

# Western Governors' Association

## Industrial Energy Efficiency

March 2011



*Let's turn the answers on.*

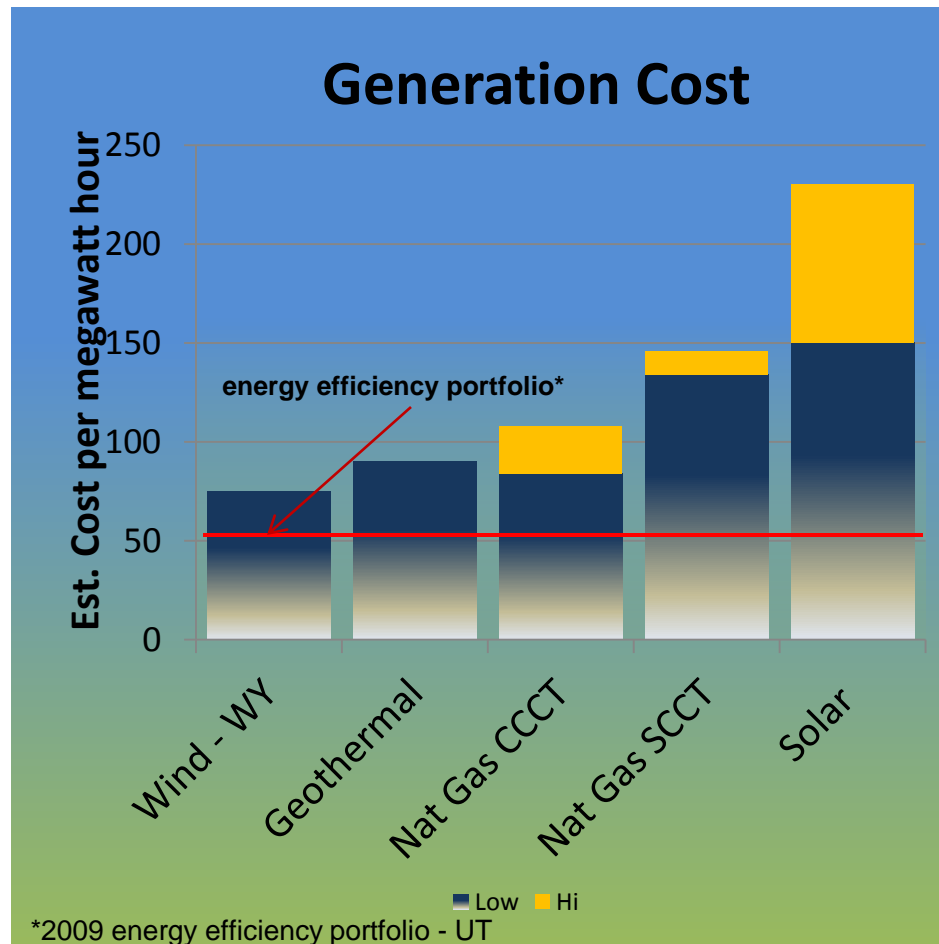
# PacifiCorp



- **PacifiCorp**
  - Rocky Mountain Power (retail operations)
  - Pacific Power (retail operations)
  - PacifiCorp Energy (energy supply)
- **1.73 m Customers in six states**
  - Residential customers      30% of sales
  - Commercial customers      31% of sales
  - Industrial customers      39% of sales
- **Energy Efficiency**
  - Over 30 years of experience
  - Services provided directly in five states
  - Indirectly in Oregon through the Energy Trust
  - 36 operating tariffs
  - 7 cost recovery tariffs

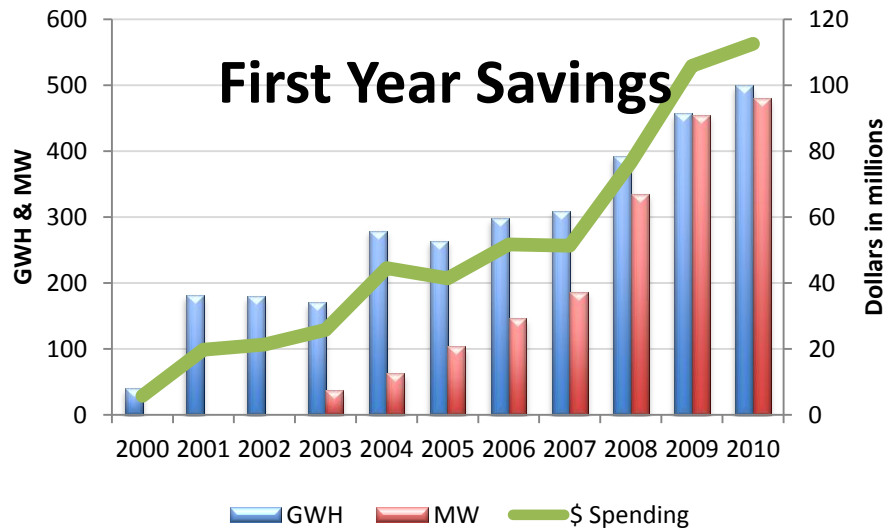
# Saving Energy = Saving Money

- Rocky Mountain Power and Pacific Power customers invested \$112 million in energy efficiency, conservation and peak reduction programs in 2010
  - High efficiency equipment, appliances, fixtures and processes
  - Structural improvements (insulation, windows, etc.)
  - Education and outreach
  - Utility dispatched control of customer equipment (air conditioning and irrigation pumps)
- Cost effective for PacifiCorp's customers compared to alternatives



**\$1 investment → ~ \$2.65 in long-term benefits\***

# Saving Energy



\* 2010 data is preliminary and subject to change

**Benefits are  
predictable,  
measurable  
and long  
lasting**

**2010 energy savings**



**Generation from  
~ 180 MW Wind Farm**

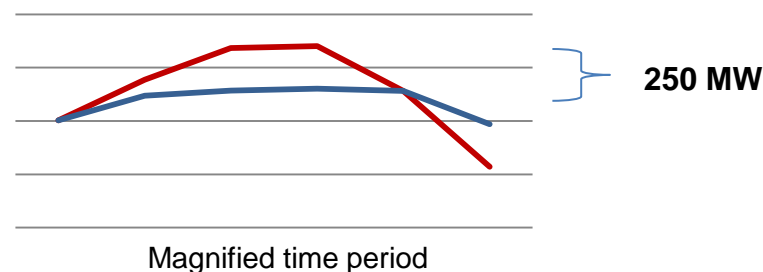
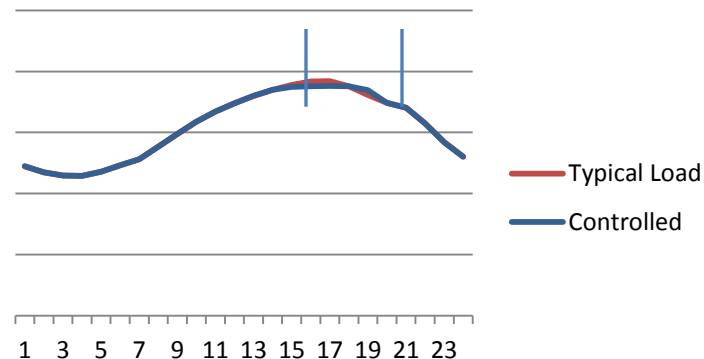
# Peak Reduction

## Air Conditioning Program

- Increased customer outreach
- Increased participation by 6.9% from 2009-10
- Increased capacity under control by 7.1% from 2009-10
- Approximately 15% of residential customers participate in Cool Keeper; 25% of those eligible or with central electric cooling

## Irrigation Programs

- Increased participation
- Increased capacity under control
- Addressing impacts on distribution system



2010 peak reduction from control of  
customer equipment



~100,000 Homes

# **How did we do it?**

## **(2007 – 2010)**

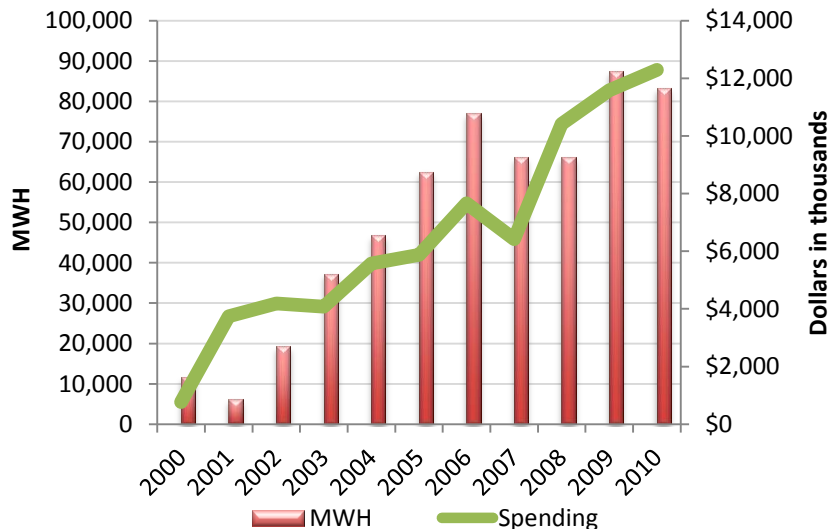
- **State, regulatory and customer support**
- **4,000 commercial and industrial projects**
  - Over 60 % of the savings
  - Lighting, process improvements (variable speed drives, high efficiency motors, heating and air handling, etc.), refrigeration and space cooling, fruit storage, etc.
- **Residential Programs**
  - 108 million square feet of insulation
  - 1.8 million square feet of windows
  - 6.1 million compact fluorescent light bulbs
  - 89,000 high efficiency washers and dryers
  - 25,000 dishwashers
  - 87,000 refrigerators/freezers removed and recycled
- **125,000 volunteers in Cool Keeper and irrigation load control**

**In 2010 industrial contributed 20% of the funding  
and benefited from 22% of the investment\***

\*Excludes Oregon

# Meeting Industrial Customers' Needs

- **Prescriptive (New and Retrofit)**
  - Defined Measures
  - Defined Incentive
- **Custom (New and Retrofit)**
  - Comprehensive, investment grade engineering analysis funded by utility
  - Incentive based on commission approved formula recognizing:
    - Commission established cap
    - Customer's simple payback is greater than 1
- **Self Direction of Investment**
  - Customers > 1 MW or 5 Gwh/yr
  - Comprehensive, investment grade engineering analysis funded by customer
  - Customer receives monthly credits against the Customer Efficiency Charge for 80% of project cost
    - Customer's simple payback is within 1 to 5 years
    - Cost effectiveness analysis demonstrates a payback of greater than 5 years



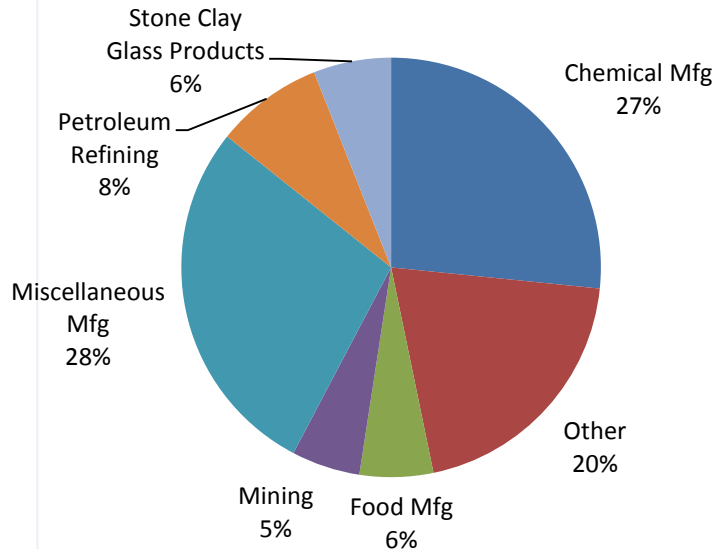
**\$1 investment → ~ \$2.90 to \$5.60  
in long-term benefits\* to all  
customers**

**\$1 investment → ~\$4.10 to \$5.50  
in long-term benefits\* to  
participating customers**

\*2009 energy efficiency C&I portfolio - UT

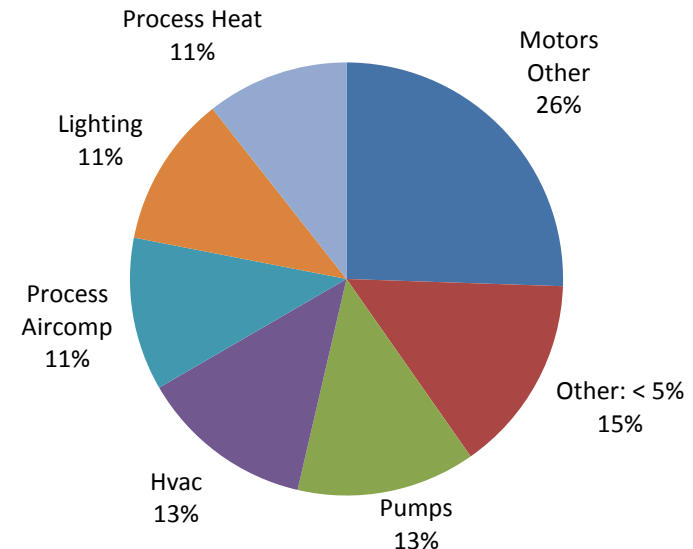
# Long-term Savings - Industrial

Industrial Sector Achievable Technical Potential



Note: "Other" includes primary metal, transportation equipment, electronic equipment, industrial machinery, and paper manufacturing, water, waste water, and wood products

Achievable Technical Potential by End Use



**Technical Achievable Potential** ➡ **~2,300 Gwh or 9% of base Sales\***

\* Based on 2030 projected industrial loads



# What does the future look like?

- **What we know**
  - Energy efficiency will become increasingly important in meeting the nations energy requirements
  - Investments are designed to reduce the long term cost of energy
  - **Benefits are shared**
    - Participating customer benefits from lower overall energy prices, improved process efficiencies and improved quality of life
    - All customers benefit from a lower energy supply cost
    - States benefit through increased employment and financially stronger industries
- **What do we need to over come in promoting industrial efficiency**
  - **Competition for capital**
    - Strike a more aggressive balance between investments in production and efficiency
    - Customers will invest in areas with the greatest return – higher energy priced markets
  - **Lack of incentives other than from electric utilities**
  - **Overcome the limited focus on capital investment**
    - Operation, maintenance and behavioral savings need to be tapped

# Where can we use help

- **Further developing the market**
  - Leverage state leaderships to call industries to action and to recognize performance
  - Leverage energy efficiency opportunities
- **Limiting risk**
  - Utility planning, design, development and evaluations should be conducted with complete transparency
    - Prudence of energy efficiency and peak reduction investments should occur prior to implementation
    - Information from evaluations should be used to modify, enhance or limit investments – not to penalize the utility
  - Mandates can reduce the cost effectiveness of investments
  - Utility recovery of investments should be timely – impact on the utilities ability to investment capital

# Questions