

Approved: 3-25-08

Date

MINUTES OF THE JOINT MEETING OF THE SENATE UTILITIES COMMITTEE AND THE
HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Chairman Jay Emler at 9:30 A.M. on March 18, 2008 in Room 313-S of the Capitol.

Committee members absent:

Committee staff present: Raney Gilliland, Kansas Legislative Research Department
Cindy Lash, Kansas Legislative Research Department
Mike Corrigan, Revisor of Statutes
Ann McMorris, Committee Secretary

Conferees appearing before the committee:

David Owens, EVP of Business Operations, Edison Electric Institute
Caren Byrd, Executive Director - Investment Banking Division, Morgan Stanley
(Biographicals - Attachment 1)

Others in attendance: See attached list

Chair Emler introduced the speakers who spoke to the group on the following:

Current National Issues Affecting the Electric Utility Industry

David Owens, EVP of Business Operations, Edison Electric Institute, stated we are confronted with some daunting challenges and concerned with our environment. He noted this is not a local, statewide or national but a global challenge. Core drivers to be balanced - (1) enormous capital expenditures; (2) rising costs and prices; (3) climate change; and (4) energy efficiency. He discussed demand projections; causes for rising energy demands; tomorrow's demands; transmission congestion; aging transmission infrastructure; electric capital investment requirements; natural gas investments; raw materials price indexes; equipment price increases; fuel costs; increasing reliance on natural gas; aging workforce; worldwide electricity demand; China's CO2 emissions; and national commitment to energy efficiency. (Attachment 2)

The Investor Outlook for the Electric Utility Industry

Caren Byrd, Executive Director - Investment Banking Division, Morgan Stanley, discussed electric industry challenges. She explained capital requirements for the next 15 years involving conservation and efficiency; environmental retrofits; transmission; distribution; and generation. Other areas of information were on rate pressures; environmental concerns, technology opportunity and collaboration. (Attachment 3)

Members of both the House and Senate Committees asked many questions of the conferees.

Adjournment.

Respectfully submitted,

Ann McMorris, Secretary

Attachments - 3

JOINT MEETING OF
 SENATE UTILITIES COMMITTEE
 AND
 HOUSE ENERGY & UTILITIES COMMITTEE

GUEST LIST
 DATE: MARCH 18, 2008

Name	Representing	Name	Representing
- David O'Epiney		Carb	
Steve Miller		Sunflower	
Lindsey Douglas		Hein Law Firm	
Maril Hazlett		CEP	
Tom Thompson		Sierra Club	
Carol McDowell		Tallgrass Ranchers	
Erz Brosius		KS Energy Council	
Will Lawrence		Capital Consulting Group	
Doug Smith		Pinegar, Smith & Associates	
Steve Johnson		ONEOK, Inc.	
Rick GREENO		LABORER'S LOCAL 1290	

JOINT MEETING OF
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GUEST LIST
 DATE: MARCH 18, 2008

Name	Representing	Name	Representing
Joe Duke	KCBPU		
Wes Ashton	Aquila		
Tom Day	KCC		
Shirley Ashcraft	KDHE		
Mick Urban	KCS		
Stacey Harden	CURB		
Patricia Lucas	KEPL		
Lindsey Douglas	Heinlaw Firm		
Dawn Holzkamp	KEC		
Kimberly Lorenz	KIMU		
John C. Battenby	Westar		
Paul Johnson	Ks Cath Conf		

Joint Meeting of the House Energy and Utilities Committee and Senate Utilities Committee

March 18, 2008

David Owens

David K. Owens is Executive Vice President, Business Operations, at the Edison Electric Institute (EEI). Owens has responsibility over the strategic areas of energy supply and the environment, energy delivery, energy services and international affairs. Prior to joining EEI, Owens served as Chief Engineer of the Division of Corporate Regulation of the Securities and Exchange Commission. Owens also was an engineer in the Division of Rates and Corporate Regulation at the former Federal Power Commission and worked as a design and test engineer for General Electric and Philadelphia Electric Companies, respectively.

Owens has over 35 years of energy-related experience. He is a recognized authority on utility issues frequently appearing in proceedings before Congress and the states. He frequently appears on television and radio forums addressing energy issues. Owens holds a BS and Masters Degree from Howard University and a Masters in Engineering Administration from George Washington University. He is on the Board of AABE.

Caren Byrd

Caren Byrd is an Executive Director in Morgan Stanley's Global Power and Utility Group. She joined the Investment Banking Division of the firm in 1972, and has focused all her career on the electric utility industry. She is an expert on the requirements of investors in the equity and debt securities of this industry. Over the years, she has been involved in the firm's utility activities for the electric utility industry including financing, advisory services, restructuring and mergers and acquisitions.

She currently serves on the Advisory Council of the Institute of Nuclear Power Operations (INPO), having previously served in this capacity for seven years (1986 – 1993). She has also recently been named to the Advisory Council of the Electric Power Research Institute (EPRI). Additionally, she had been involved with the Nuclear Energy Institute's outreach program to the New York financial community. Byrd is a chartered financial analyst, a member of the CFA Institute, the Wall Street Utility Group, and the New York Society of Security Analysts. She received a Bachelor's Degree from Smith College and an MBA degree from the Wharton School of Finance, University of Pennsylvania.



**EDISON ELECTRIC
INSTITUTE**

Senate Utilities Committee
March 18, 2008
Attachment 2-1

Key Electricity Issues

David K. Owens
Executive Vice President
Edison Electric Institute

Kansas State Legislature
March 2008

Transformation or Chaos? The Challenge of Balancing Core Drivers

Enormous CapEx

\$750 -900 Billion
Exceeds current capitalization
Major new coal and nuclear and transmission

Rising Costs and Prices

No longer a declining cost industry
Fuel, infrastructure components,
global industrialization and competition

Climate Change

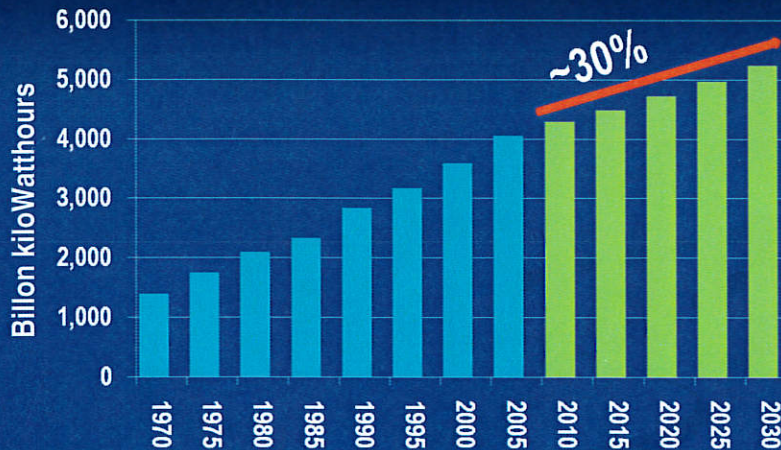
Dozen bills pending in Congress
States becoming aggressive
Role of Renewables
> \$1 Trillion ???

Energy Efficiency

Low hanging fruit for Climate Change
Need to make it a sustainable business
"Smart" appliance, buildings, grid



Demand Projected To Increase 30% by 2030



Sources: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2006* and *Annual Energy Outlook 2008 Early Release*
*Electricity demand projections based on expected growth between 2006-2030

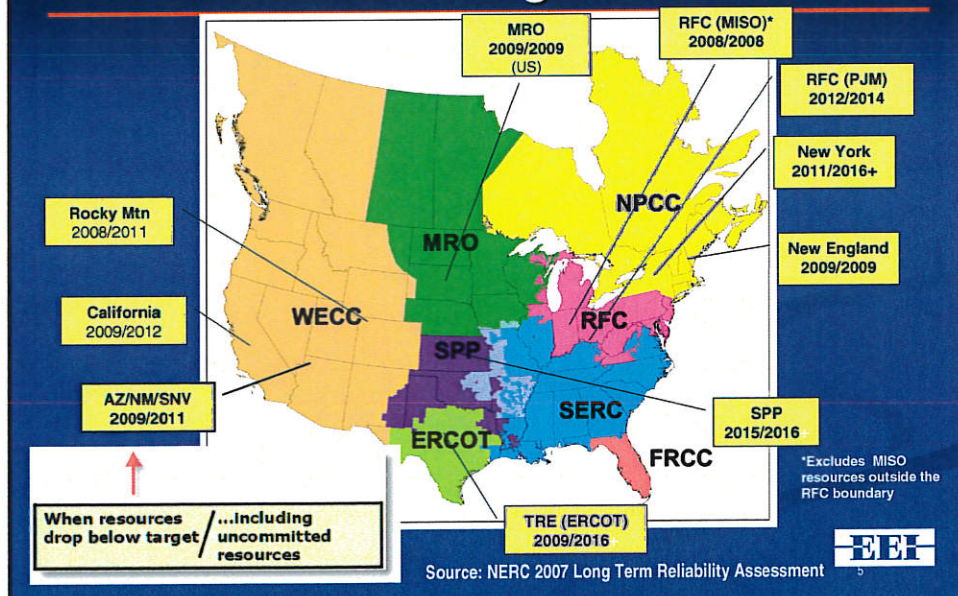


Causes for Rising Demand

- Increasing population **11.18% in 10 years**
- Increased economic growth **50.1% in 8 years**
- Increased number of homes with central A/C **49% in 9 years**
- Plasma TVs up **50%** 1st Qtr 05 from 1st Qtr 04
- MP3 players up **>17 million in one year**
- Average US household owns **26 consumer electronics products**
- Increased number of homes **47.85% in 8 years**
- Increased number of larger homes **72% in 9 years** (over 2400 sq. ft.)



Margins Projected to Fall Below Minimum Target Levels

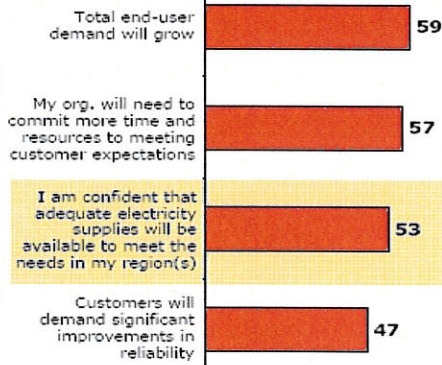


Can We Meet Tomorrow's Demand?

There is growing concern that the industry won't be able to meet surging demand



Five Year Trends
(% Agree Completely/Somewhat)



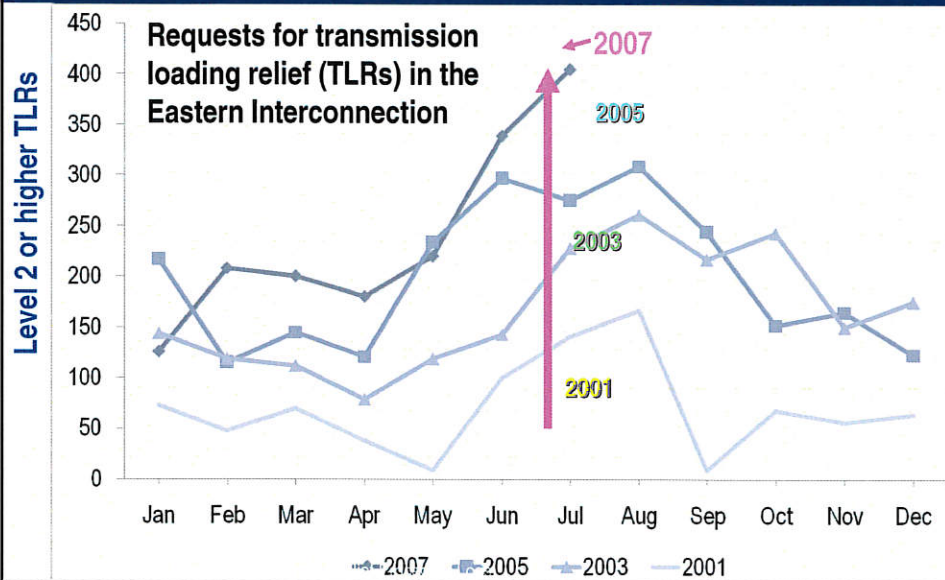
- In the next 5 years, only **53%** of respondents are **confident** they will be able to provide the needed supply in their region.

- Other survey data suggests generation commitments are being deferred.

47% NOT confident

Q39. Thinking about five years from today, how much do you agree with each of the following statements (5-point scale)?
Source: GF Energy 2007 Electricity Outlook: Entering the Climate Zone, June 18, 2007

Transmission Congestion Dramatically Increasing



Aging Transmission Infrastructure

- “Rising Utility Construction Costs: Sources and Impacts”
 - Edison Foundation/Brattle Group Report
- 70 % of **transmission lines** are 25 years or older
- 70 % of **power transformers** are 25 years or older
- 60 % of **circuit breakers** are more than 30 years old

http://www.globalenvironmentfund.com/GEF%20white%20paper_Electric%20Power%20Grid.pdf



Infrastructure Affects Reliability

Number one challenge facing reliability today
(NERC's 2007 Survey of Reliability Issues)

***“High likelihood ... reliability risk due to
aging infrastructure and limited new
construction”***

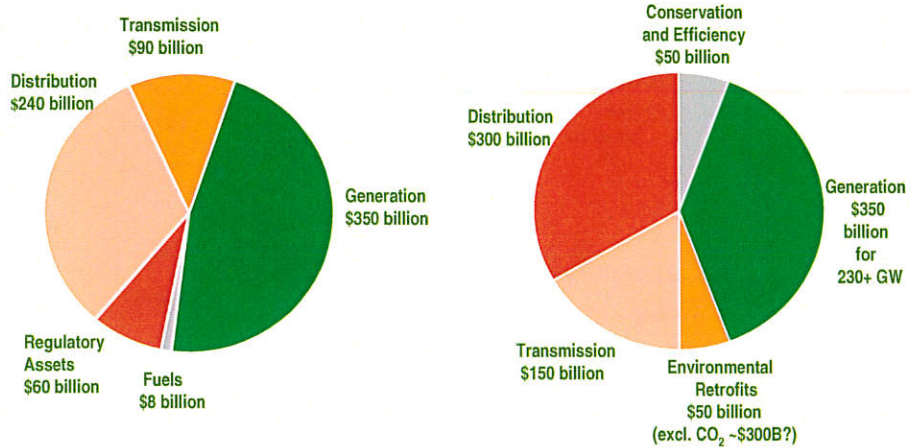
www.nerc.com/pub/sys/all_updl/docs/pubs/Reliability_Issue_Survey_Final_Report.pdf



Significant Electric Capital Investment Required

Existing Net Plant in Service \$750 Billion⁽¹⁾

Investment Need for Next 15 Years: \$900 Billion⁽²⁾



1. End of 2006. 2. 2006 dollars
Source: Lehman Brothers, July 2007



Significant Natural Gas Investments Required

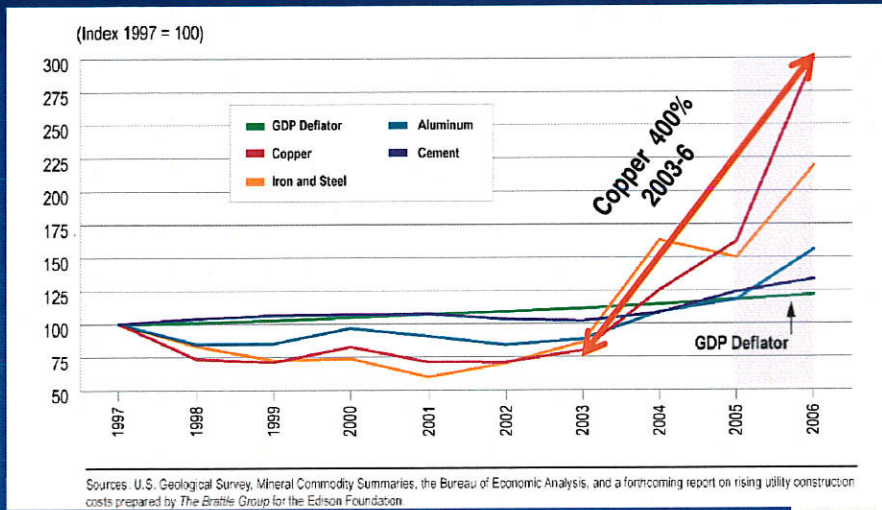
- **Distribution \$5.3 billion / year**
 - Net distribution gas plant = \$46.6 billion
- **Transmission \$2.4 billion / year**
 - Net transmission gas plant = \$50.1 billion
- **Natural Gas Exploration / Supply \$47.2 billion / year**

Source: National Petroleum Council's 2005 report, *Balancing Natural Gas Policy*

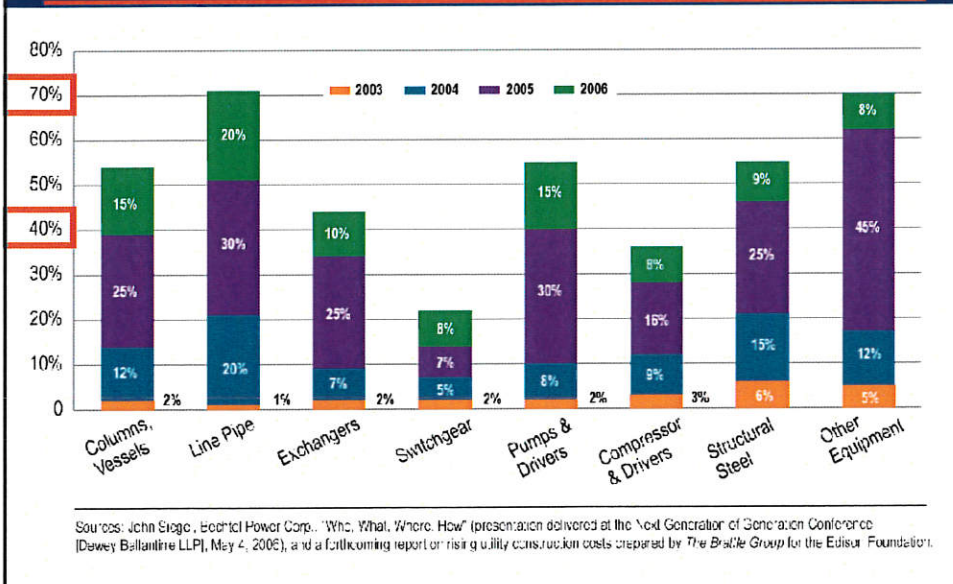


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Raw Materials Price Indexes

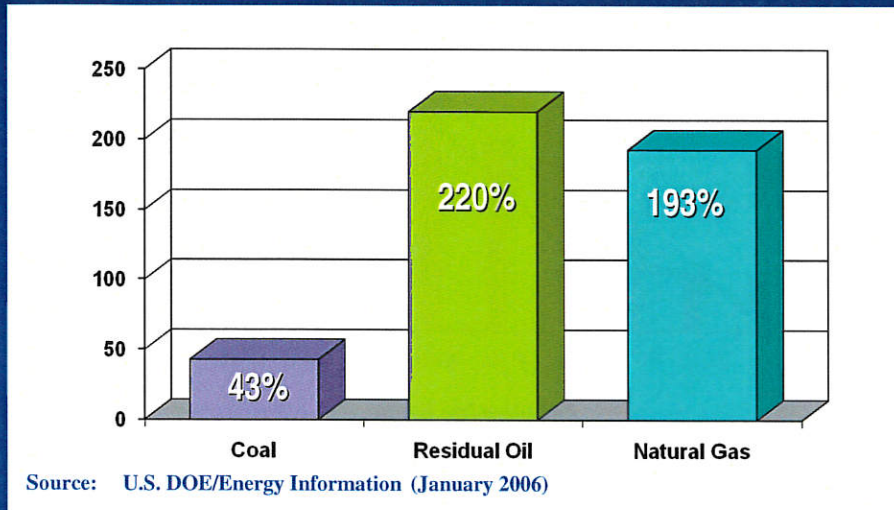


Equipment Price Increases 2002-2006



Fuel Costs Increasing Dramatically

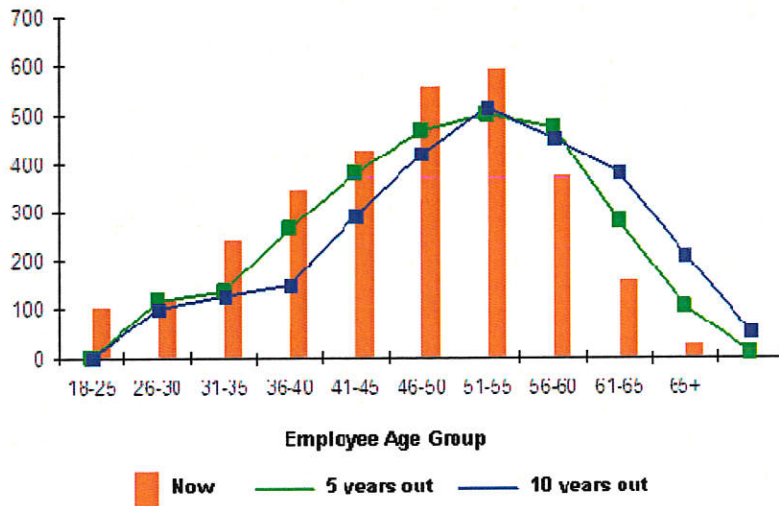
1999 – 2006



Increasing Reliance on Natural Gas

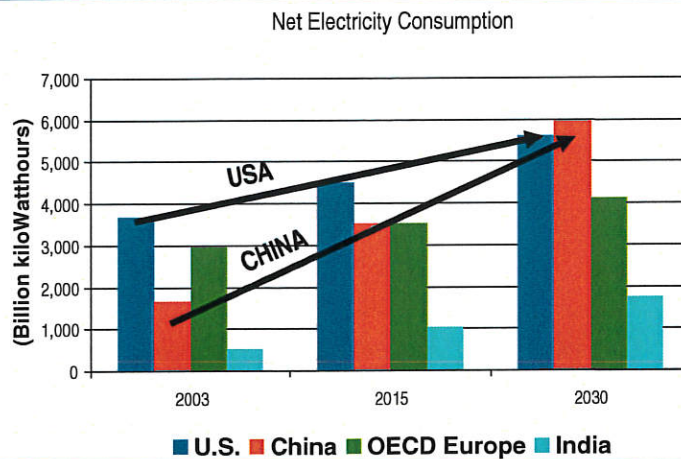
- Continued dependence on natural gas for electric generation
- Dependency could impact reliability
 - Competition increasing for gas supply and delivery capacity
 - Canadian imports declining
- Can overseas markets provide new supply?
 - Requires new LNG terminals
 - Increase the grid's exposure to global economic and political risk
- Steps already taken to mitigate reliability impact ... But more needs to be done

Aging Workforce



Source: KEMA

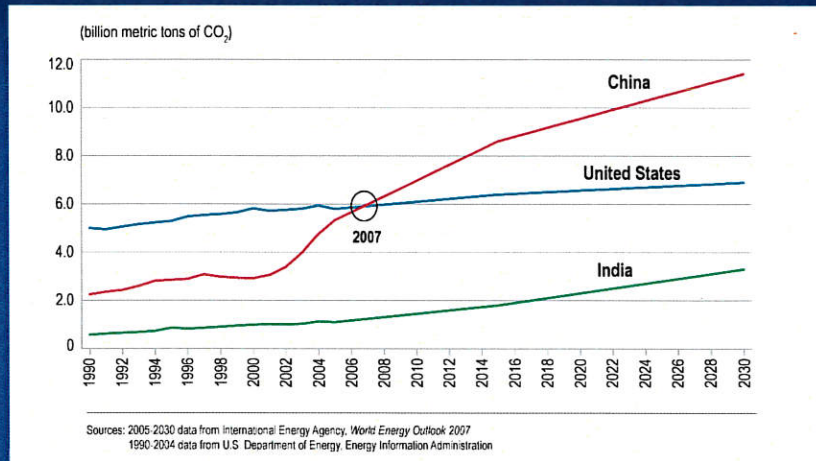
Worldwide Electricity Demand Growth



Source: Energy Information Administration, *International Energy Outlook 2006*



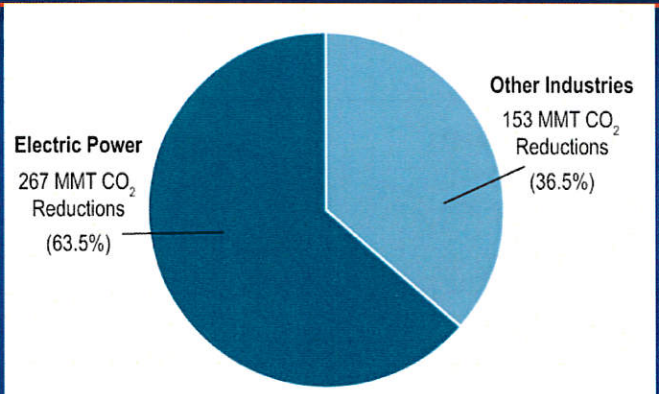
China's CO₂ Emissions Surpass U.S. in 2007



* Based on projected data from the International Energy Agency, November 2007.



Electric Power Sector Leads All Other Industrial Sectors in Reducing CO₂



2005

Note: million metric tons (MMT) represent the greater of project or entity amount, on a reporter-by-reporter basis.

Source: EIA Voluntary Reporting of Greenhouse Gases Program, 2005 Annual Report. Analysis by Edison Electric Institute.

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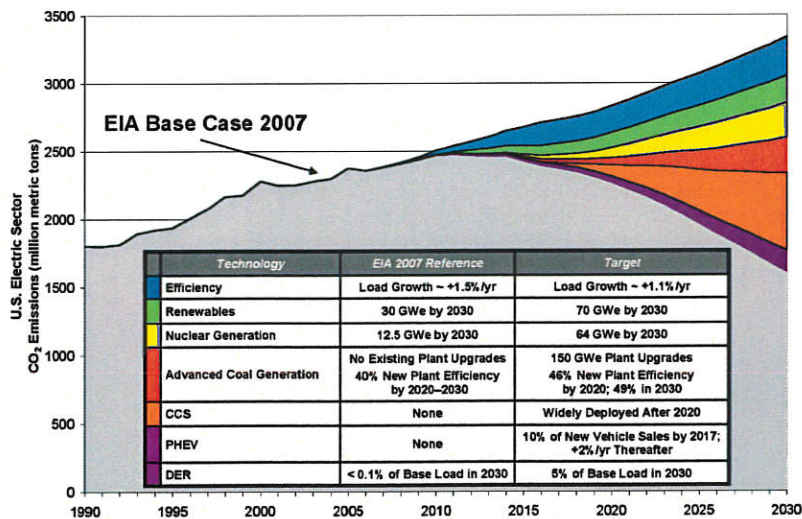
What Will It Take?

There Is No Silver Bullet!

- Renewables
- Energy Efficiency
- Clean Coal Technologies
- Carbon capture and storage
- Nuclear
- Plug-in hybrid electric vehicles



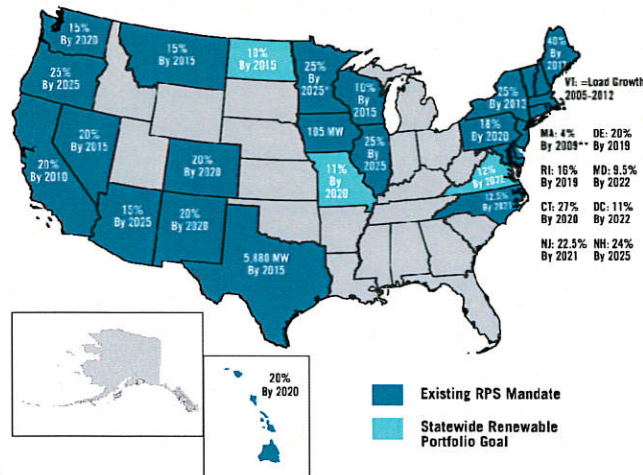
CO₂ Reductions ... What's Technically Feasible



* Achieving all targets is very aggressive, but potentially feasible

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26 States & D.C. Mandate Renewable Portfolio Standards (RPS)



What Will It Take?

An Intensified National Commitment To Energy Efficiency

- Aggressive campaign for technologies
 - Smart buildings
 - Smart appliances
 - Smart electric meters
 - Smart thermostats
- Use of “smart technologies” and new rate designs can
 - Allow consumers to control their energy usage to save money
 - Avoid wasting energy
 - Control how and when appliance do their jobs
 - Help utilities efficiently operate their systems and maintain reliability
 - Help keep supply and demand in balance
 - Support more efficient use of generating resources
- Commercializing plug-in hybrid electric vehicles



Key Elements In GHG Debate

- We need a full suite of technologies
- Harmonize compliance dates and technology availability
- An effective cost containment mechanism to avoid economic disruption
- Robust domestic and international offsets to lower costs and promote effectiveness
- Requirement that developing countries participate – China / India



Challenge: Technologies and Timeframes

- **Clean coal technologies**
 - Not commercially available until **2015**
- **Carbon capture and storage (CCS) technologies**
 - Not commercially available until **2020-2025**
- **Deployment of nuclear plants**
 - Not possible until **2015** at earliest



Summary: **Challenges Are Plentiful**

- **Supply margins are declining and demand is increasing**
 - Need significant infrastructure investment but costs increasing rapidly
- **No longer a declining cost industry**
 - Need significant outreach to explain the reasons for increasing cost
- **Aging workforce increasingly important**
 - Need to support programs for science and engineering
- **Increasing concerns about the environment**
 - Need to accelerate development and deployment of new technologies
- **Energy efficiency is viable option**
 - Need to create regulatory climate for making EE a sustainable business

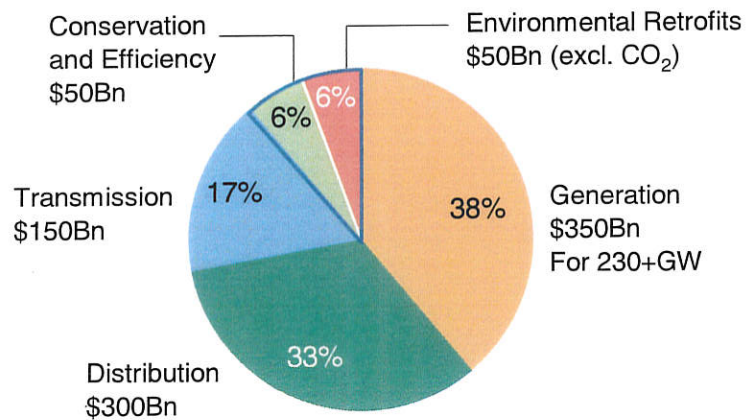


Kansas Electricity Briefing

Caren Byrd, Executive Director, Morgan Stanley, New York

Electric Industry Challenges

Capital Requirements Next 15 Years



Rate Pressures

- “Catch-up” rate cases
- Rates to reflect \$1T capital expenditures
- Incremental costs for Global Warming Offsets

Ratepayers
Regulators

Environmental Concerns

- Greenhouse Gas costs
- Renewable Portfolio Standards
- Energy Efficiency impact
- Clean Coal
- Nuclear Spent Fuel

Technology Opportunities

- Energy efficiency
- Alternative Energy
- Smart Grid
- Etc, etc, etc.

Collaboration Essential

- Rate Regulation
 - Pre-approvals for cap ex
 - Incentives for energy efficiency
 - Opportunity for fair return
- Energy Policy
 - Non-partisan
 - Long-term
 - Positive business environment
- Informed Stakeholders