



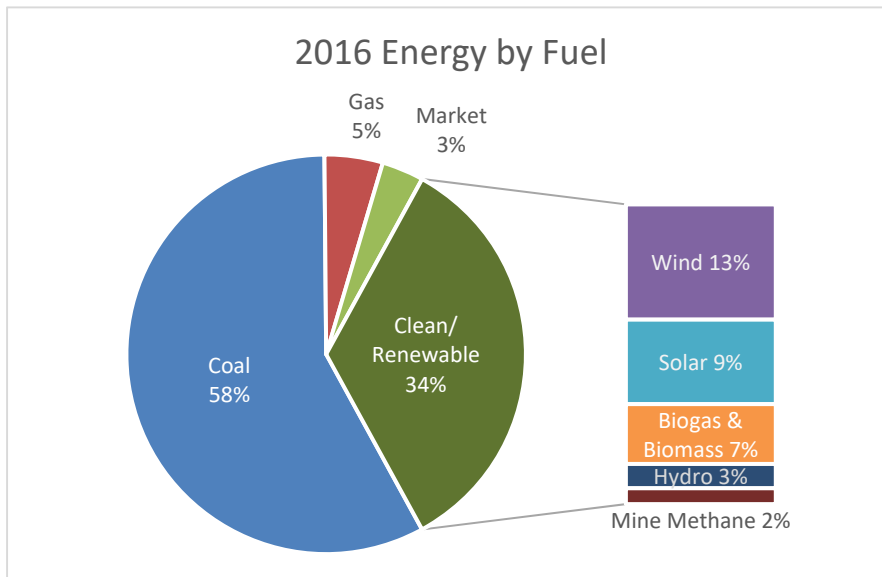
HOLY CROSS ENERGY

2016 CO2 Emissions Report

Holy Cross Energy is a cooperative electric association serving the needs of rural communities in central and western Colorado. The majority of our customers are located in the counties of Eagle, Garfield, and Pitkin, but we also provide electrical service to a few properties in Gunnison and Mesa counties. Our headquarters facility is located in Glenwood Springs and we also have three outlying offices located in Aspen, Avon and Gypsum. Holy Cross provides power to more than 56,000 meters from 11 substations over more than 3,000 miles of distribution and transmission lines.

Holy Cross has long term power supply commitments through contracts with Public Service Company of Colorado (a subsidiary of Xcel Energy) and Western Area Power Administration. We have long term purchase power agreements with a number of small clean and renewable generators located in and near our service territory, including 6 small hydroelectric generators, a 1 megawatt (MW) solar array, a 12 MW biomass plant, and 4 community owned solar arrays. We also made short term economy purchases from Black Hills Power and Xcel Energy. The short-term purchases from Xcel significantly increased the share of our members loads served with solar and wind resources in 2016. Holy Cross started up a new 145 kW solar array in partnership with the Colorado Energy Office and Grid alternatives during December 2016. This array provides bill credits to low and moderate income Holy Cross members at no cost to participants. Holy Cross owns an 8% share in Unit 3 at the Comanche Generating Station located in Pueblo, CO. This 750 MW super-critical, coal-fired generating unit became operational in July of 2010 and provided approximately 36% of Holy Cross’s energy needs in 2016.

About 34% of the energy used to meet member load was supplied through clean and renewable resources, such as wind, solar, hydro, biomass, and coal mine methane generation. About 58% came from coal, 5% came from gas, and about 3% was from market sources which could not be identified with a high level of certainty.



Source Fuel	CO2 (Tons)
Coal	811,000
Natural Gas	29,000
Market	28,000
Mine Methane	-81,000
Total	787,000

Holy Cross procured 1,228,635 MWh of wholesale and generated power (including estimated generation from net meters) and billed for 1,190,409 MWh to serve consumers’ loads. The difference includes transmission



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and distribution line losses, electricity used in company facilities, and electricity provided to net metered customers that was offset under that billing mechanism. The CO₂ emissions associated with electric power generation used to serve Holy Cross's customers in 2016 totaled approximately 787,000 short tons. Emissions decreased by 13.6% from 2015 and sales increased by 1.3%. Emissions were about 17.7% lower than when tracking began in 2005 while sales were 15.5% higher. After accounting for line losses and the sales which have no associated emissions (under voluntary green pricing programs), the average CO₂ intensity for delivered electricity during 2016 was 1.34 lb. per kWh.

Holy Cross offers two voluntary programs to support renewable energy generation in Colorado: the Wind Power Pioneers program and the Local Renewable Energy Pool. The Wind Power Pioneers program gives Holy Cross consumers the option of purchasing power from wind farms on the plains of eastern Colorado in 100 kWh blocks. There were 1,706 participants in this program who purchased a total of 13,690 MWh in 2015. The Local Renewable Energy Pool provides power produced by Holy Cross members who operate small-scale hydroelectric facilities in 75 kWh blocks. 213 members purchased about 307 MWh under this program. In addition, Holy Cross's members had installed 817 small renewable energy generators (such as solar panels) behind their meters by the end of 2016. The 6,066 kW of distributed generation produced about 8,085 MWh during the calendar year

Colorado passed a Renewable Energy Standard (RES) in 2004 by voter initiative that required Investor Owned Utilities to supply 10% of their retail electric sales from renewable sources by 2020. In 2007, House Bill 1281 added a requirement that electric cooperatives supply 10% of retail sales from renewable sources by 2020, with the required percentages increasing over time. Holy Cross was required to supply 6% of retail sales from renewable sources in 2016, or the equivalent of 71,425 MWh. 359,241 MWh or more than 30% of Holy Cross supplies came from sources which qualify for the Colorado RES in 2016, excluding renewable sales to customers under the voluntary pricing programs. Renewable Energy Credits equal to those sales are retired on an annual basis and not used for any other purpose.

Year	Received Power (MWh)	Total Sales (MWh)	Green Power Sales (MWh)	Emissions (Short tons)
2016	1,228,635	1,190,409	13,997	787,000
2015	1,219,499	1,175,365	14,753	821,300
2005	1,080,417	1,032,137	10,501	955,700

Information for additional years is available at www.holycross.com/co2-emissions. This information is based on the best information available at the time the report is issued. This report may be updated to reflect changes in the information used to calculate carbon dioxide emissions associated with energy sold to Holy Cross consumers.