



# Black Hills Energy Colorado Electric and Gas Energy Efficiency Programs

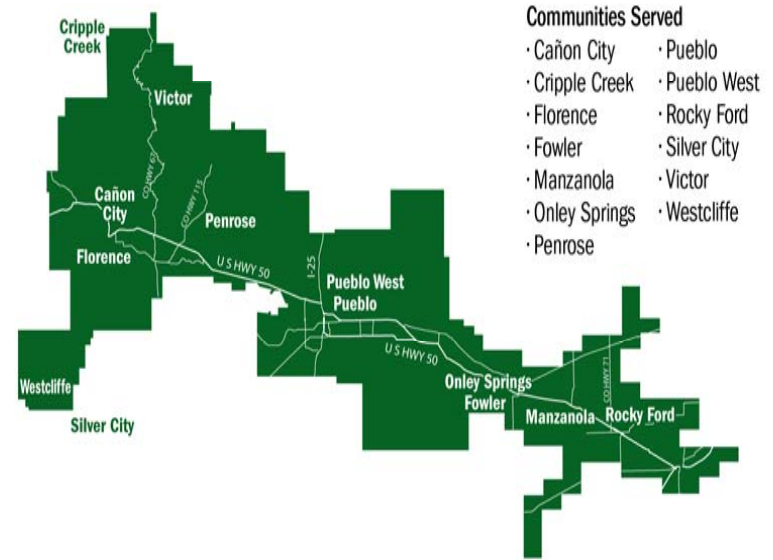
## October 10, 2012

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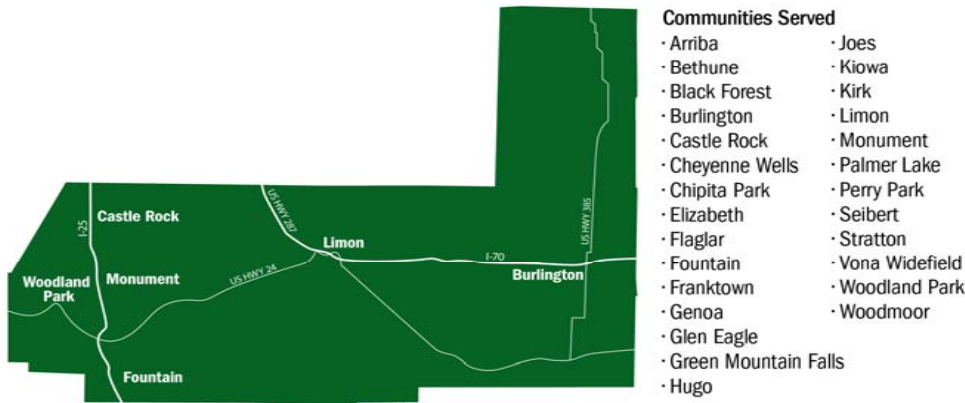


Black Hills Energy is a Black Hills Corporation company that provides electric and natural gas service to over 759,000 customers in Colorado, Iowa, Kansas, Montana, Nebraska, South Dakota and Wyoming.

## Black Hills Energy/ Colorado Electric



## Black Hills Energy/ Colorado Gas



In Colorado, Black Hills provides electric service to 94,000 electric and 67,000 gas customers in 48 southern Colorado communities.

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# Electric and Natural Gas EE Portfolios

- Electric
  - Plan period: 7/1/12 through 12/31/15
  - Total energy savings goals: 78.2 million kWh
  - Total demand savings goals: 21,560 kW
  - Total Budget: \$16.3 million
- Natural Gas
  - Plan period: 1/1/12 through 12/31/14
  - Total energy savings goals: 89,309 Dth
  - Total Budget: \$4.3 million

# Efficiency Program Portfolios

## Electric Programs

### Residential Programs

- High Efficiency Lighting
- High Efficiency Cooling
- Appliance Recycling
- High Efficiency Appliances
- On-line Evaluation

### Commercial and Industrial

- Prescriptive
- Small Business Direct Lighting
- Custom
- New Construction

### Special Programs

- School Based Energy Education
- Low Income Assistance

## Gas Programs

### Residential Programs

- Residential Evaluations
- Space & Water Heating
- Envelope Measure Retrofit
- New Construction

### Commercial and Industrial

- Prescriptive
- Custom
- New Construction
- Industrial Sector Outreach

### Special Programs

- School Based Energy Education
- Low Income Assistance

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# Colorado Electric Residential

## High Efficiency Lighting –

- Direct Mfg & Retailer buy down on CFL and LED bulbs and fixtures
- 2012/ 2013 Budget/ Energy Savings - \$467,002/ 7,902 MWH

Eligible Measure	Incentive per Unit
CFLs	\$1/bulb
LEDs	\$10/bulb
Fixtures	\$10/fixture

## Residential Rebates –

- Rebates paid Directly to Residential Customers
- 2012/ 2013 Budget/ Energy Savings - \$439,723/ 876,278 kWh

Eligible Measure
Central ASHP SEER ≥ 15, EER ≥ 12 HSPF ≥ 8.5
Ground Source Heat Pump ≥ 14.1 EER
Attic Insulation R-19 to R-40
Air Sealing from 25% ACH Reduction
Wall Insulation from R-0 to R-11
Heat Pump Water Heater
Central AC SEER ≥ 15, EER ≥ 12.5
Central AC SEER ≥ 16
Evaporative Cooler >2,500 CFM
Evaporative Cooler Media Saturation >85%
Evaporative Cooler - Whole House Cooler

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# Colorado Electric Residential

## Appliance Recycling –

- Rebates paid Directly to Residential Customers
- 2012/ 2013 Budget/ Energy Savings - \$105,667/ 268,780 kWh

Eligible Measure	Incentive per Unit
Refrigerator Recycle	\$50
Freezers Recycle	\$50
Air Conditioners Recycle	\$50

## High Efficiency Appliances –

- Rebates paid Directly to Residential Customers
- 2012/ 2013 Budget/ Energy Savings - \$44,750/ 33,623 kWh

Eligible Measure	Incentive per Unit
ENERGY STAR Refrigerator	\$30
ENERGY STAR Freezer	\$30
Heat Pump Water Heater	\$450
ENERGY STAR Television	\$25
Smart Power Strips	\$10
ENERGY STAR Standard Dishwasher	\$30
ENERGY STAR Compact Dishwasher	\$30

# Colorado Electric Commercial

## C&I Prescriptive –

- Rebates paid Directly to Commercial Customers
- 2012/ 2013 Budget/ Energy Savings - \$1,232,865/ 11,861 MWH

Eligible Measure
Evaporative Cooler >2,500 CFM
Evaporative Cooler Media Saturation >85%
Energy Management System
PTAC
CAC 15 SEER
Air Source Heat Pump
Ground Source Heat Pump
Heat Pump Water Heater
Motors
Air Cooled Chiller
Water Cooled Chiller
Lighting (T12 to T8)
Lighting (400 MH to 320 PSMH)
Lighting (400 MH to HIF T5HO)
LED Lighting
Lighting De-Lamping
Variable Frequency Drives

# Colorado Electric Commercial

## C&I Custom –

- Rebates paid Directly to Commercial Customers.
- Projects must have incremental payback of 1 year or longer.
- Projects must have a TRC benefit to cost ratio of 1.0 or greater.
- Rebate values are calculated as either 50% of the incremental cost of the project or \$0.30 per kWh savings, whichever is lower.
- Incremental cost is based on difference in cost between baseline (standard efficiency) and proposed high efficiency option.
- 2012/ 2013 Budget \$377,208.



# Colorado Electric Commercial

## Direct Installation Lighting Program

- Direct service buy down on high efficiency lighting, occupancy sensors and refrigerator case lighting
- Target commercial customers with demand usage up to 350 kW
- Black Hills pays up to 60% of the equipment and installation cost.
- 2012/2013 Budget - \$1,885,647
- 2012/2013 Program Savings – 4,305 MWH

# Colorado Electric Commercial

## Commercial New Construction Program

- Commercial New Construction designed to promote energy-efficiency in the new construction and major renovation markets.
- Design incentives based on building square footage covers 50% of energy modeling cost.
- Construction incentives based on kWh savings
- Minimum energy savings of 15% higher than IECC 2009 AND ASHRAE standard 90.1-2004 are required to qualify.
- Budget/ energy savings - \$143,325/ Energy Savings – 229,235 kWh

# Colorado Electric

## Special Programs

- **Low income assistance** - through the Colorado Energy Office and Neighborworks of Pueblo
- Budget/ Energy Savings - \$898,043/ 1,672 MWH
- **School Based Energy Education**
- Budget/ energy savings - \$143,325/ Energy Savings – 229,235 kWh

# Colorado Electric

## Total Budget for 2012/2013 (18 Months)

Program Year 1 - \$6,513,123

## Total Energy Savings Goal 2012/2013 (18 Months)

Program Year 1 – 30,936 MWH

# Colorado Gas Residential

## Residential Evaluations –

- Free and cost shared residential evaluations – On-line, Walk through, Tier1 and Tier2
- 2012 Budget/ Energy Savings \$213,800/ 8,074 DTh

## Residential Space and Water Heating –

- Rebates paid Directly to Residential Customers
  - ✓ Furnace/ Boiler Replacements
  - ✓ Water Heater Replacements
  - ✓ Innovative Space & Water Heating
  - ✓ Setback Thermostat and furnace/ boiler maintenance service
- 2012/ 2013 Budget/ Energy Savings - \$160,800 / 6,701 DTh

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# Colorado Gas Residential

## Residential Envelope Retrofit Measures –

- Rebates paid Directly to Residential Customers
- 2012 Budget/ Energy Savings \$98,600/ 1,173 DTh

## Residential New Construction –

- Rebates paid Directly to Home Builders
  - ✓ Prescriptive Rebates
  - ✓ Custom Rebates
  - ✓ Tier1
  - ✓ Tier2
- 2012/ 2013 Budget/ Energy Savings - \$191,000 / 1,643 DTh

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# Colorado Gas Commercial

## Commercial Evaluations –

- Cost shared commercial evaluations – Evaluations conducted on small facilities up to 25,000 square feet and large facility assessments above 25,000 square feet.
- 2012 Budget/ Energy Savings \$14,900/ 12 DTh

## C&I Prescriptive Measures –

- Rebates paid Directly to commercial customers
  - ✓ Furnace/ Boilers
  - ✓ Cooking Equipment
  - ✓ Envelope Measures
- 2012 Budget/ Energy Savings \$51,000/ 1,417 DTh

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# Colorado Gas Commercial

## C&I Custom –

- Rebates paid Directly to Commercial Customers.
- Projects must have incremental payback of 1 year or longer.
- Projects must have a TRC benefit to cost ratio of 1.0 or greater.
- Incremental cost is based on difference in cost between baseline (standard efficiency) and proposed high efficiency option.
- 2012 Budget/ Energy Savings \$20,800/ 2,000 DTh.



# Colorado Gas Commercial

## Commercial New Construction Program

- Commercial New Construction designed to promote energy-efficiency in the new construction and major renovation markets.
- Design incentives based on building square footage covers 50% of energy modeling cost.
- Minimum energy savings of 15% higher than IECC 2009 AND ASHRAE standard 90.1-2004 are required to qualify.
- Budget/ energy savings - \$44,500/ 1,500 DTh per participant

# Colorado Gas

## Special Programs

- **Low income assistance** through the Colorado Energy Office
  - Budget/ Energy Savings - \$54,700/ 1,549 DTh
- **School Based Energy Education**
  - Budget/ energy savings - \$72,200/ 1,660 DTh

# Colorado Gas

## Total Budget for 2012

Program Year1 - \$1,323,500

## Total Energy Savings Goal 2012

Program Year1 – 25,729 DTh

# Black Hills Energy

Questions?

