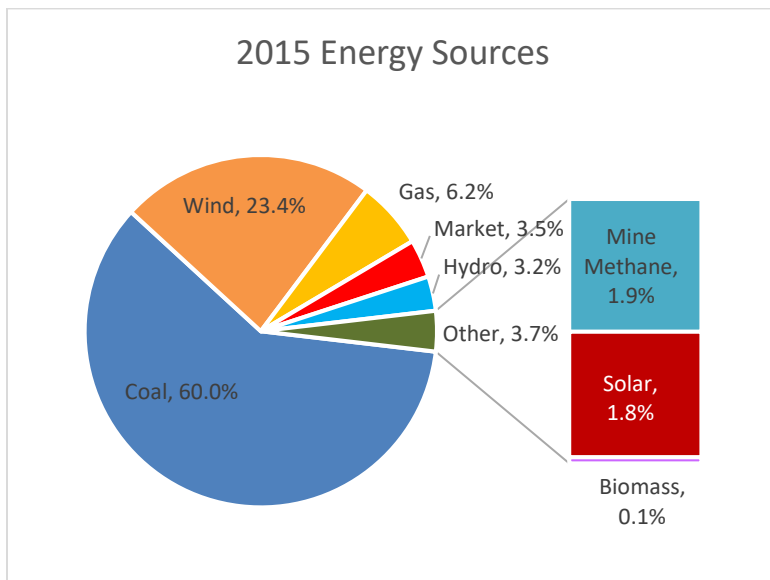




# HOLY CROSS ENERGY

## 2015 CO2 Emissions Report

Holy Cross Energy is a Colorado cooperative electric association serving approximately 55,350 meters in Eagle, Garfield, Gunnison, Mesa, and Pitkin Counties. 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. Additional wholesale resources include economy purchases from Black Hills Power, purchases of electricity generated using methane vented from a coal mine and a number of renewable energy generation facilities within Holy Cross’s service territory. Significant short term economy purchases of renewable energy were made in 2015 from solar and wind resources through Public Service Company of Colorado. In 2015, these local generators included three community-owned solar arrays, 7 small hydroelectric generators, a 1 MW solar array and an 11.5 MW biomass plant. Holy Cross owns 8% of Comanche Unit 3, a 750 MW super-critical, coal-fired generating unit located in Pueblo, CO. This unit became operational in July of 2010 and provided approximately 30% of Holy Cross’s energy needs for 2015. The portfolio of resources used to serve Holy Cross’s customer load in 2015 was composed of 60.0% coal, 6.2% natural gas, 30.3% clean and renewable sources such as wind, solar, hydroelectric, biomass, and coal mine methane generation, and 3.5% market purchases which could not be identified with a high level of certainty.



Source Fuel	CO2 (Tons)
Coal	834,900
Natural Gas	40,300
Market	34,800
Mine Methane	-88,800
<b>Total</b>	<b>821,300</b>

Holy Cross procured 1,219,499 MWh of wholesale and generated power (including estimated generation from net meters) and provided 1,175,365 MWh to serve consumers’ loads. The difference includes transmission and distribution line losses as well as electricity used in company facilities. The CO<sub>2</sub> emissions associated with electric power generation used to serve Holy Cross’s customers in 2015 totaled approximately **821,300** short tons. Emissions decreased by **10.1%** from 2014 and sales declined by 0.4%. Emissions were about **14.1%** lower than when tracking began in 2005 while sales were 14.1% higher. After accounting for line losses and the sales which have no associated emissions (under voluntary green pricing programs), the average CO<sub>2</sub> intensity for delivered electricity during 2015 was **1.42** lb. per kWh.



# HOLY CROSS ENERGY

## 2015 CO2 Emissions Report

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 1,771 participants in this program who purchased a total of 14,441 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. 347 members purchased about 312 MWh under this program. In addition, Holy Cross's members had installed 694 small renewable energy generators (such as photovoltaic panels) behind their meters by the end of 2015. The 4,957 kW of distributed generation produced about 6,557 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 2015, or the equivalent of 70,634 MWh. Holy Cross procured 25.6% of its retail sales from resources that met the requirements of Colorado's RES for 2015, primarily purchased through Public Service Company of Colorado and various renewable generators within Holy Cross's service territory. This excludes those RECs associated with sales to customers under the voluntary pricing programs, which are retired separately and does not count multipliers available for compliance purposes.

Year	Received Power (MWh)	Total Sales (MWh)	Voluntary Green Power Sales (MWh)	Emissions (Short tons)
2015	1,219,499	1,175,365	14,753	821,300
2014	1,240,374	1,179,789	15,002	913,600
2005	1,080,417	1,032,137	10,501	955,700

Information for additional years is available at [www.holycross.com/co2-emissions](http://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.

Update (May 2017): The quantity of carbon offsets associated Holy Cross' purchases from a coal mine methane generation project has been updated to reflect an estimated allocation of offsets issued by a verifying authority instead of the previous estimated values for 2015. All of the affected values in this report are in red text for easy review.