



2018 Renewable Electricity Analysis for Denver Municipal Facilities

Our Goal

Denver made a commitment to using 100% renewable electricity for our facilities and operations by 2025 (Denver Public Health & Environment, 2018).

Where We Are

In 2018, 20% of Denver’s electricity use was supplied by carbon-free, renewable electricity sources.

2018	Total Building Portfolio ¹	General Fund Buildings	Non-General Fund Buildings
 Renewable Electricity Supplies	20%	20%	20%
 Electricity Usage	112.3 GWh²	67.3 GWh	44.9 GWh

¹ This analysis does not include the airport, zoo, or streetlights.

² GWh = Gigawatt-hour

How We Got There

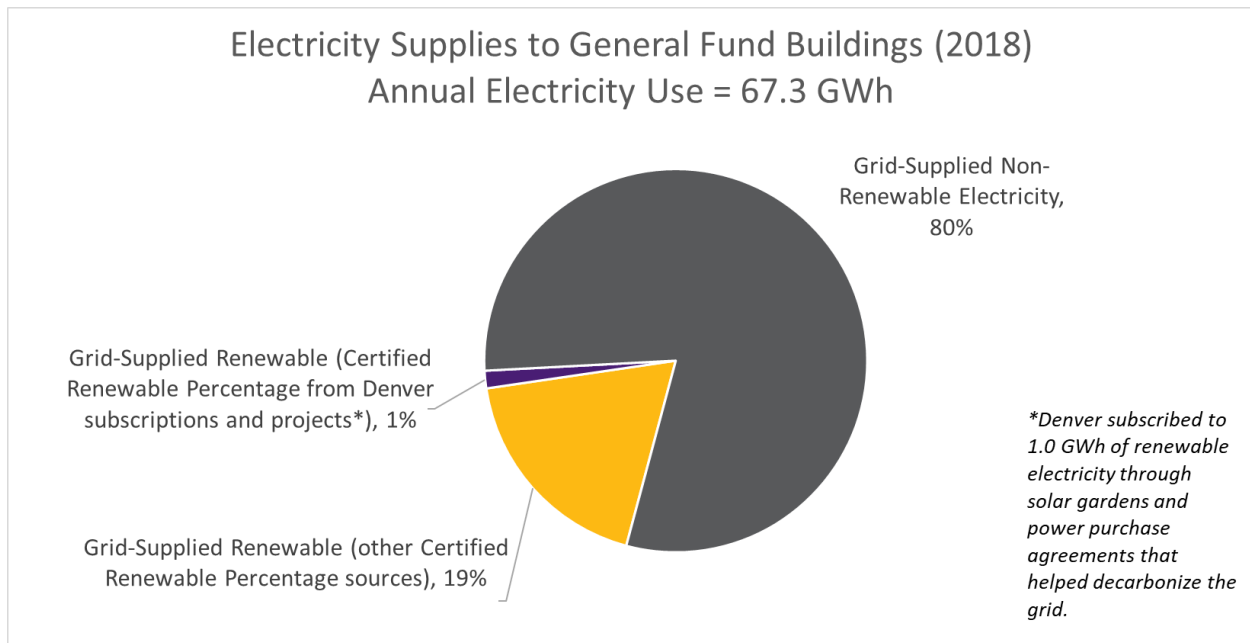
Denver’s renewable electricity comes from a variety of sources:

- **Grid-Supplied Renewable Electricity:** Xcel Energy supplies electricity to its customers through the grid. The electricity comes from a mixture of renewable and non-renewable energy sources. As the grid gets greener (also known as grid decarbonization), Denver gets closer to achieving its goals. In 2018, 20% of electricity supplied by the grid came from renewable energy sources. Xcel Energy certifies this percentage through the Certified Renewable Percentage program.
 - Denver does its part to help decarbonize the grid by subscribing to community solar gardens and on-site solar projects through power purchase agreements. Denver’s participation helps decarbonize the grid for all Xcel Energy customers, in exchange for an incentive payment from Xcel Energy.
- **Additional Renewable Electricity Supplies:** Xcel Energy offers additional renewable electricity programs that allow their customers, including Denver, to directly benefit their own goals, rather than general grid decarbonization. These programs include Renewable*Connect®, Net

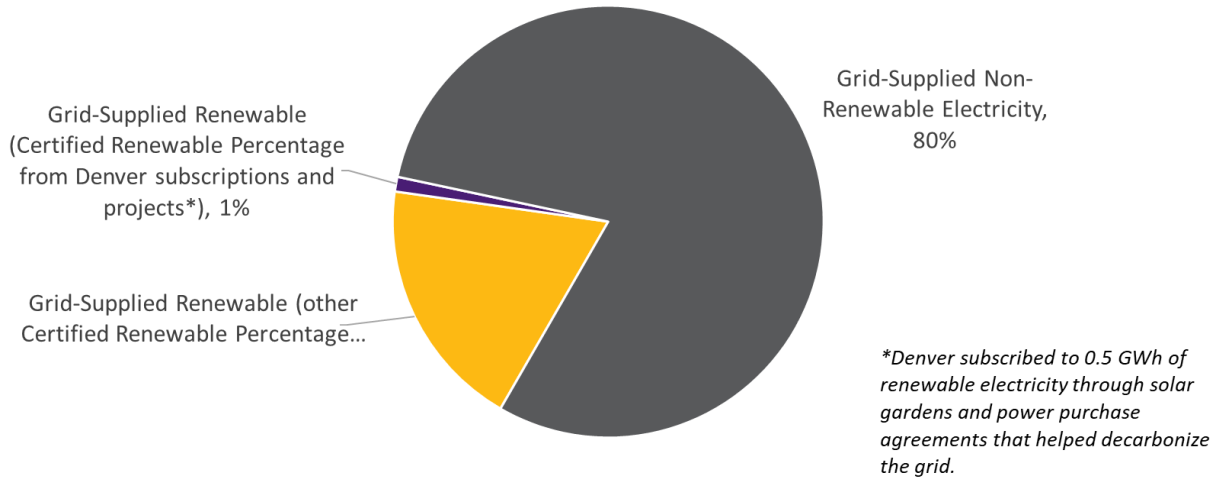
Metering, and Windsource®. Denver has strategically participated in these additional renewable electricity programs when the programs are available and make financial sense:

- **Renewable*Connect:** In 2018, Denver subscribed to Renewable*Connect, but the project was not yet producing power.
- **Net Metering:** Denver owns a 30-kilowatt (kW) solar array on top of the Castro building. On-site solar has otherwise not been a significant strategy towards achieving Denver’s goal due to operational and maintenance requirements.
- **Windsource:** Denver has not utilized the Windsource program to date since this program represents an ongoing price premium that does not make financial sense for Denver facilities at this time.

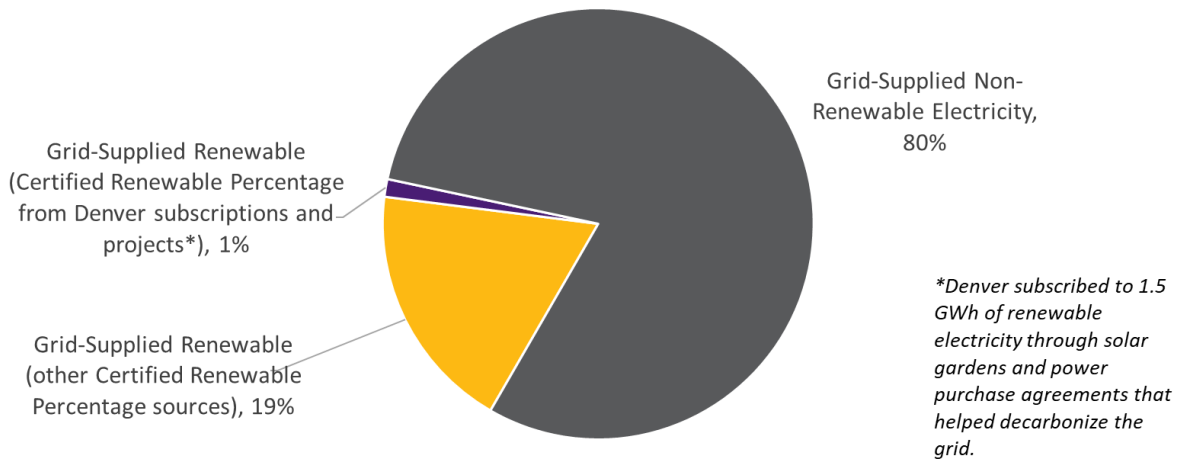
Denver’s participation in these programs, combined with the Certified Renewable Percentage from Xcel Energy, achieved 20% renewable electricity supplies across all buildings in 2018. Denver’s renewable electricity supplies are shown in detail in the following graphs, with the General Fund Buildings and non-General Fund Buildings shown separately.



Electricity Supplies to Non-General Fund Buildings (2018) Annual Electricity Use = 44.9 GWh



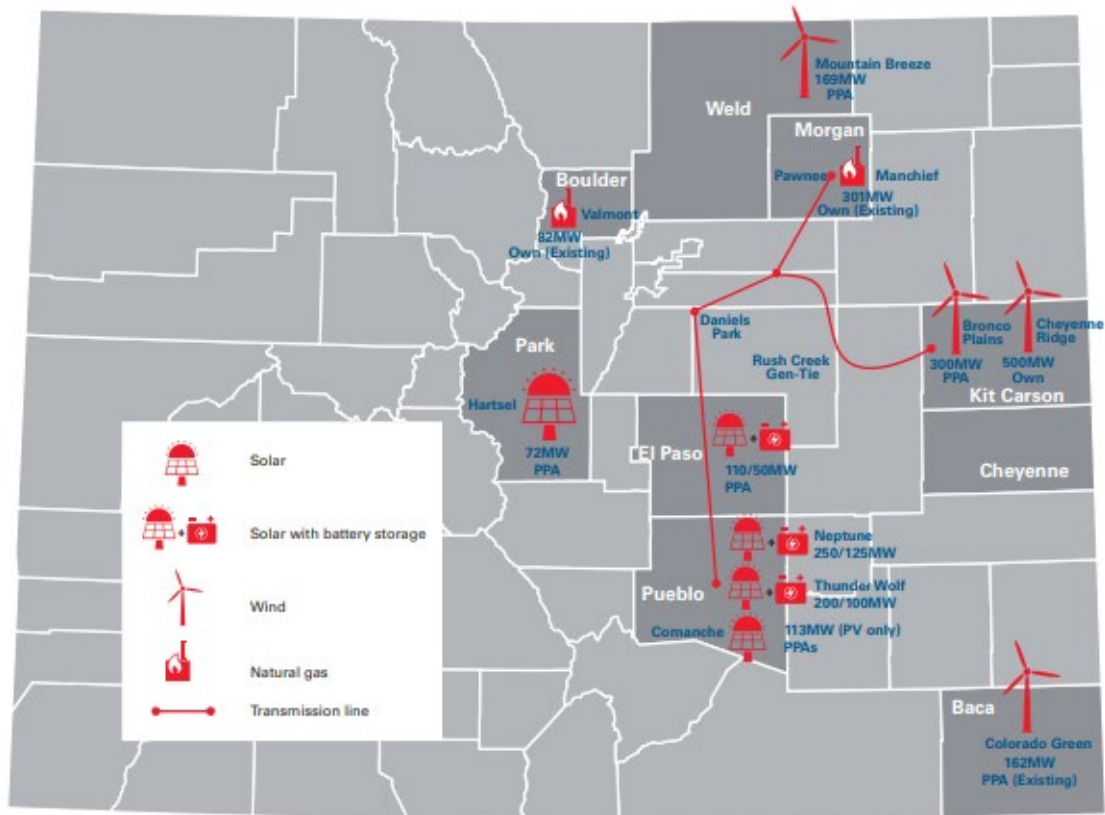
Electricity Supplies to All Buildings (2018) Annual Electricity Use = 112.3 GWh



Where Does Denver’s Renewable Electricity Actually Come From?

Projects that contribute to Xcel Energy’s source fuel mix through Certified Renewable Percentage include those summarized in the following table and shown in the following map (Xcel Energy, 2020):

Project Name	Project Size (Megawatts, MW)	Location
Bronco Plains Wind Project	300	Kit Carson County
Mountain Breeze Wind Project	169	Weld County
Colorado Green Wind Project	162	Baca County
Neptune Solar Project	250 – solar, 125 – storage	Pueblo County
Thunder Wolf Solar Project	200 – solar, 100 – storage	Pueblo County
Hartsel Solar Project	72	Park County
Cheyenne Ridge Wind Project	500	Lincoln, Kit Carson, and Cheyenne counties
All community solar gardens through the Solar*Rewards Community program	Varies	Varies
All on-site solar projects through the Solar*Rewards program	Varies	Varies



Renewable electricity projects that contribute to voluntary, additional renewable electricity programs include:

- **Renewable*Connect:** The renewable electricity comes from a 50 MW solar project near Deer Trail, CO.
- **Windsource:** The renewable electricity comes from Xcel Energy’s wind resources in Colorado, which total more than 2,200 MW (Xcel Energy, 2021).
- **Net Metering:** The renewable electricity comes from all on-site solar projects in Xcel Energy’s territory that participate in the Net Metering program.

For More Information

Visit our [website](#) or send us an e-mail at energyoffice@denvergov.org.

References

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