

Colorado's Commitment to Energy Efficiency – the 'First Fuel'

National Conference of State Legislatures
Workshop on Energy Efficiency

Presentation of
Ron Binz, Chairman
Colorado Public Utilities Commission

June 23, 2008

Outline of this presentation

- Introduction to the Colorado PUC
- The challenge we face
- Elements of a state energy policy
- Some concrete suggestions

Caveat

- I am one of three equal commissioners
- My positions are my own
- I am confused by many things and have not made up my mind on much at all
- I don't even agree with some of the things I say
- Good advice: *don't believe everything you think*

The Colorado PUC

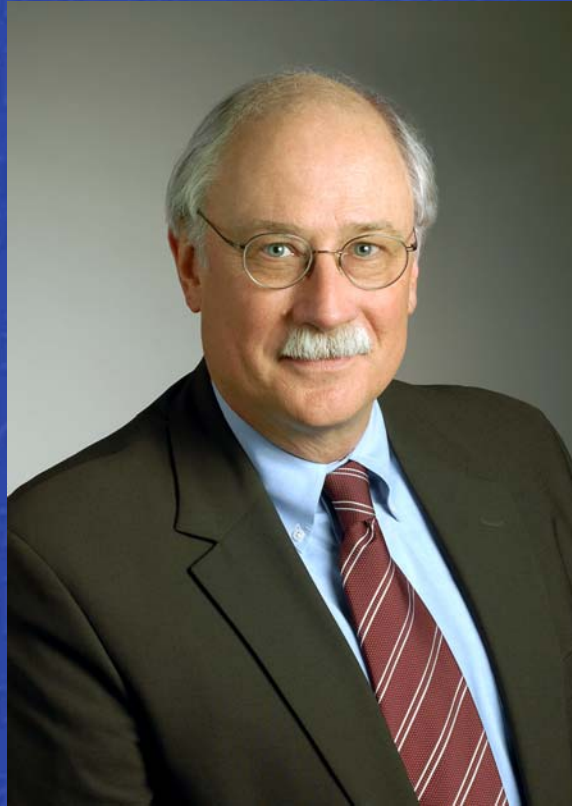
The Public Utilities Commission's mission is to achieve a flexible regulatory environment that provides safe, reliable and quality services to utility customers on just and reasonable terms, while managing the transition to effective competition where appropriate.

- Independent agency, created in the constitution
- Three Commissioners, appointed by the Governor
- Four year terms
- Partly judicial, partly legislative
- Ninety-member staff is an agency within the Department of Regulatory Agencies

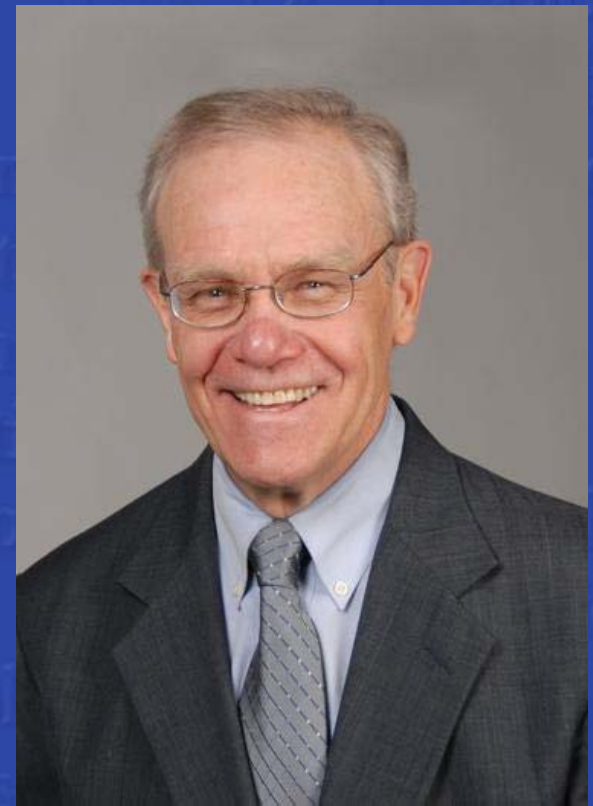
Colorado Commissioners



Matt Baker



Ron Binz

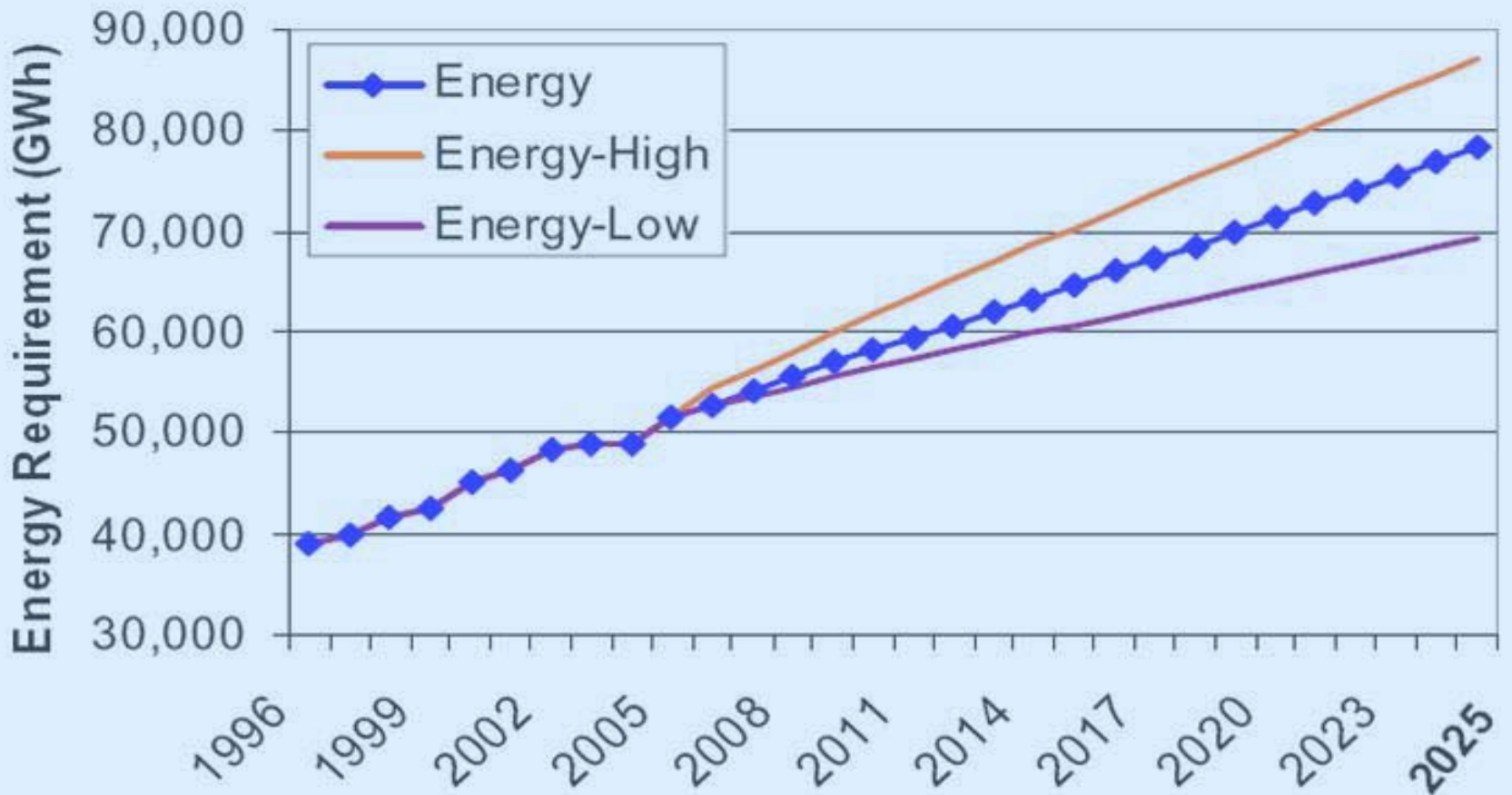


Jim Tarpey

The Challenge We Face

- 
- **Reduce Colorado's carbon emissions by 20% below 2005 levels by 2020**
 - **Reduce Colorado's carbon emissions by 80% below 2005 levels by 2050**

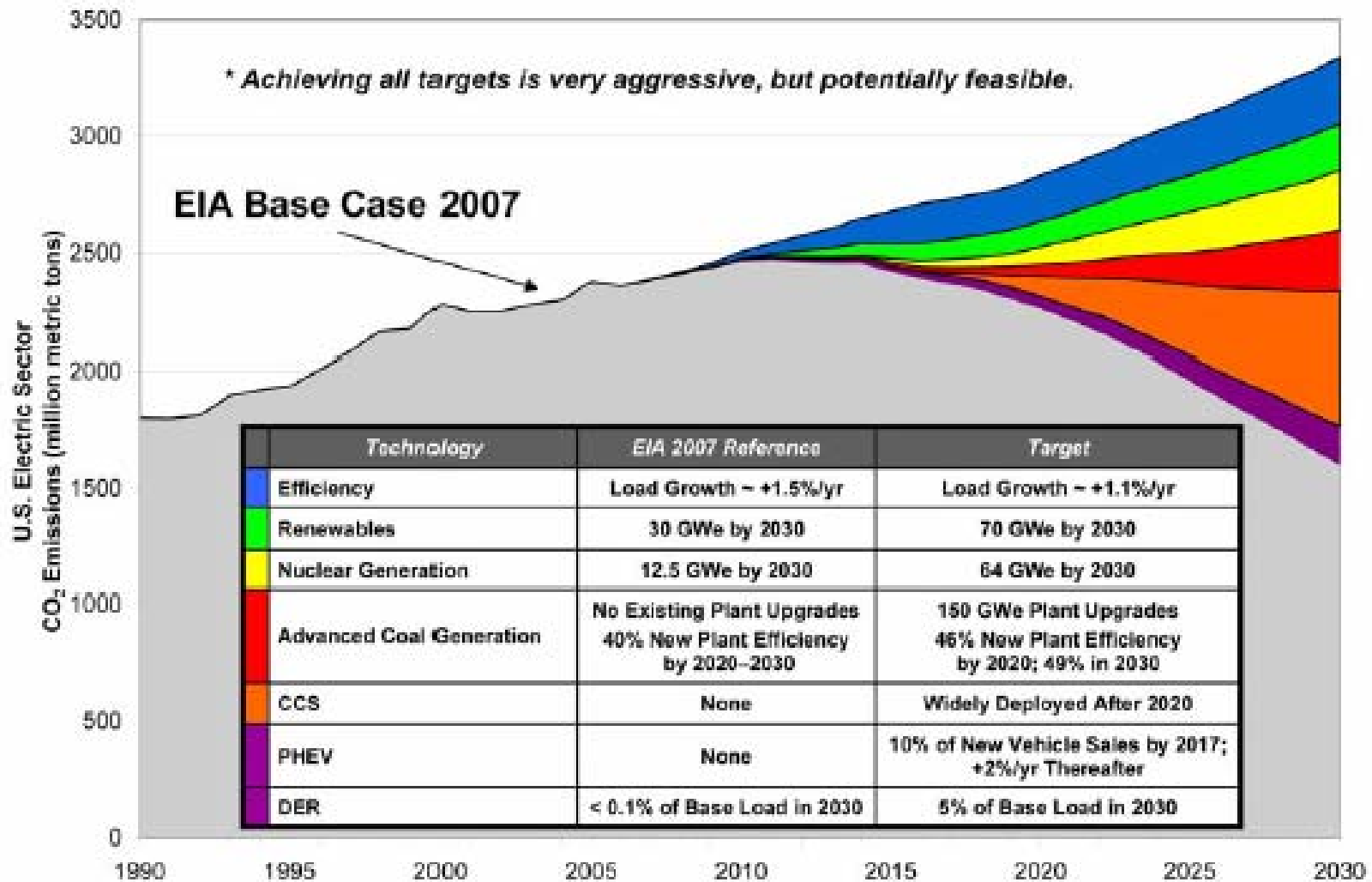
Projected Colorado Electric Energy Growth 2007-2025



The Take-Aways

- Colorado's demand for electric energy services is projected to grow 60% in the next seventeen years.
- Think of this curve as demand for energy services denominated in kilowatt-hours
- Projection does not include transportation applications for electricity (plug-in hybrids).

EPRI "Prism" Analysis



ASES “Wedge” Analysis

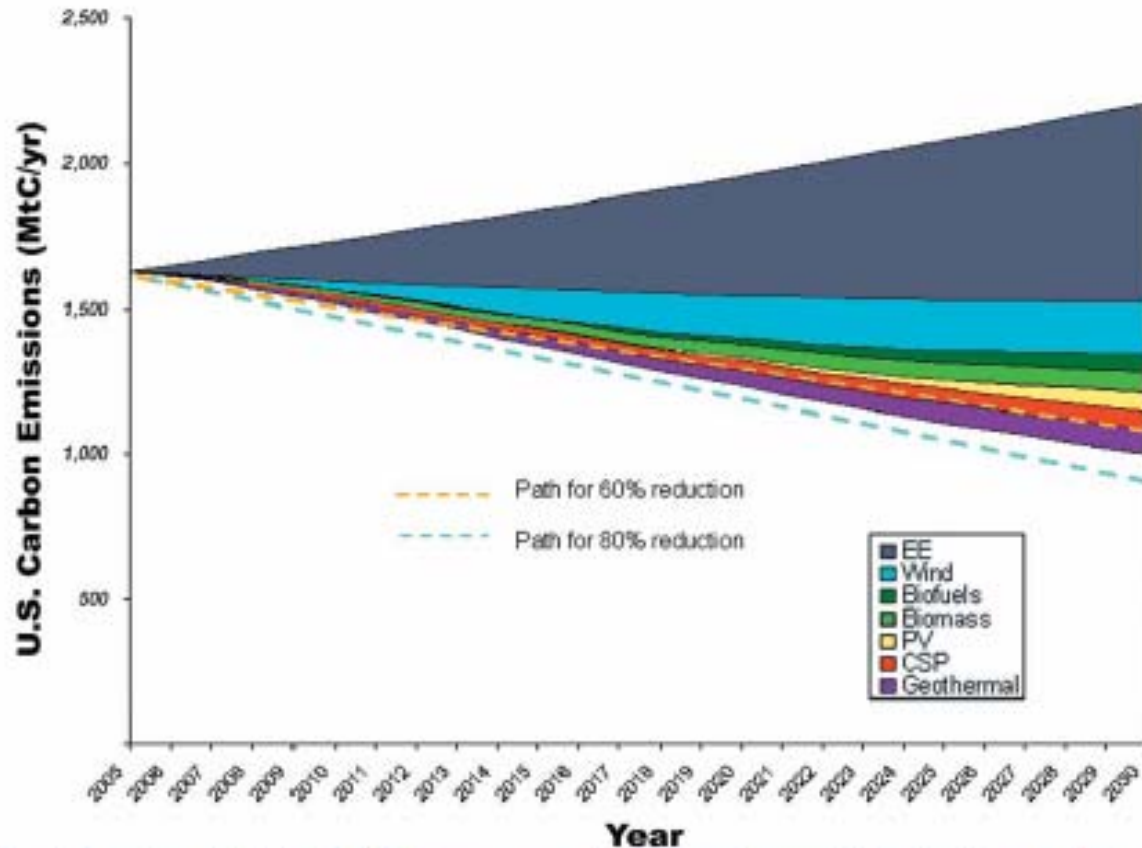
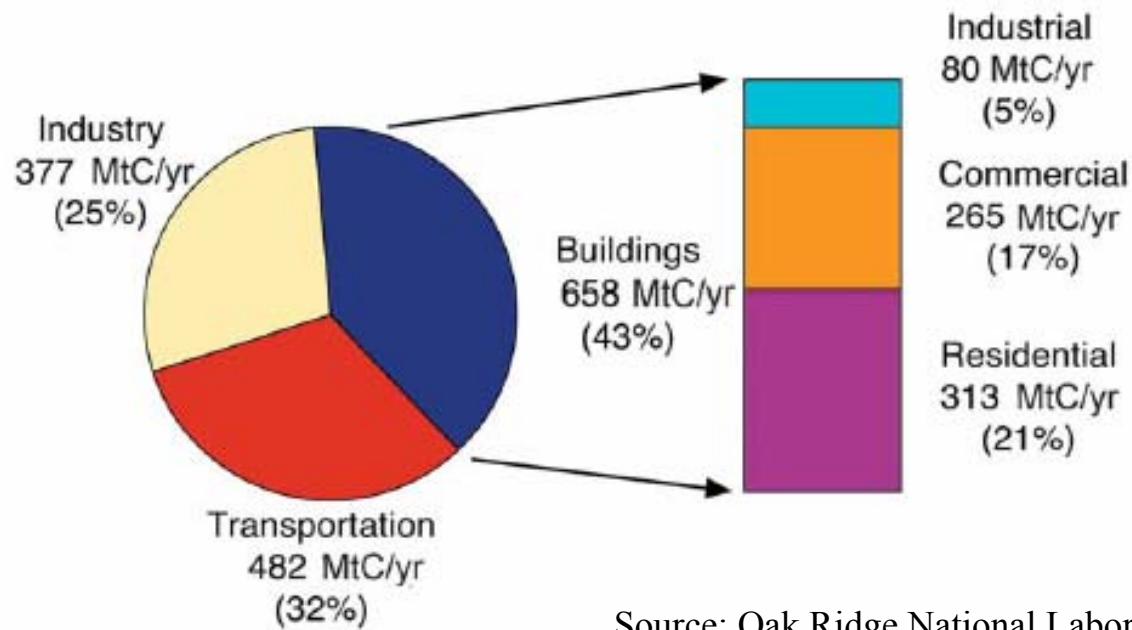


Figure 2. Potential carbon reductions in 2030 from energy efficiency and renewable technologies and paths to achieve reductions of 60% and 80% below today's emissions value by 2050.

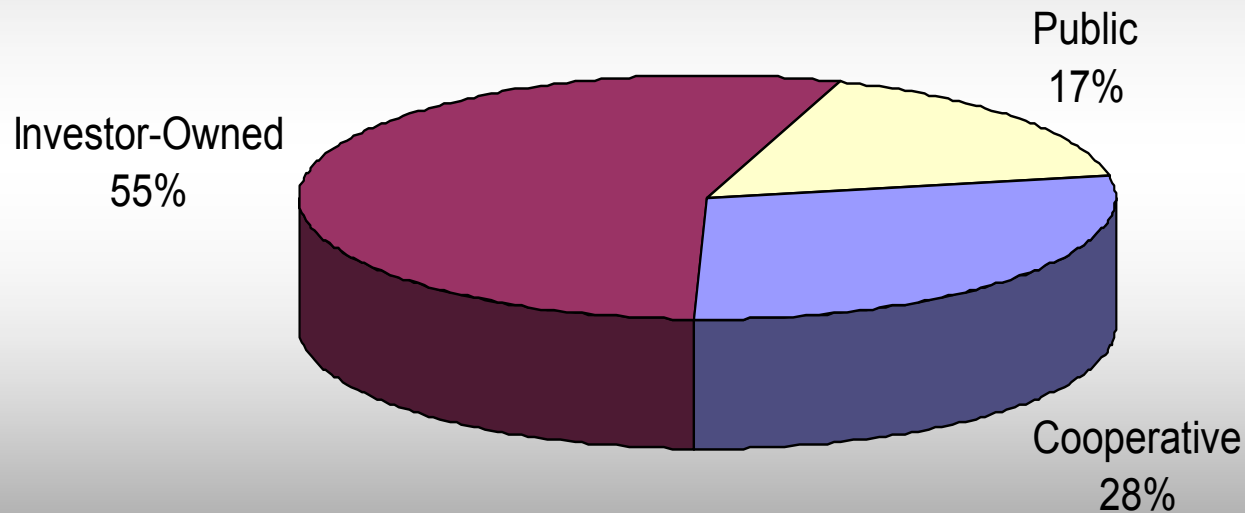
Sources of US Carbon Emissions (2002)

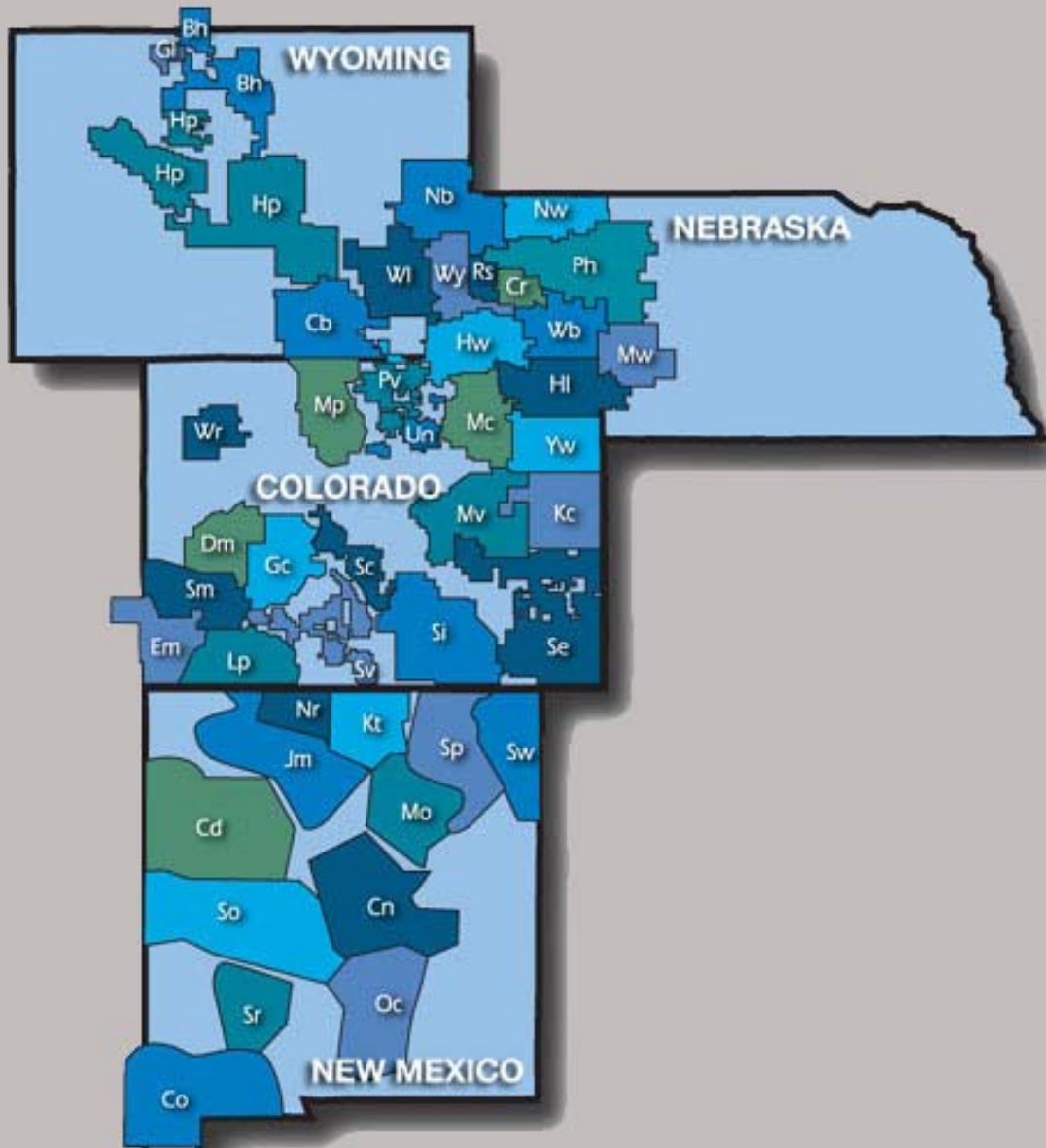


Source: Oak Ridge National Laboratory

Types of Colorado Utilities

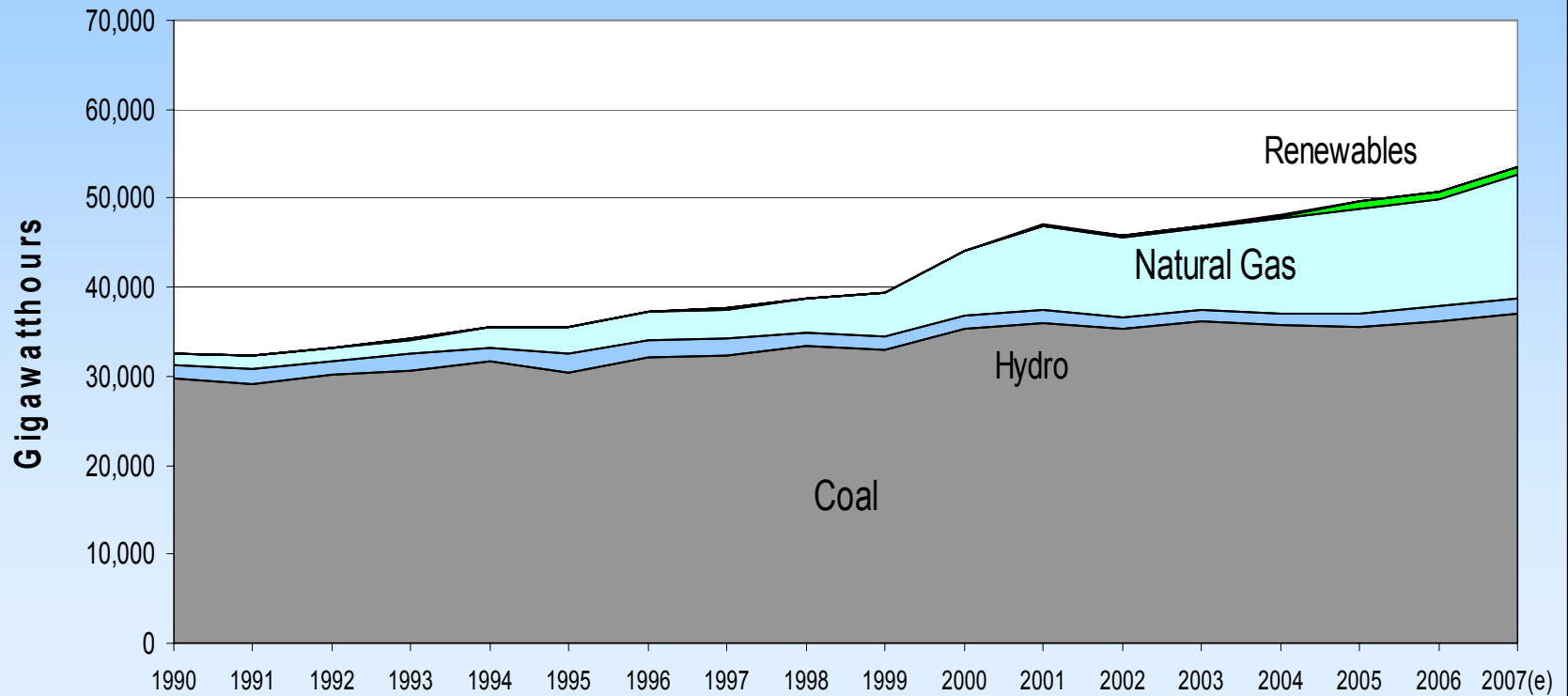
Colorado Energy Sales
by Type of Utility





Generation Fuels in Colorado

Colorado Electric Generation by Fuel Source 1990-2007



Elements Of A State Energy Strategy

- **Boost Efficiency**

- Customer: education
- Utility: engagement
- Rate structure changes

- **Stress renewable resources**

- Regulators and utilities with a commitment to addressing climate change
- State RPS
- Progressive resource planning at Commission
- Healthy renewables industry

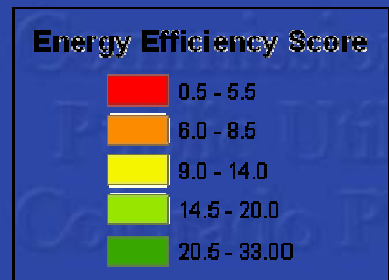
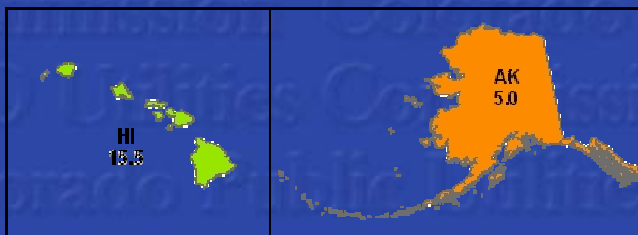
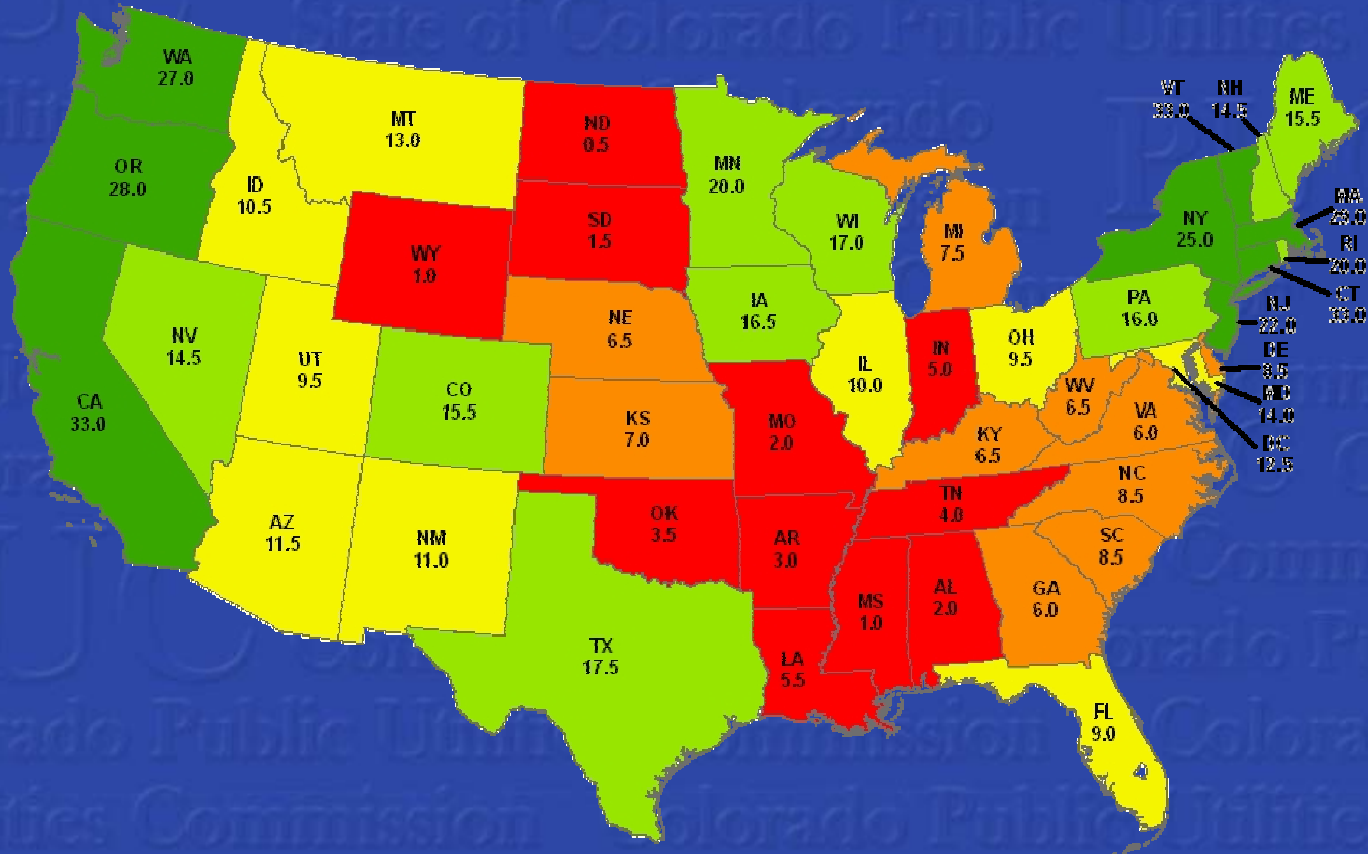
- **Advanced generation development**

- Research and demonstration for carbon sequestration

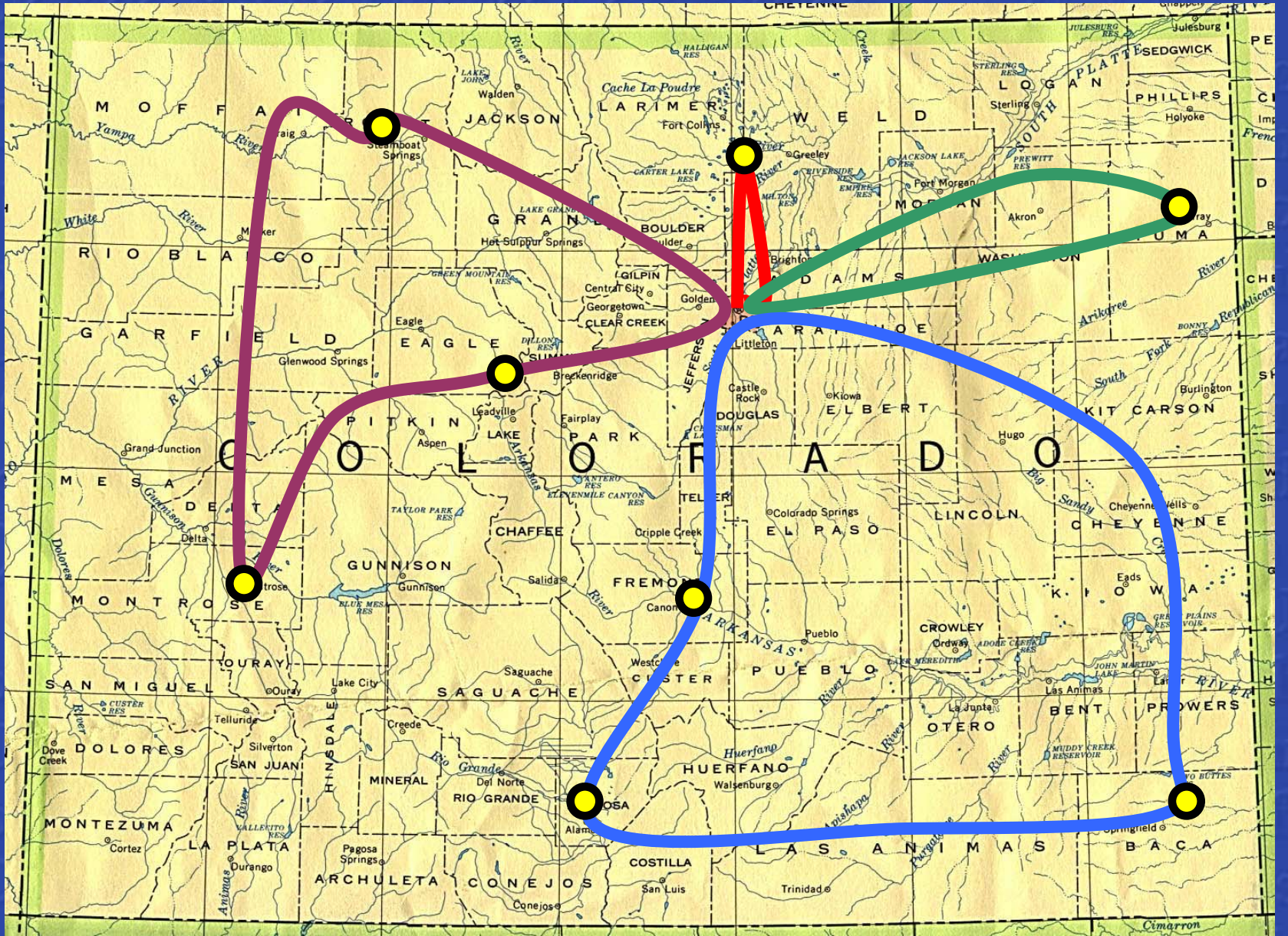
Elements Of A State Energy Strategy

- **Boost Efficiency**
 - Customer: education
 - Utility: engagement
 - Rate structure changes

ACEEE State Rankings



Customer Education





***We'll give you a light bulb
for your bright ideas...***

Join us at the PUC's Energy Town Meeting on
Tuesday, August 14, in Windsor, Colorado.

The first 75 people will take home two free compact
fluorescent light bulbs, courtesy of the PUC,
Lowe's and The Governor's Energy Office.

Customer Education

**Two 75-watt Compact Fluorescent Lights
will reduce CO₂ emissions by
One Metric Tonne over their lifetime**



Customer Education

- Consumer need to be told that the future belongs to the energy efficient.
- In more mundane terms, the key to avoiding future higher bills is using energy more efficiently.
- DSM programs should be spread to all customer classes
- Market transformation and early intervention is essential

Utility Engagement

- DSM goals in legislation
- Focus: utility should make efficiency a business
- Recent Commission rules establishing:
 - bonus mechanism
 - expedited cost recovery
- Tie-in to utility resource planning
- Conditions on a recent generator approval
 - Demand response solicitation
 - Expanding residential AC program

Utility Engagement, cont'd

- Colorado PUC's Inquiry into Utility Incentives
 - “Stem to stern” look at regulatory incentives
 - How to alleviate “build vs. buy” biases
 - How to align incentives for efficiency investment
 - How to retain management efficiency incentives

Changes in Rate Structures

- Colorado's Investigation of Rate Structure
 - Seasonal rates
 - “Inverted-block” rates
 - Time of use rates
 - Impact of smart grid technologies

Elements Of A State Energy Strategy

- **Stress renewable resources**

- Regulators and utilities with a commitment to addressing climate change
- State RPS
- Progressive resource planning at Commission
- Healthy renewables industry
 - See: Colorado's New Energy Economy

Some Conclusions

- This is no time for small ideas.
- Most states' energy efficiency activities are too small, probably by an order of magnitude. Look for transformation opportunities.
- Demand reductions are important to pursue in addition to energy reductions.
- It is possible to acquire significant renewable resources with an acceptable rate impact.
- Leadership and political will are needed.
- We are the leaders we've been waiting for.

Thanks for the invitation.

I look forward to your questions.