



2012: The Year In Review

Dave Mohre
*Executive Director,
Energy & Power Division*



NRECA

A Touchstone Energy® Cooperative 

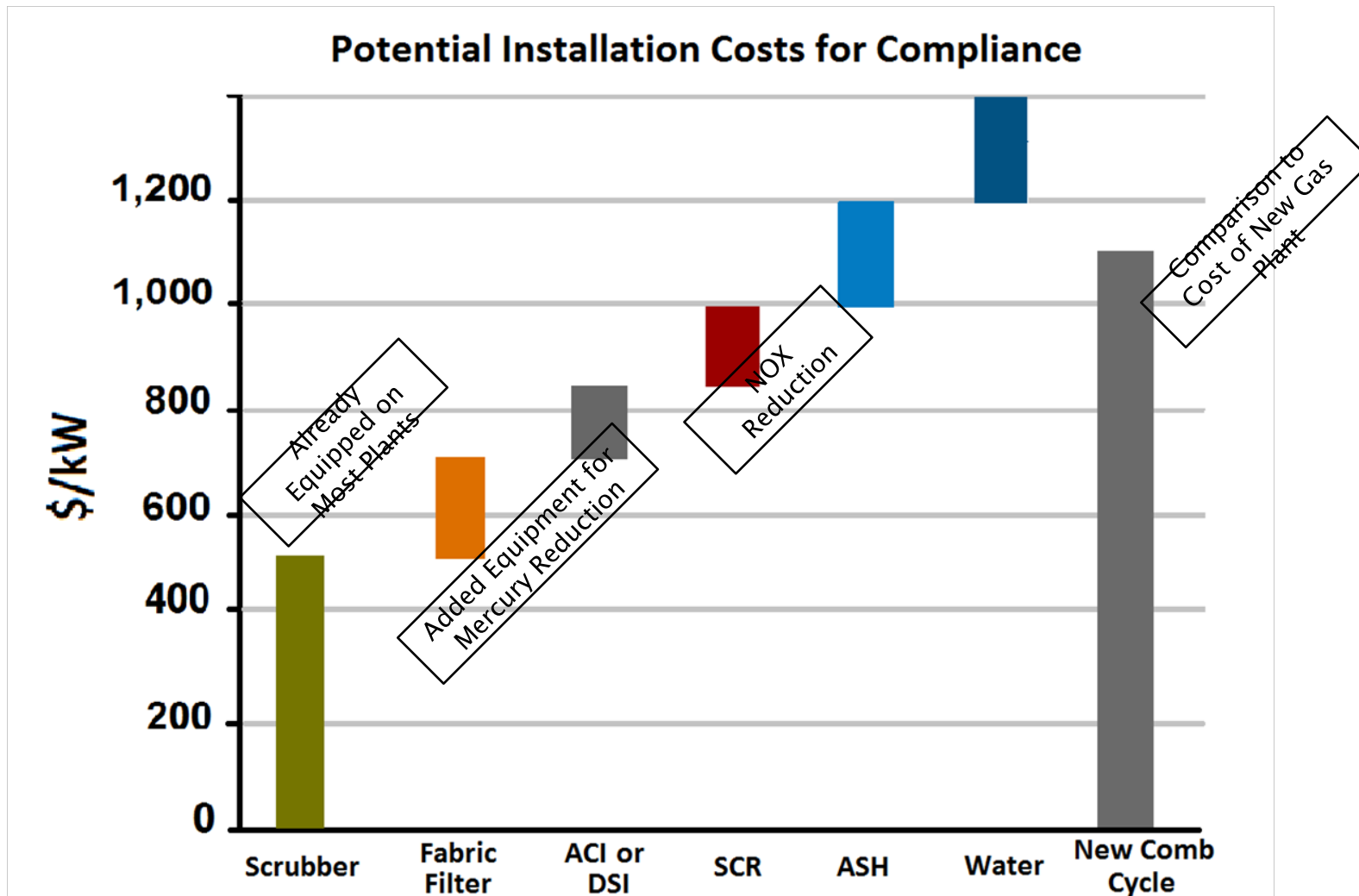
Macro-Level Issues

- Environmental Regulations
- Low Cost Natural Gas
- Reduced Load Growth
- State, Federal Mandates
- FERC Orders, Enforcements, Policy Positions

Environmental Regulations

- Death of 1000 cuts continuing for coal
- Expected shut down of 55-75,000 MW coal capacity
- Remaining coal plants must add additional environmental controls at substantial costs
- Proposed NSPS (50% carbon capture) means no new coal generation

Cumulative Environmental Capital Cost

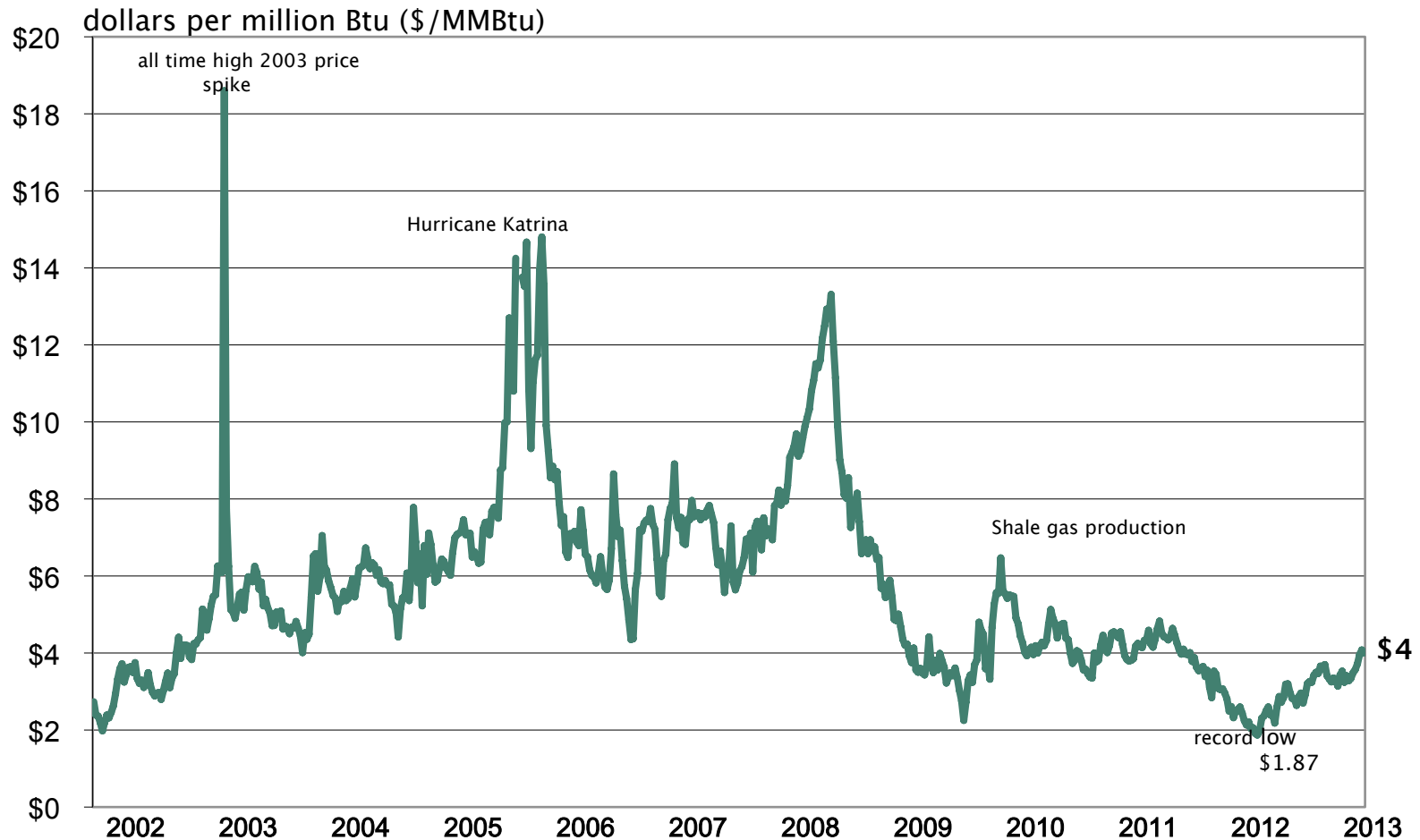


Low Natural Gas Prices

- Have already shifted some energy generation from coal to natural gas
- Makes Natural Gas Combined-Cycle the current dispatchable generator of choice for new construction
- Calls into question resource life; pipeline capacity; gas/electric coordination; other issues

Natural Gas Prices at the Henry Hub

January 2002 through April 2013



SOURCE: Henry Hub Natural gas Spot Price Archive <http://www.neo.ne.gov/statshtml/151.htm>

April 11, 2013

Forecast Production Shift to Natural Gas from EPA Regs, Market Forces

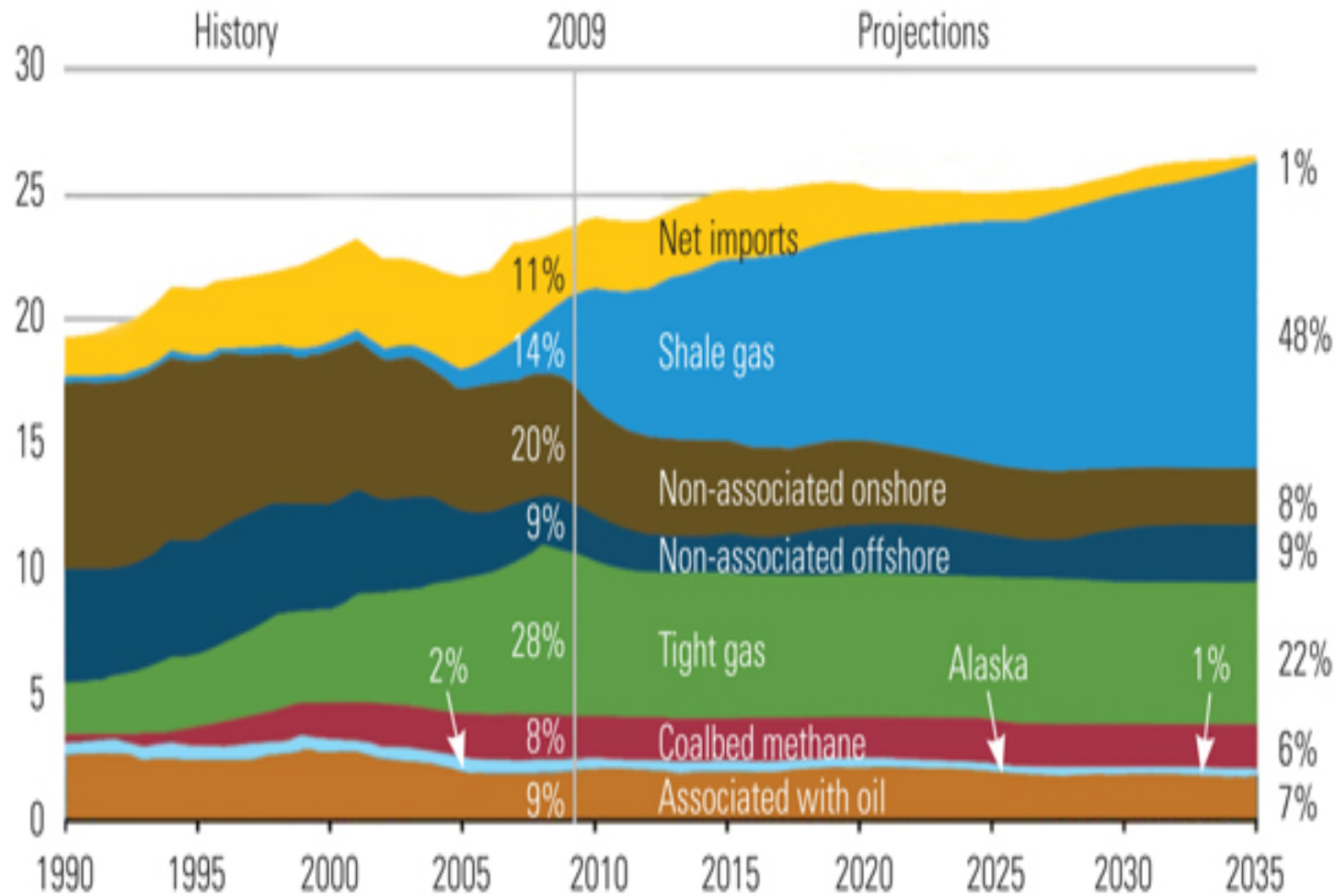
COAL Generation:

Coal	20 years	51%
Coal	2012	38%
Coal	2036	16-34%

NATURAL GAS Generation:

Gas	20 years	16%
Gas	2012	31%
Gas	2036	30-44%

Sources of Natural Gas Production (Tcf)



Source(s) – US Energy Information Administration

New Generating Technology

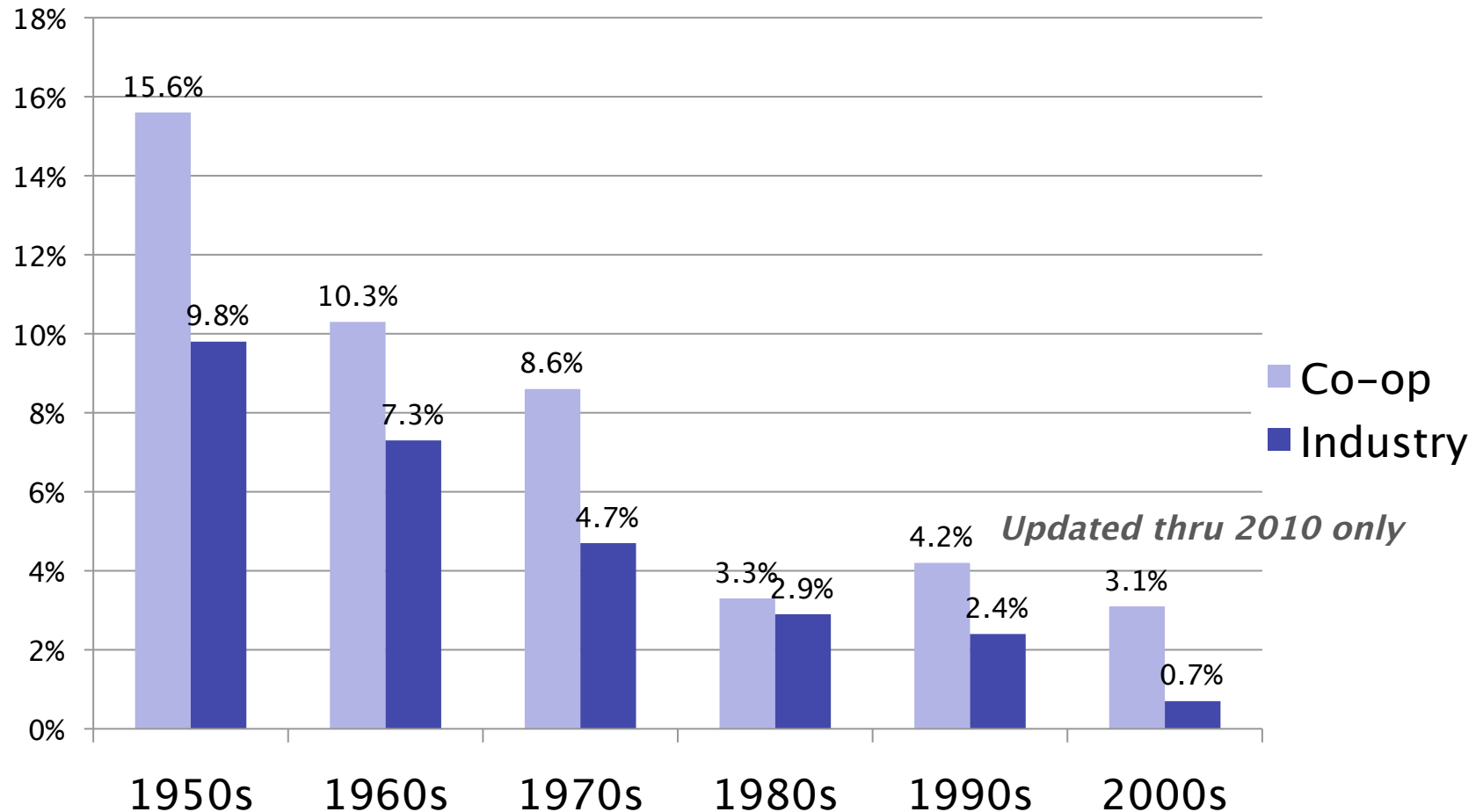
- GE 109 FB natural gas combined-cycle
- 61% efficiency
- Cold start to full load in 75 minutes
- 250MW to 435MW in 10 minutes
- Perfect for load-following, back-up to wind, other intermittent generation
- If gas \$4.00, busbar cost 6 cents per kWh

Reduced Load Growth

- Caused by a slower economy, a changing economy, but also efficiency and productivity gains that are permanent
- Takes some pressure off building new generation in some regions
- But impacts different regions of nation differently

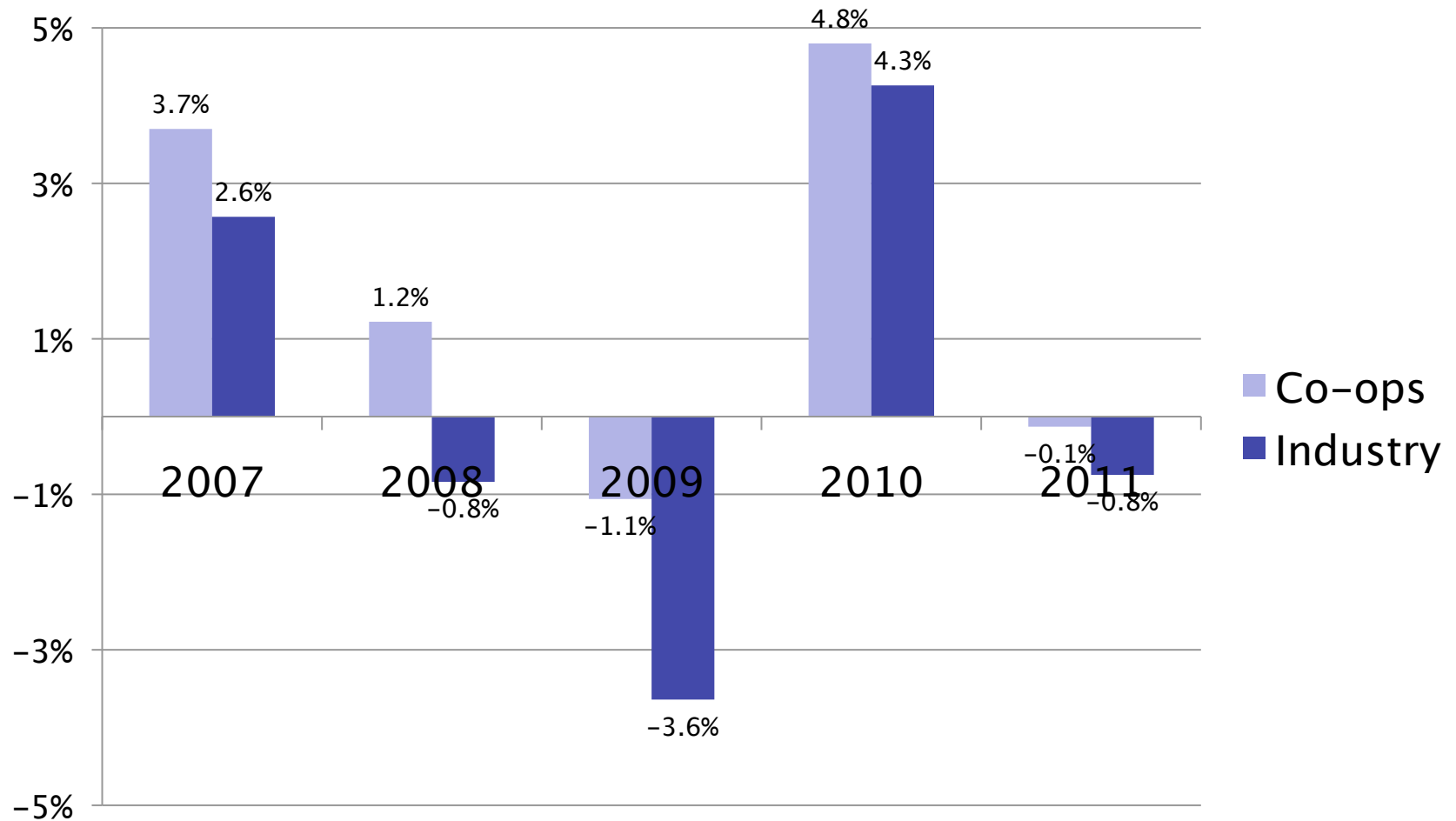
Six-Decade Deceleration of Electricity Demand

Annual Sales Growth Rates by Decade



Electricity demand growth has slowed in each decade since the 1950s. After 9.8% annual growth in the 1950s, demand increased 2.4% per year in the 1990s for the industry as a whole. Co-ops grew faster than the industry but have also declined each decade with the exception of the 1990s.

Co-op Sales Growth Leads Electric Utility Industry



Perspective on Demand

- Flat/minimum growth is forecast, but some areas will grow
- Will cheap shale gas produce a resurgent manufacturing sector, or will we export shale gas via LNG, or both

State Renewable, Efficiency Mandates

- 29 States, D.C. and 2 territories have Renewable Portfolio Mandates
- 22 of those 29 States have specific allocations for solar, wind, CHP, etc.
- 8 States and 2 territories have Renewable Portfolio Goals
- States looking at Efficiency Mandates

Federal Mandates?

- BTU/Carbon Taxes?
- Clean Energy Generation Standards?
- Cap and Trade Mechanisms?
- Renewable Portfolios?
- Appliance Efficiency/Building Code Standards

FERC Orders: Transmission.

- Order 1000 Compliance filings arrived January 2013
- We support open, inclusive, regional planning processes, and beneficiary pays
- Concerns about “build it and they will come” implications of “Public Policy” considerations
- Major concern with policy allowing 3rd party transmission outside of regional planning
- Additional concerns regarding no open access requirement for 3rd party transmission

Related Transmission Issues

- Coops strongly supported Epact 92 to effect generation competition based on open access transmission, so any movement away from that principle is a concern
- Additional concerns includes the expanding size of independent transmission, and the potential impact on competition and available transmission capacity for LSEs
- And FERC continues to ignore 217(b)4's instructions from Congress

217(b)4 says:

- “...exercise the authority of the Commission under this Act in a manner that facilitates the planning and expansion of transmission facilities to meet the reasonable needs of **load serving entities**, and enables load serving entities to secure **firm transmission rights** (or equivalent tradable or financial rights) **on a long-term basis** for long-term power supply arrangements made, or planned, to meet such needs.”

FERC's War on Market Manipulation

- Getting tough on market manipulation, enforcement: see JP Morgan; Barclays Plc; Constellation Energy Group, Inc; et. al.
- Will FERC license traders to control things
- FERC also going after Demand Response market manipulation: see Lincoln Paper and Tissue, LLC.; Rumford Paper Company; Competitive Energy Services, LLC. ; and, Richard Silkman
- Keep up the good work!

FERC: Capacity Markets and MOPRs

- Major issues continue with Buyer Market Power protection in PJM and NE-ISO
- No response yet to PJM MOPR filing to resolve issue using net-short, net-long approach
- NRECA, APPA, PJM Industrial Coalition, States of New Jersey and Maryland, et. al. still in 3rd Circuit
- Meanwhile PJM Market Monitor says Capacity Market “not competitive”----SURPRISE!!!!

Other Concerns

- Reliability impacts of coal shutdowns.
- Entergy in MISO. Really???
- Better FERC balance on renewable integration
- Need after-the-fact merger reviews to see if analysis was accurate, and if “savings” actually occurred
- Review of impact of probable Ch. 11 filing of biggest LBO in history: the TXU private equity buy-out for \$45 billion