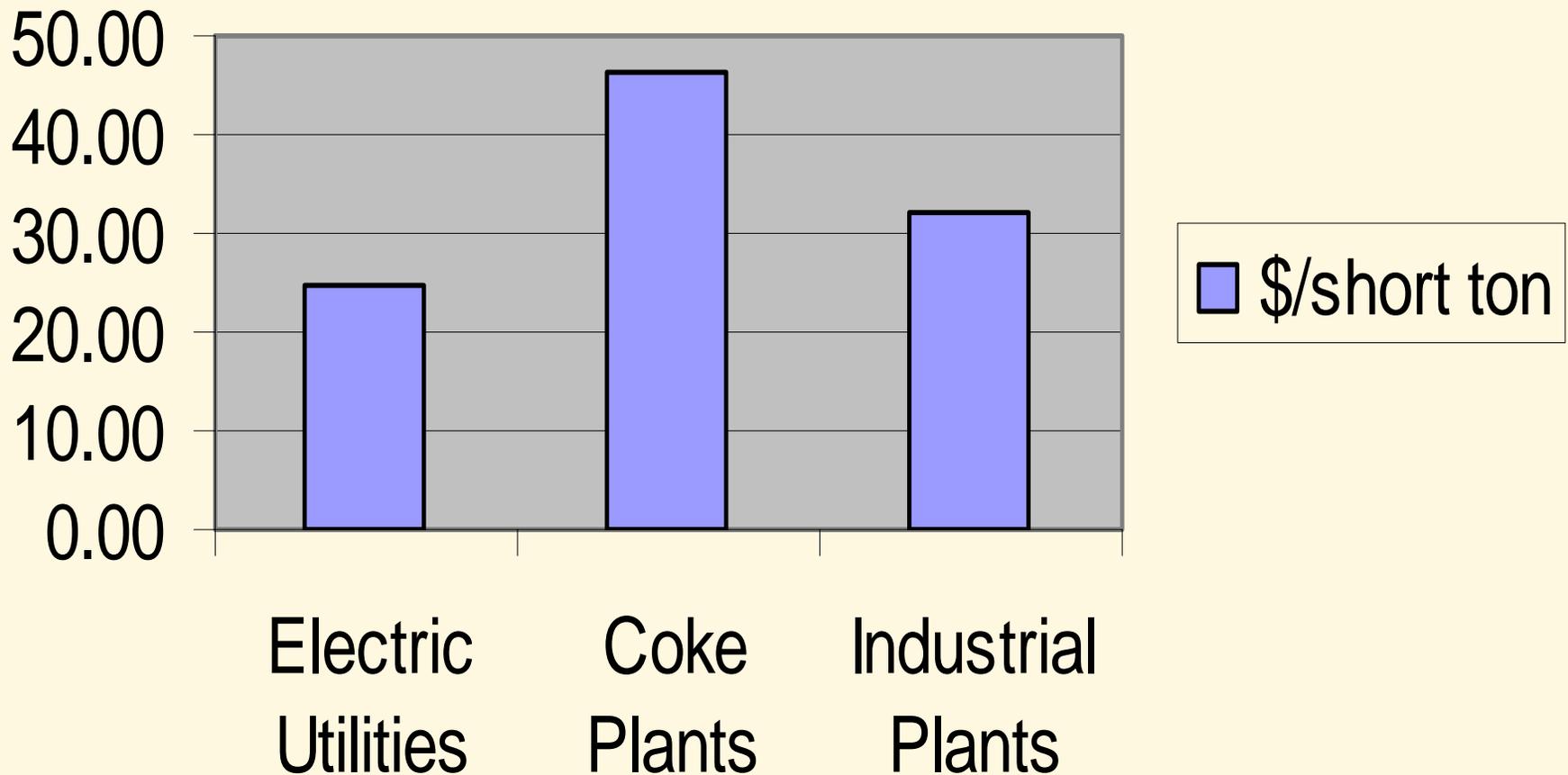
August 17-20, 2003

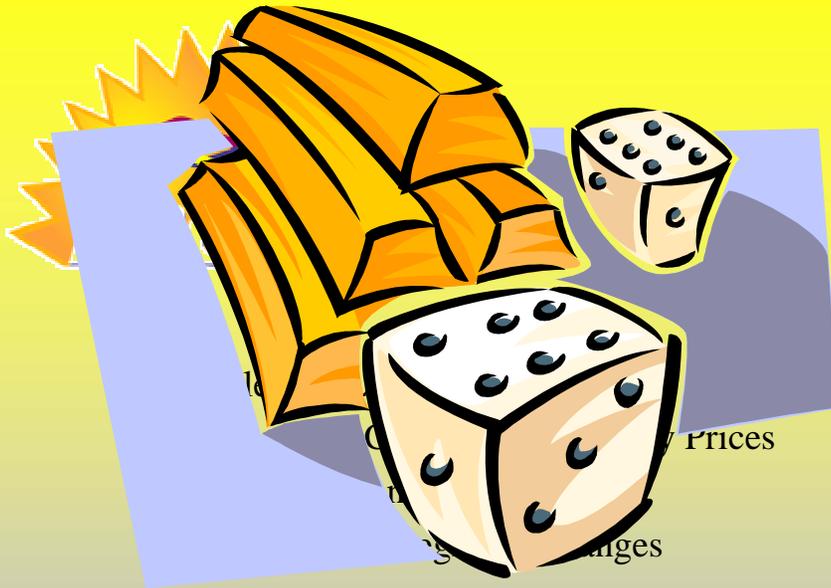


Coal Still King

Average Coal Costs FOB

Plant. Leading State Wyoming - 368.7 Million Short Tons Leading
Producing Company - Peabody Coal 146.1 Million Short Tons





- Federal Energy
Legislation & NEP

- Pace and direction of Electric Re-regulation
- Energy Industry Financing and Investment



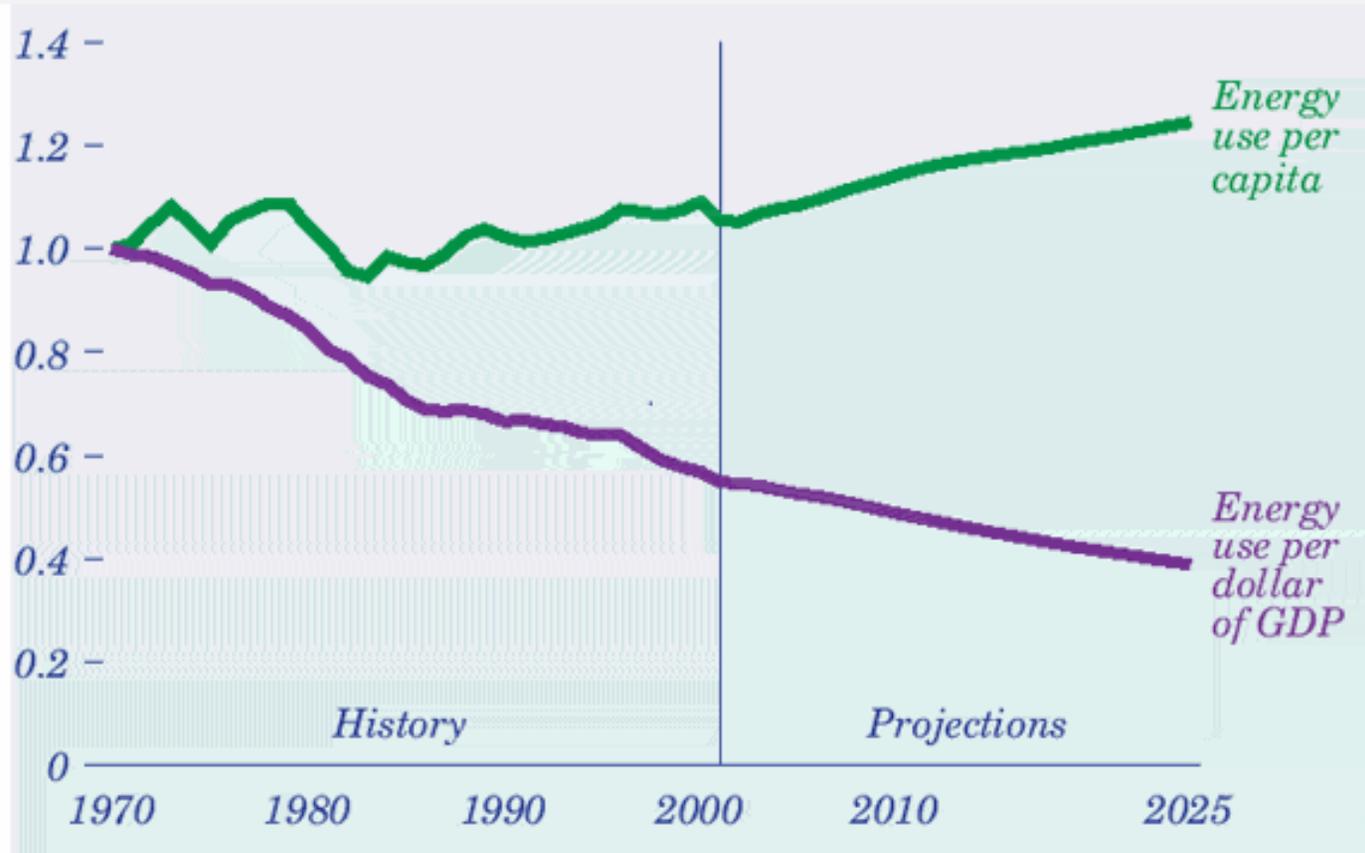
There is job security er, well at least for Federal Energy Managers

The differences in the Senate and House versions won't effect

- (1) More stringent base line for energy efficiency
- (2) Metering requirements for facilities



Figure 3. Energy use per capita and per dollar of gross domestic product, 1970-2025 (index, 1970 = 1)





AEE Survey on NEP



- Who Participated
- Rear View Mirror Reflections and Dilbert Responses
- National Energy Policy Opinions

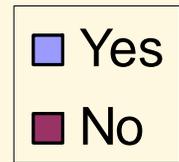
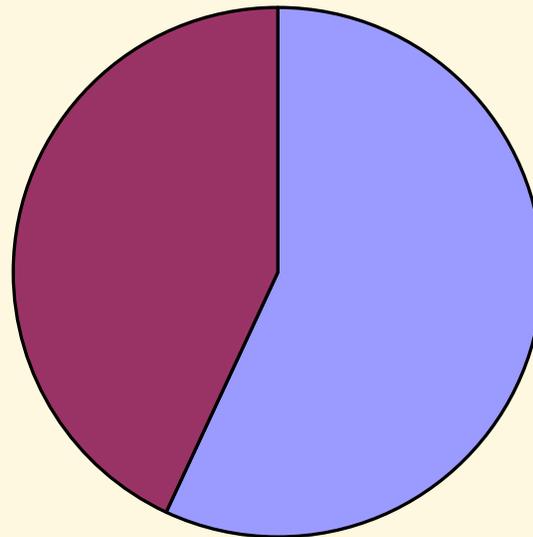


Have you reviewed the
NEP?



AEE Survey – NEP Review

Have You Reviewed the NEP?

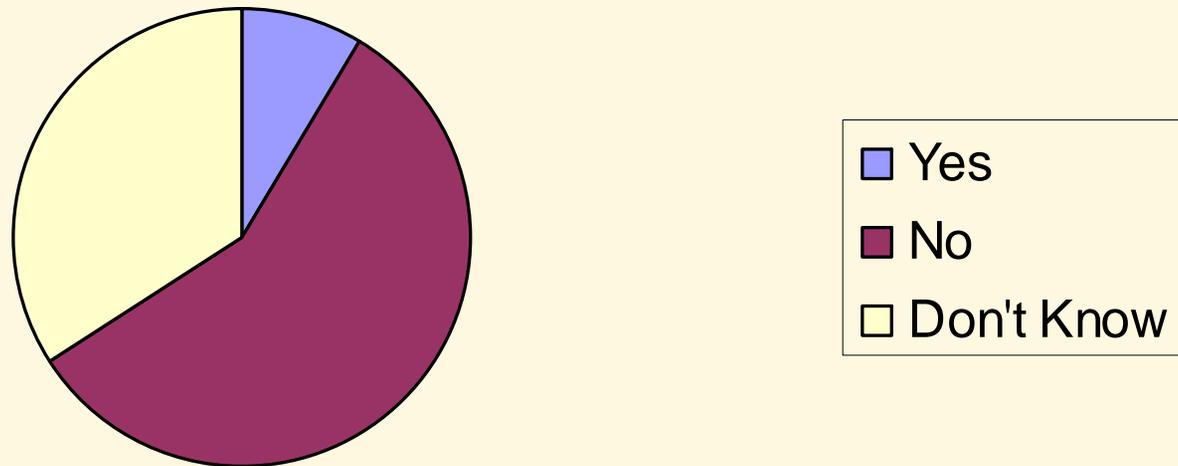




Does the NEP
adequately address
energy management?

2003 Energy AEE Survey – Addressing Energy Mgmt

The NEP Adequately Addresses Energy Management . . .



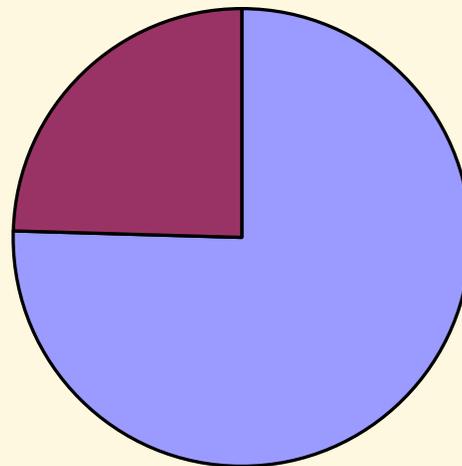


Should the NEP address Global Warming?



AEE Survey – Global Warming

NEP should address global warming concerns



□ Agree
■ Disagree

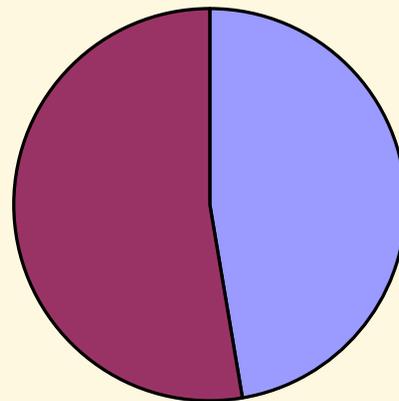


Oil Production in
Environmentally Sensitive
Areas is Necessary to meet
future energy needs.



AEE Survey – Oil Production

Oil production in environmentally sensitive areas is necessary to meet future energy needs



□ Agree
■ Disagree

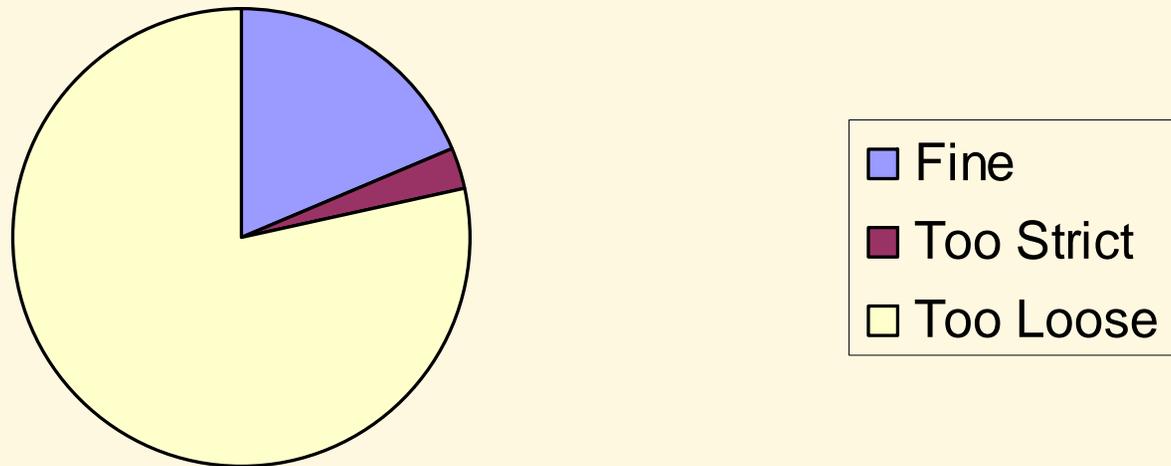


Energy Codes are fine ..
Too strict ... too loose



AEE Survey – Energy Codes

Current Commercial Building Energy Codes are ...





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Pace and direction of Electric Re-regulation

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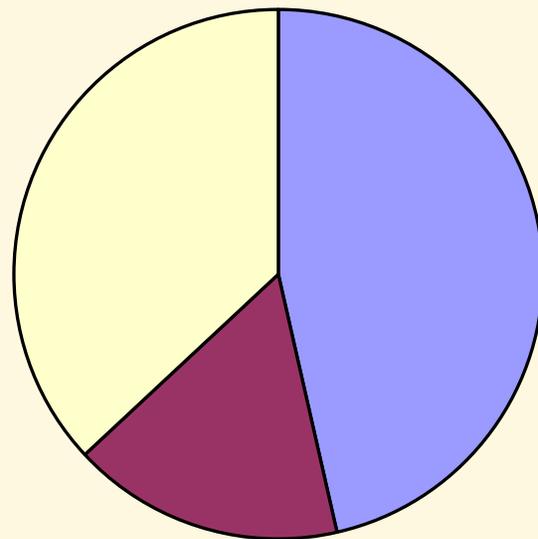


In the past year my electric rate has increased, decreased, stayed the same?



Electric Rate Changes – Interesting Times

In the past year, my electric rate has . . .



- Increased
- Decreased
- Stayed the Same

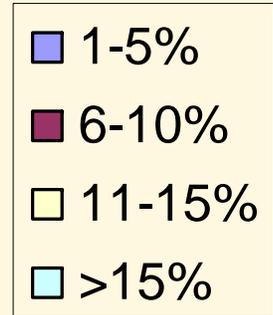
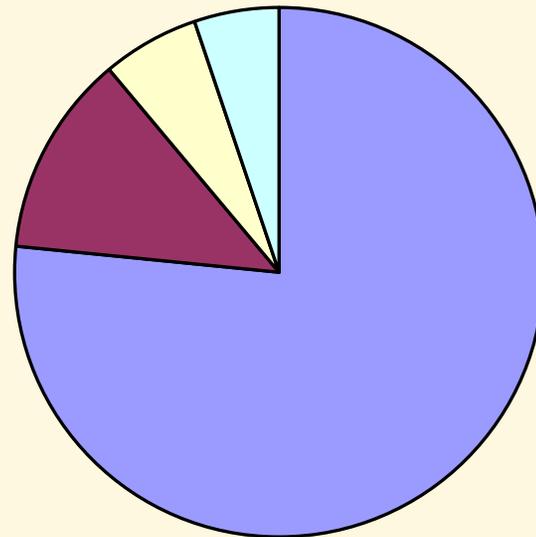


If it has increased, how
much



Rate Increases

My electric rate has increased by . . .



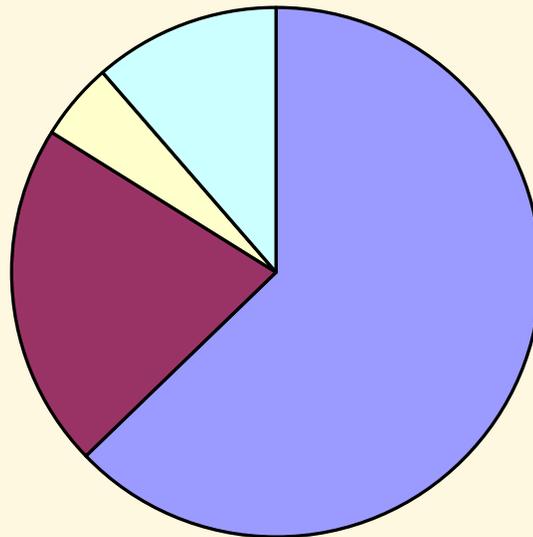


If it has decreased, how much



Rate Decreases

My electric rate has decreased by . . .



- 1-5%
- 6-10%
- 11-15%
- >15%

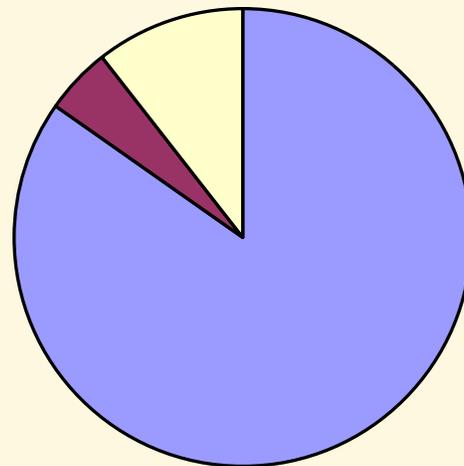


Dibert Q – in the next five years
my utility bill will increase?
Decrease? Stay the same? If it
changes by how much?



Future Electric Rate in interesting times

In the next three years my electric rate will be . . .

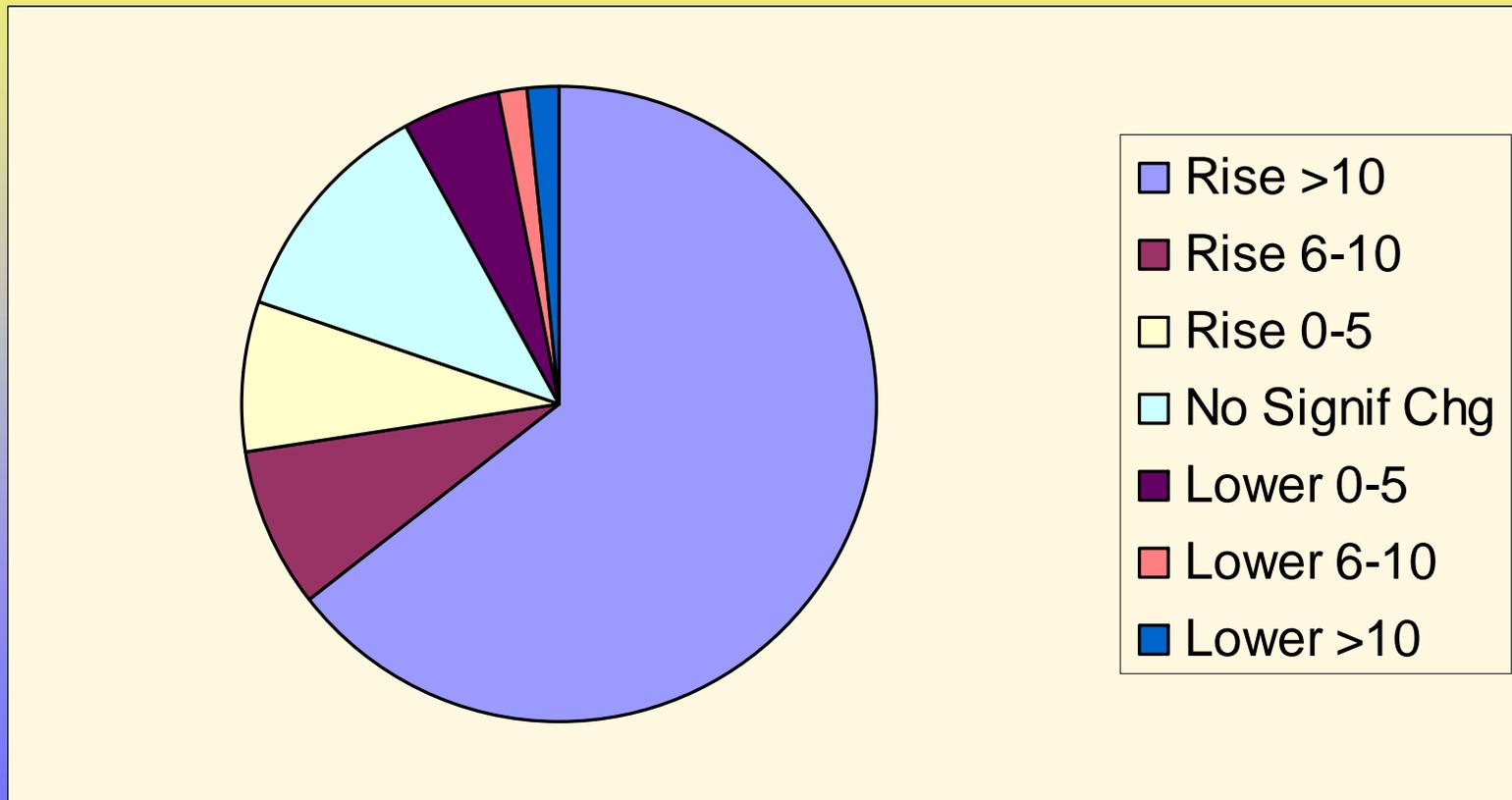


- Higher
- Lower
- The Same



%wise, my elect rate will

(end users in states not yet dereg'd, if dereg'd)

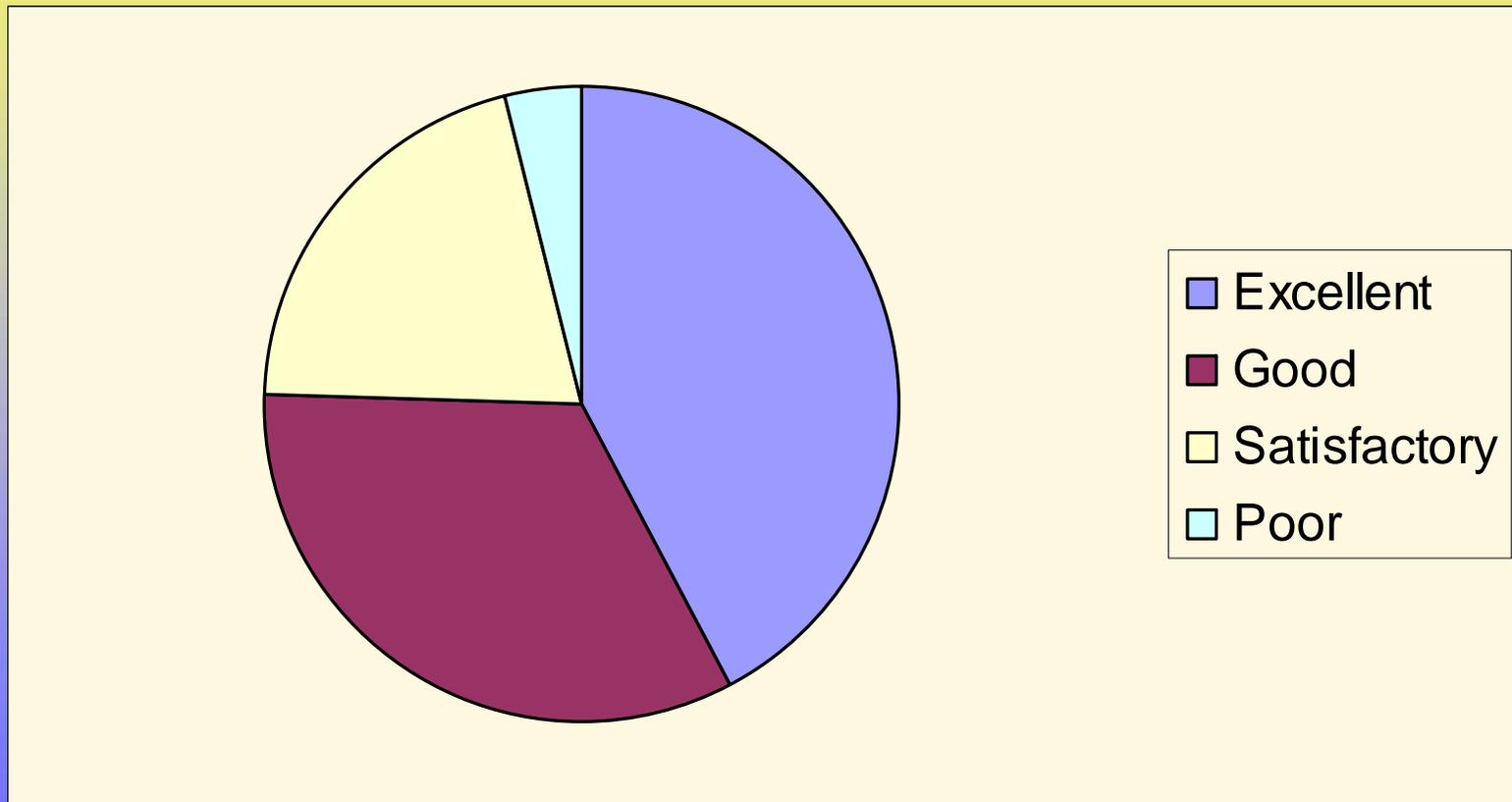




The service I get from my electricity provider is Excellent, good, fair, or poor?

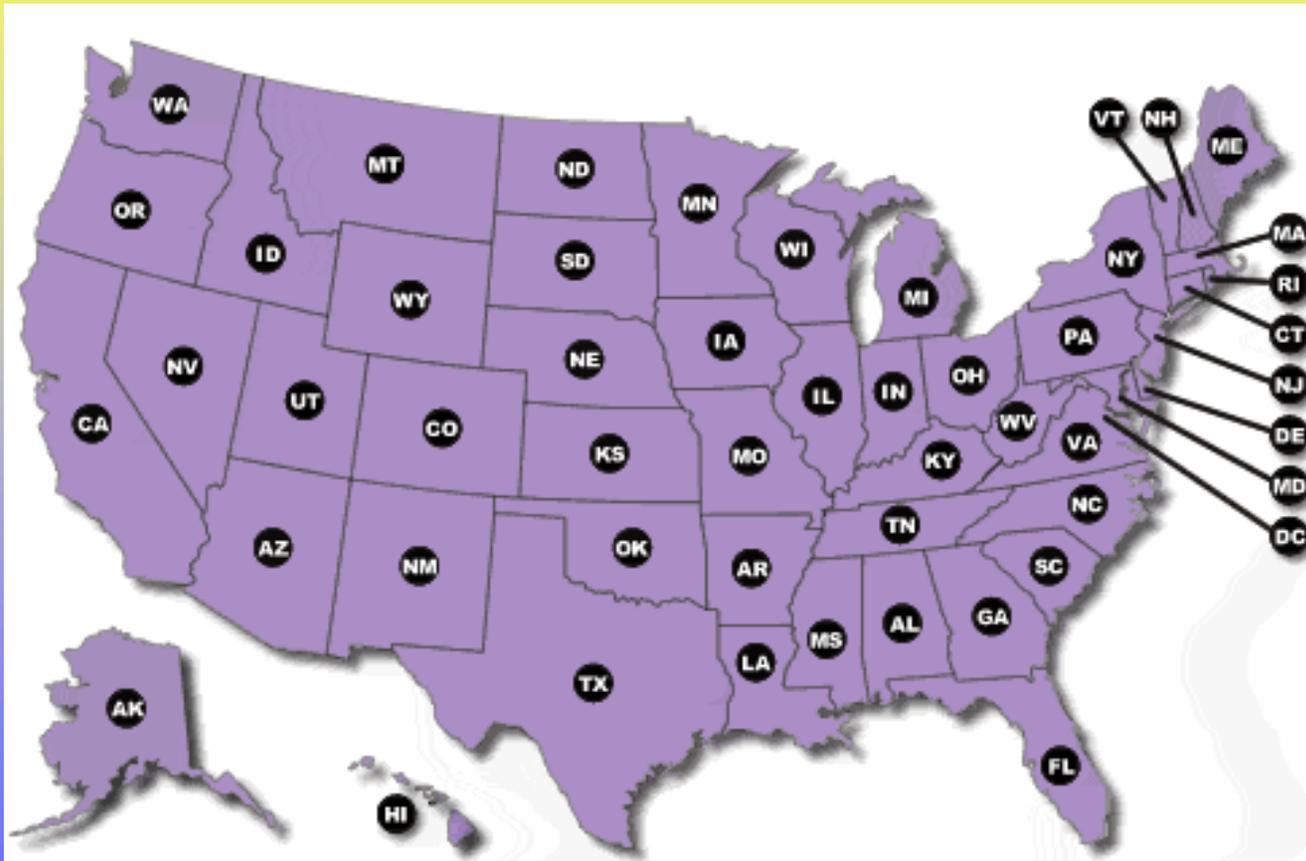


The Service I get from my Electricity Provider is





www.dsireusa.com



Web site
that
tracks EE
and RE
incentives
by state



- Pace and Direction of Electric Re-

Energy Industry Financing and Investment



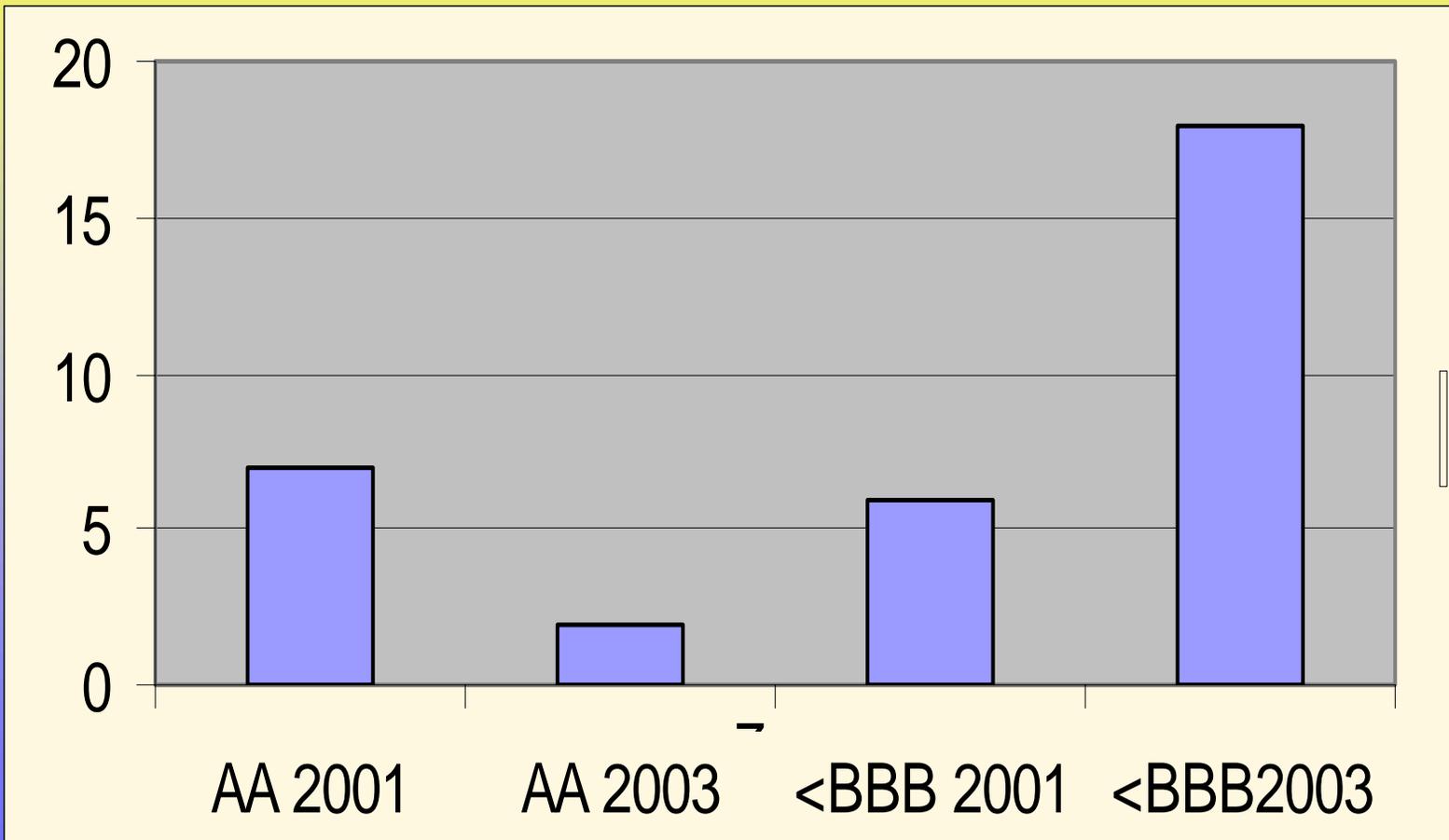
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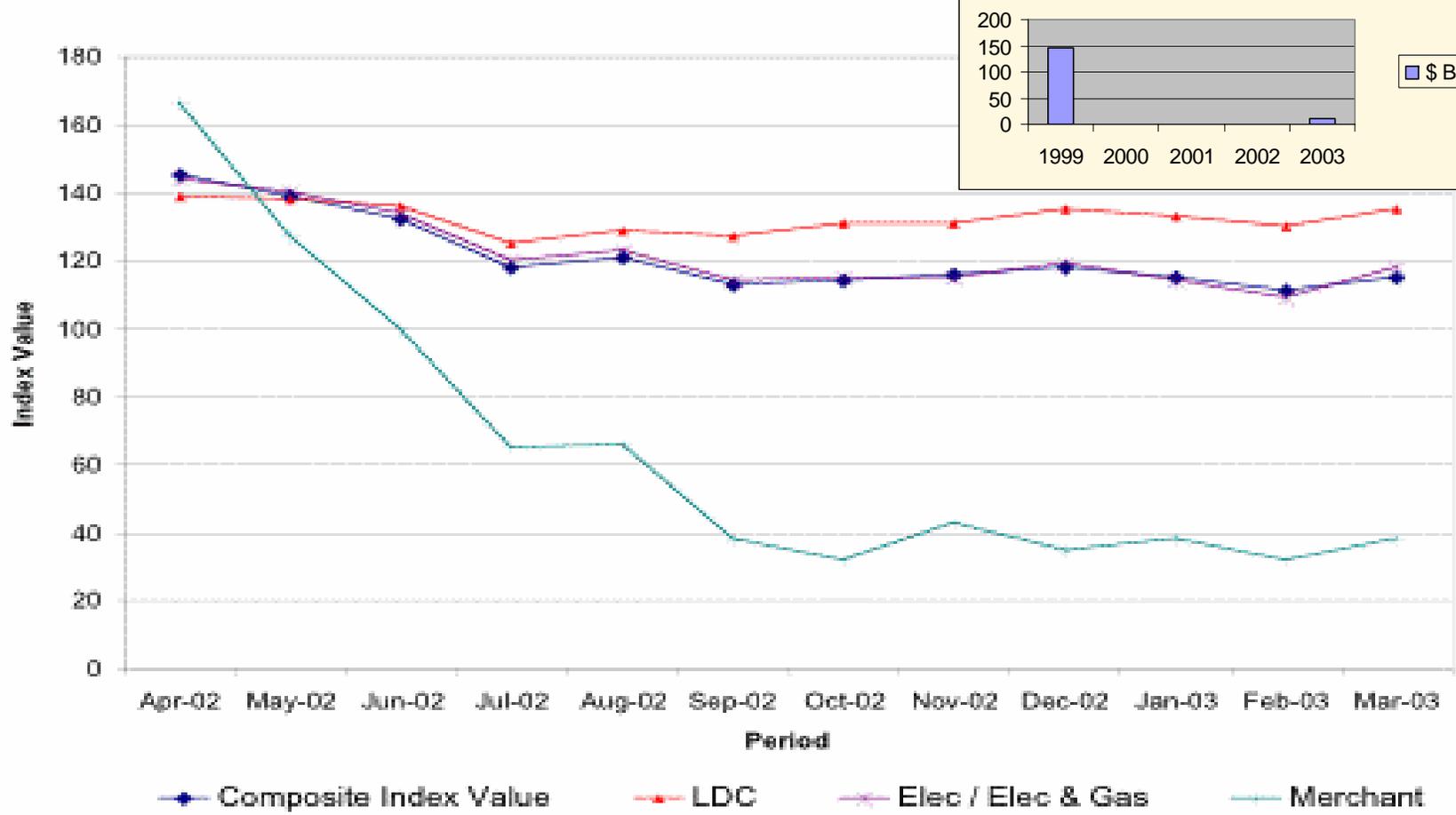
Utilities w/ AA and BBB ratings

03/04/03 Testimony of Suzanne G. Smith before the U.S. Senate Energy and Natural Resource Committee



The C Three Group Energy Utility Indices™ (12-Month Performance thru March 2003)

Source: The C Three Group



2003 Financial Factors

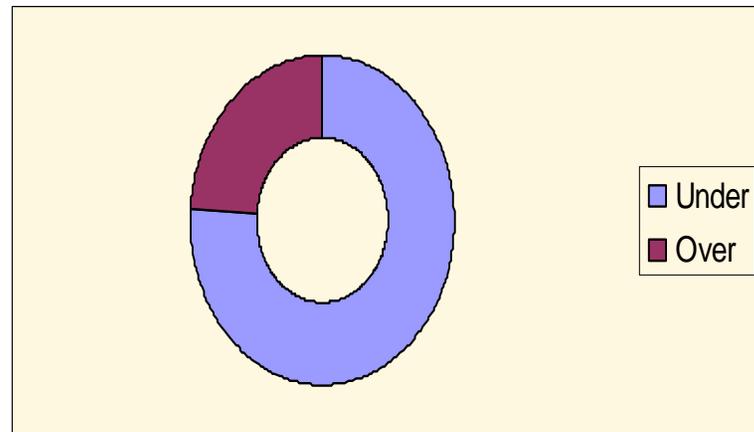
Underfunded Pensions

Price Caps/St'd Offers

Support from

- Banks
- Bond Holders
- Regulators

Interest rates



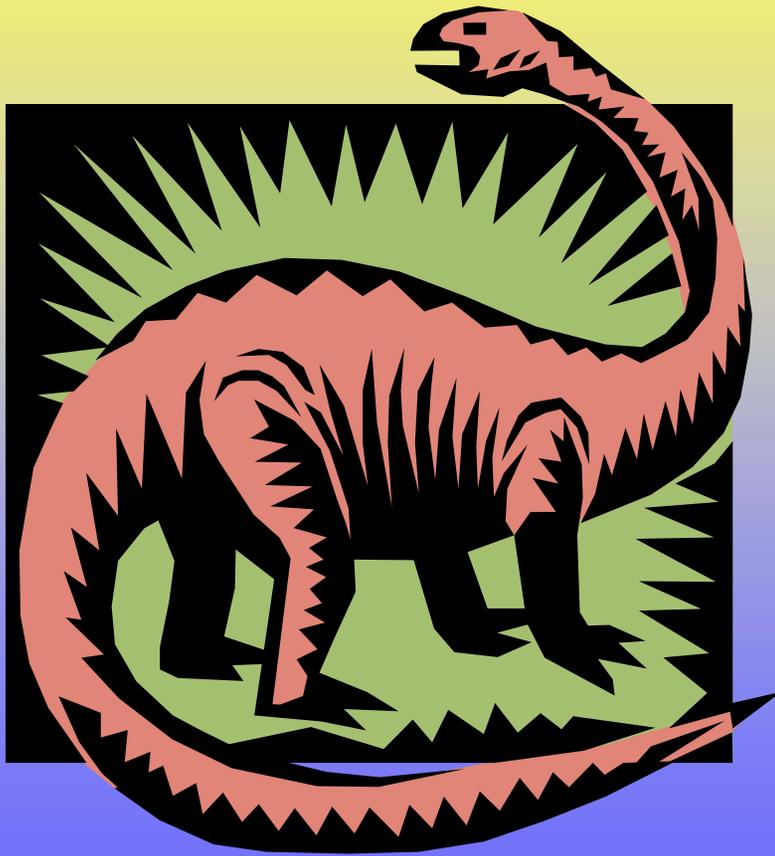


Increased Nat'l Debt can cause interest rate rise





First Energy Survey circa
120 million years ago



There is
OIL in
my
future!!!