Future Trends: Energy

Paul Kowalis
Market Manager
Commercial and Industrial

Why Does Xcel Energy Want Its Customers to Use Less Energy?

- It's good for our customers.
  - Our rebates reduce the payback period for energy-saving improvements
  - Energy-efficient equipment lead to lasting energy savings

- It's good for energy prices.
  - Reduces amount of energy we need to generate
  - Helps limit our need to purchase energy on the open market

- It's good for the environment.
  - The cleanest kilowatt is the one not produced
  - Current programs have already eliminated the need for an additional medium-sized power plant

Energy Trend Drivers

Economics

- Personal pocketbook issues in national spotlight
- Natural gas market highly volatile
- Renewable energy becoming more cost-competitive
- Financiers investing records amounts in renewable energy sector

Environmental

- Growing concern among the general public
- Corporations, government and individuals making efforts to reduce greenhouse gases
- Increasing interest in renewable energy and adoption of energy conservation behaviors

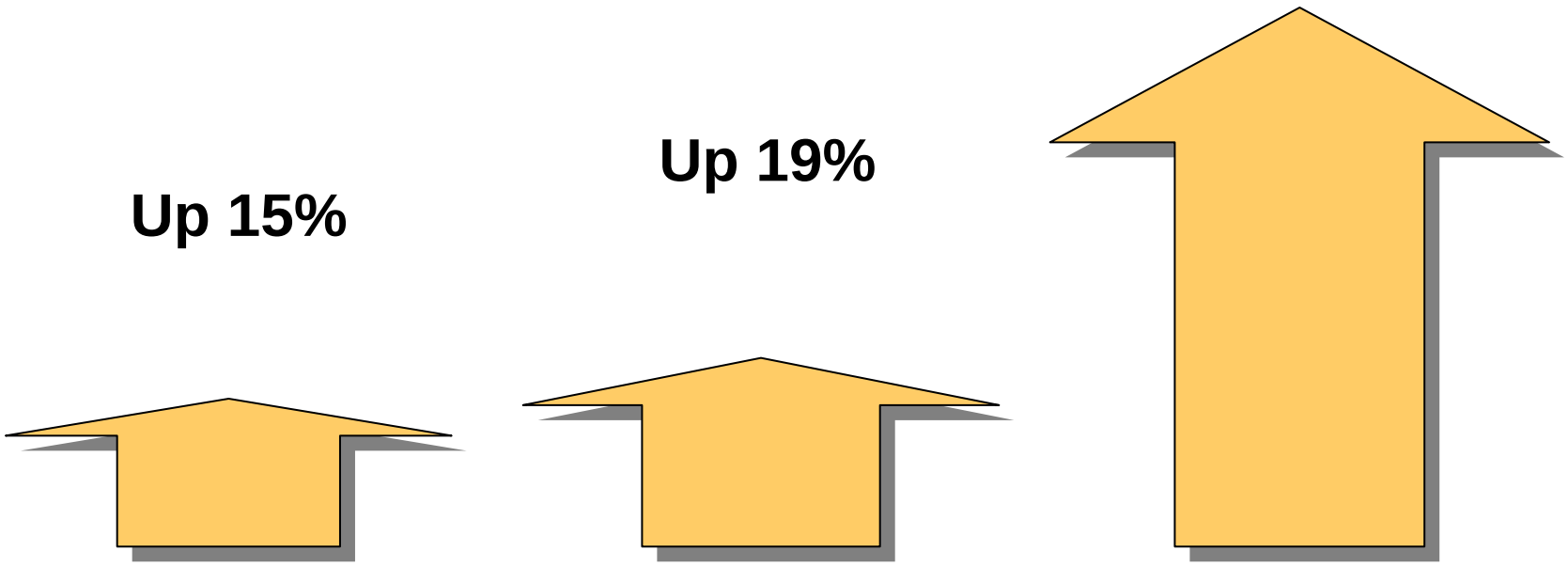
Energy Trend Drivers

Legislative

- Colorado renewable energy standard – 20% renewable energy by 2020
- Governor Ritter's New Energy Economy
- Colorado Public Utilities Commissioners appointed by Governor Ritter
- Renewable energy tax credit recently renewed
- National carbon cap-and-trade plan under discussion

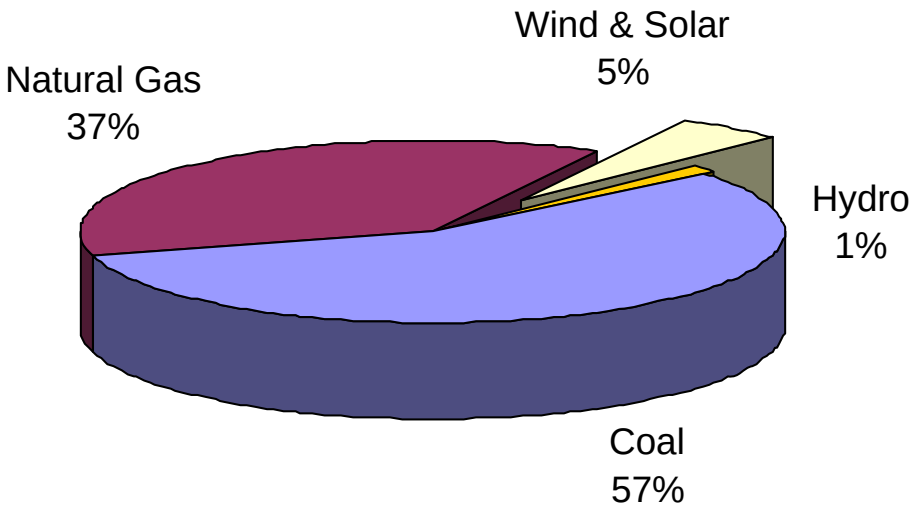
Colorado's Energy Needs

In the last decade:



Where Does Colorado Get Its Energy and How Has It Changed?

2007 Fuel Mix



In 1999

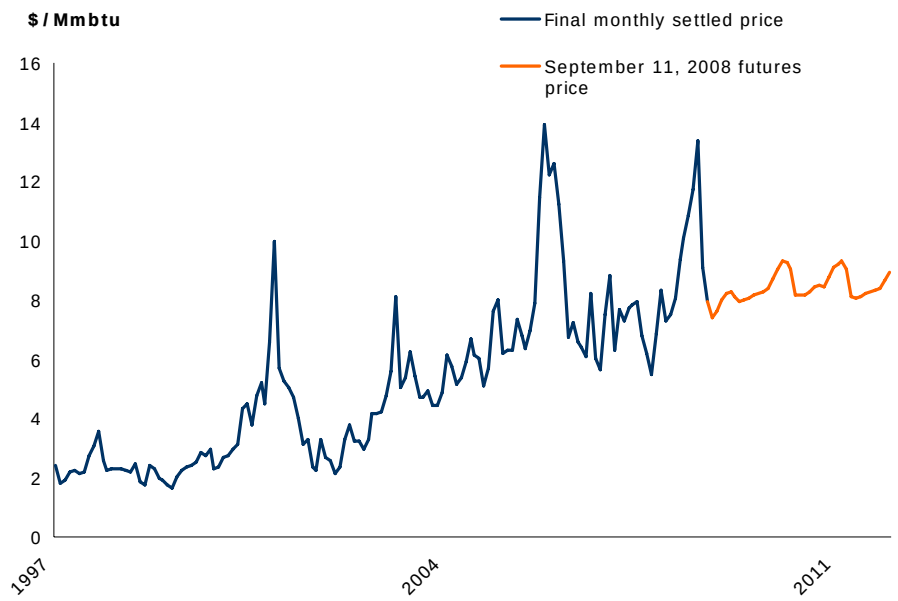
- Coal represented 80% of the fuel mix
- Wind energy wasn't in the fuel mix
- Natural gas was approximately 20%

As Demand for Electricity Increases, Fuel Costs Go Up

Natural Gas

- Cleaner burning, reliable
- One of several fuels used to generate electricity
- Generation to cover peak demand
- Backup generation when renewable energy resources aren't producing
- Volatility attributed to storage levels – hurricanes / weather affect supply
- Higher prices in Colorado are expected in 2008 with new pipeline capacity

Volatility in Natural Gas Prices

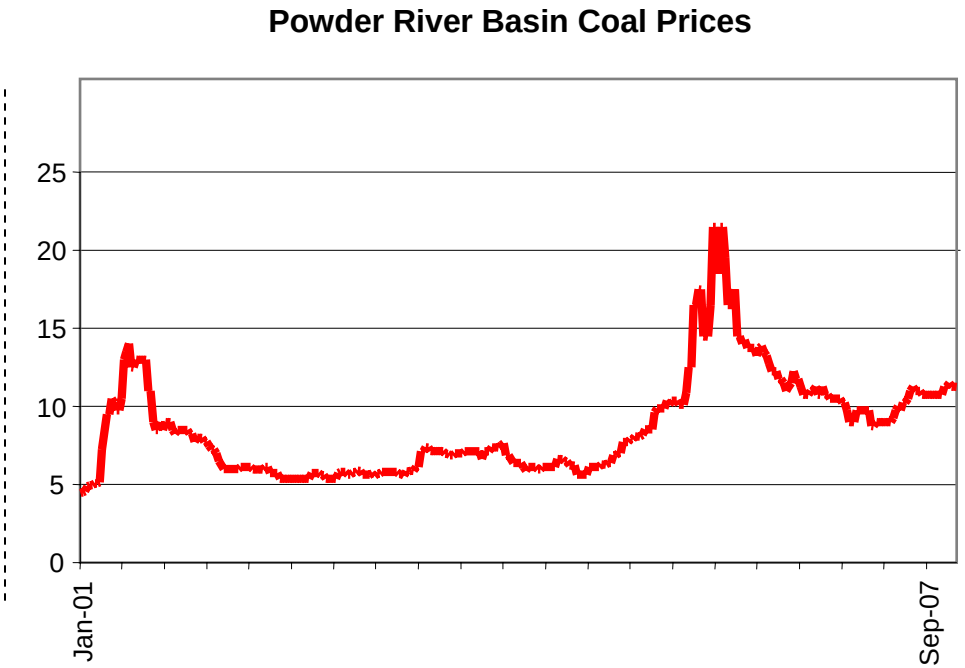


Source: NYMEX, Henry Hub Futures

As Demand For Electricity Increases, Fuel Costs Go Up

The Coal Market

- Less volatile than natural gas, providing predictable pricing
- Price has doubled since 2001
- Price continues to rise along with other fuel sources
- Even with coal scrubbing technologies, CO_2 is emitted in the atmosphere
- Potential CO_2 emission reduction legislation is on the horizon



Environmental Leadership

- No. 1 wind power provider
  - Source: American Wind Energy Association
- Windsource – No. 1 program in the nation
  - Source: National Renewable Energy Laboratory
- Industry-leading voluntary emission reductions
- Award-winning energy conservation programs
- Voluntary carbon management strategy
- Member of the Dow Jones Sustainability Index

Dow Jones Sustainability Indexes
Member 2007/08

Conservation First, Then Renewables

The cheapest, cleanest and most efficient kW is the one not produced

Conservation

- Less usage means less power produced
- Cheaper than developing new wind and solar farms

Renewables

- People don't live where the wind blows the most
- Added transmission needed to get wind and solar to population centers
- Intermittent
  - Wind generates power about 30% of the time
  - Not always sunny outside
  - Need natural gas back-up

Conservation Rebate Programs

- Provides financial incentives to adopt energy efficient technologies
  - Cash rebate up to 50% of the project cost
  - For new or existing facilities
- Filed an unprecedented request to launch 35 conservation rebates programs for business and residential customers in 2009
- Builds on the success of our existing programs.
  - Creates new programs
  - Adds new rebates to existing programs

- Designed to save more than 425 million kWh of electricity and 721,000 dekatherms of natural gas in 2009 and 2010
- Effective date (requested) January 1, 2009

Three Types of Programs

- Prescriptive programs
- Non-Prescriptive programs
- Studies and audits

Prescriptive Programs

Prescriptive programs

Predetermined rebate amounts and related savings for various energy-saving technologies

- **No preapproval required**
- Qualifying technologies are listed on the rebate applications

Included programs:

- Lighting
- Cooling
- Motors and variable frequency drives

Non-Prescriptive Programs

Non-prescriptive rebates

For equipment and conservation efforts not covered with the prescriptive programs

- **Preapproval required**
- Rebate amounts and energy savings may vary greatly by project

Included programs:

- Custom Efficiency
- Energy Management Systems
- Energy Design Assistance

Studies & Audits

Studies/Audits

Xcel Energy funds a portion of a study, which may lead to identifying energy-saving opportunities

- **Preapproval required**
- Additional rebate opportunities can be realized by submitting a prescriptive or custom rebate application

Included programs:

- Compressed Air
- Recommissioning
- Refrigeration Recommissioning
- Energy Analysis
- Lighting Redesign

Proposed New Business Programs

New Rebate Programs

- Boilers
- Data Centers
- Furnaces
- New Construction
- Process Efficiency
- Small Business Lighting
- Self-Directed
- Standard Offer
- **Commercial Real Estate**

Expanded Rebates on Existing Programs

- Compressed Air
- Cooling
- Custom
- Energy Management Systems
- Lighting
- Motors and Drives
- Recommissioning

Commercial Real Estate Program

- Modeled after our award-winning program in Minnesota
- Filed in August 2008 for expansion to Xcel Energy's Colorado customers
- Available for a limited time (2009-2011)
- Open to office buildings > 50,000 ft^2
- Pays for up to 50 percent of studies (up to $24,000)
- Offers rebate bonuses for implementation

Commercial Real Estate Program

Phase	Cost	Rebate	Services Included
Preliminary report	**$8,000**	**$4,000**	• **ENERGY STAR® benchmark** • **Remote phone survey** • **On-site visit** • **Preliminary detailed report** • **Energy Conservation Opportunities rebate summary**
Investigative study (optional)	**$40,000** (estimated example)	**$20,000** (Up to 50%, $20K max)	• **Investment-grade analysis** • **Requires preapproval**
Total	**$48,000**	**$24,000**	**Energy Conservation Opportunities receive additional rebates & bonuses**

Commercial Real Estate Program

Successful Program in Minnesota

- 80 participating buildings
- 30 million square feet
- More than 650 energy-saving measures identified
- Over 30 million kWh identified in potential savings
- The program has identified many potential improvements, even in ENERGY STAR-labeled buildings

Commercial Real Estate Program

Controls
- ✓ Night setback and “optimum start”
- ✓ Outside air (CO_2 sensors)
- ✓ Mixed-air setpoint

Cooling Equipment
- ✓ Water-cooled DX vs. air-cooled DX
- ✓ VFD compressors
- ✓ Water-side economizer

Fans
- ✓ VFDs (no reset)
- ✓ Fan-powered VAV (series or parallel)

Garage Ventilation
- ✓ Carbon monoxide controls
- ✓ Make-up air

Heating Equipment
- ✓ Cost per BTU of heat output
- ✓ Warm-up strategy
- ✓ Condensing boilers

Pumps
- ✓ VFDs (no reset)
- ✓ Right-sizing vs. throttling

Lighting
- ✓ T-8’s, CFL’s, LED’s, etc.
- ✓ Light levels

Contact Information

- Contact your Xcel Energy Account Manager
- The Business Solutions Center 800-481-4700
- Xcelenergy.com/rebates
- paul.kowalis@xcelenergy.com or 303-294-2235
- john.d.shockley@xcelenergy.com or 303-294-2082