

# COLORADO'S ENERGY EFFICIENCY RESOURCE

Energy Efficiency can meet an estimated 25% of Colorado's carbon emission reductions the EPA expects to see by 2030. Colorado is nearly 75% the way there now—without energy efficiency, the state would only be about 50% according to a recent analysis by Western Resource Advocates.

## Electric Utilities Resources

Colorado has experience and history with state demand-side energy efficiency programs to meet carbon emissions reduction goals

- Energy Efficiency Resource Standard for investor-owned utilities since 2007
- Xcel Energy has well established energy efficiency programs - nearly 220,000 tons of CO<sub>2</sub> emissions avoided in 2014 from energy efficiency programs
- Potential for all utilities by 2020 (rural and municipal) = 5.4 million metric tons of CO<sub>2</sub> emissions reduced

## Non-Utility Resources

Colorado has non-utility energy efficiency resources available to meet carbon emission reduction goals, including

- Energy Service Companies (ESCOs) – energy saving performance contracts
- Low-income weatherization programs
- Industrial energy efficiency
- Multi-family housing incentives
- Small business incentives



*Energy efficiency at the planning stage can reduce costs for new commercial buildings*

## M&V Established

- EPA created an M&V system for utilities that has been used by Xcel since 2007
- ESCOs (commercial building energy performance contractors) guarantee energy savings and GHG emissions now
- Small/medium/large businesses corporate social responsibility programs – Use internationally accepted methods of carbon reporting: B Corp, Global Reporting Initiative, Carbon Disclosure Project, Climate Registry, etc.
- Energy Efficiency credits (white certificates) are already being traded successfully in California, Nevada, Connecticut and Pennsylvania
- Mass-based system easiest to verify energy efficiency

**Since 2007, energy efficiency has created 14,000 jobs and \$1 billion in economic revenue**

*we grow the industry*



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## Benefits to Colorado

- A 2012 member survey determined energy efficiency has created 14,000 jobs and \$1 billion in economic revenue since 2007
- Energy efficiency programs could reduce CO<sub>2</sub> emissions by 5.4 million metric tons per year by 2020
- Reduce water consumption by 2.5 billion gallons per year by 2020 as added bonus
- Save utility customers nearly \$5 billion net
- Cut air pollution and improve public health

## Cost Effective Option

Energy efficiency reduces fuel usage, air pollution, and consumer bills. Energy efficiency retrofits for existing buildings offer the best 'bang for your buck' in terms of energy savings, dollar savings, and total carbon emissions reductions for every dollar invested. A cost comparison of solar, wind, and energy efficiency by the Triple Bottom Line Foundation's investment fund (<http://www.tblfund.org>), supports this claim.

Because energy efficiency reduces electrical loads at the customer premises, they also avoid associated transmission line losses for utilities. As a result, the utility avoids as much as 120% of the generating capacity needed to serve the avoided load.



*Unico Properties Success Story: 1660 Lincoln Denver, Colorado  
Unico's retrofit improvements increased their ENERGY STAR score from 52 to 89 with a 56% decrease in energy use intensity*

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## Energy Costs (Dollars/lb of CO<sub>2</sub>)

ENERGY EFFICIENCY (ELECTRICITY – kWh)	ENERGY EFFICIENCY (NATURAL GAS - Therms)	SOLAR	WIND
\$0.021	\$0.035	\$0.243	\$0.053

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Energy Efficiency Business Coalition

14062 Denver West Parkway | Bldg 52, Suite 300 | Golden, Colorado 80401 | [www.eebco.org](http://www.eebco.org)