

# Energy and Carbon Emissions Reporting

## 2017 Summary

### Creating a more affordable and sustainable energy future

For more than a decade, we have pursued a clean energy strategy that has steadily reduced carbon emissions while improving our operations — delivering a more sustainable energy future at a low cost to customers. Since 2005, we have reduced carbon emissions from the electricity that serves customers by 35 percent, and we plan to do more. We have set one of the most ambitious goals in our industry with plans to reduce carbon emissions 60 percent by 2030.

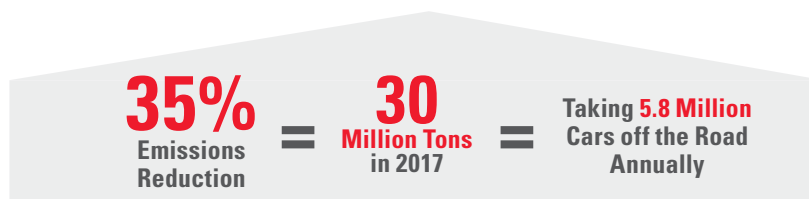
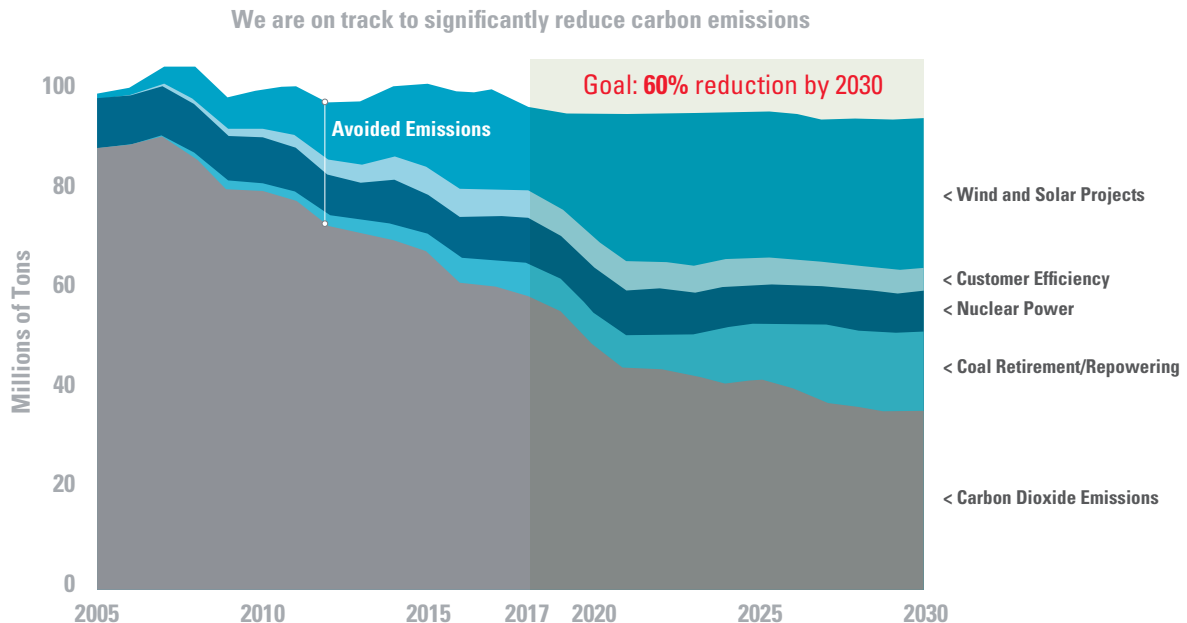
### Your carbon footprint is shrinking

We are working together — because our electricity is cleaner today, as an Xcel Energy customer, your carbon emissions are lower too. And if you have saved energy or participate in one of our renewable energy choice programs, you are doing even better.

### A comprehensive approach to clean energy

We are demanding more of ourselves, continuously working to innovate and do things better. That includes our all-inclusive clean energy strategy that focuses on reducing carbon emissions in three ways:

- Adding wind and solar to our energy mix and offering customers more renewable options
- Helping customers to manage their energy use and monthly bills through efficiency and rebate programs
- Transforming the energy grid by retiring aging coal plants, adding flexible natural gas, investing in advanced technologies and maintaining our carbon-free nuclear plants



## For our Customers

### How to calculate emissions associated with energy use

There are several ways customers can calculate their carbon emissions.

#### 1. The basic calculation:

$\text{lbs/kWh} \times \text{annual kWh} = \text{lbs of carbon dioxide (CO}_2\text{)}$

Region	2016	2017
	CO <sub>2</sub> Intensity lbs/kWh	CO <sub>2</sub> Intensity lbs/kWh
Upper Midwest (Michigan, Minnesota, North Dakota, South Dakota, Wisconsin)	0.889	0.894
Colorado	1.329	1.293
Southwest (Texas, New Mexico)	1.287	1.292

Carbon emissions intensity rates include carbon dioxide from biomass generation as well as from fossil fuels.

#### 2. Customers reporting emissions under The Climate Registry, World Resources Institute or ISO protocols should use the following emissions intensities for Scope 2 market-based reporting.

Region	2016		2017	
	CO <sub>2</sub> Intensity (mt/MWh)	CO <sub>2</sub> Intensity lbs/MWh	CO <sub>2</sub> Intensity (mt/MWh)	CO <sub>2</sub> Intensity lbs/MWh
Upper Midwest (Michigan, Minnesota, North Dakota, South Dakota, Wisconsin)	0.371	817	0.372	820
Colorado	0.609	1,343	0.593	1,308
Southwest (Texas, New Mexico)	0.584	1,287	0.586	1,293

Per The Climate Registry's Electric Power Sector Protocol, emissions intensities provided here exclude carbon dioxide from biogenic fuels.

#### 3. For some customers, their greenhouse gas accounting calls for "residual mix" carbon emissions intensities, which are provided below. These intensities use the same emissions reporting data as the intensities shown above, but they exclude electricity associated with Renewable Energy Credits or RECs that we sold to the market, purchased or retired on behalf of customers participating in Windsource® and Renewable\*Connect® in 2017.

Region	2017	
	CO <sub>2</sub> Intensity (mt/MWh)	CO <sub>2</sub> Intensity lbs/MWh
Upper Midwest (Michigan, Minnesota, North Dakota, South Dakota, Wisconsin)	0.374	825
Colorado	0.612	1,349
Southwest (Texas, New Mexico)	0.592	1,305

Residual mix carbon emissions intensities are calculated using The Climate Registry's Electric Power Sector Protocol optional delivery metrics and exclude carbon dioxide from biogenic fuels. Find more information about RECs in the Renewable Energy brief in Xcel Energy's annual Corporate Responsibility Report.

Reporting for 2016 is third-party verified while 2017 is still preliminary and may change as it goes through verification by the end of 2018.

**For cities and counties interested in tracking community energy and sustainability goals, we provide Community Energy Reports. The reports are updated annually in June and include energy usage and emissions data, as well as participation information across our renewable, demand response and energy efficiency programs. Find the report for your community, at [xcelenergy.com/CommunityEnergyReports](http://xcelenergy.com/CommunityEnergyReports).**

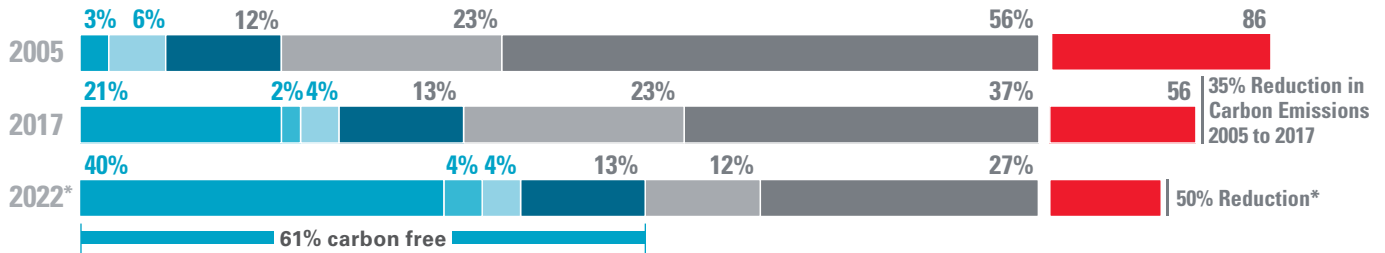
# Leading the Clean Energy Transition

## We are reducing carbon emissions from the electricity that serves customers

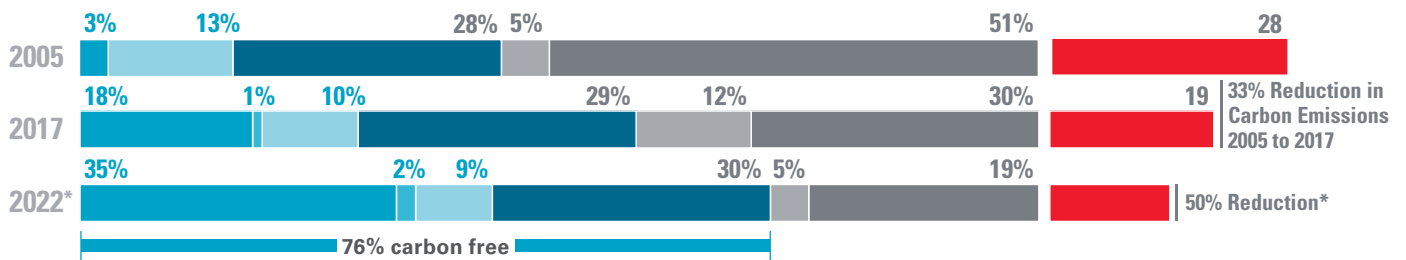
Through our clean energy strategy, we are serving customers with a cleaner mix of resources while investing in a modern and more advanced grid for the future. And, we are accomplishing this while keeping customer bills low.

### Our Changing Energy Mix and Progress Reducing Carbon Emissions

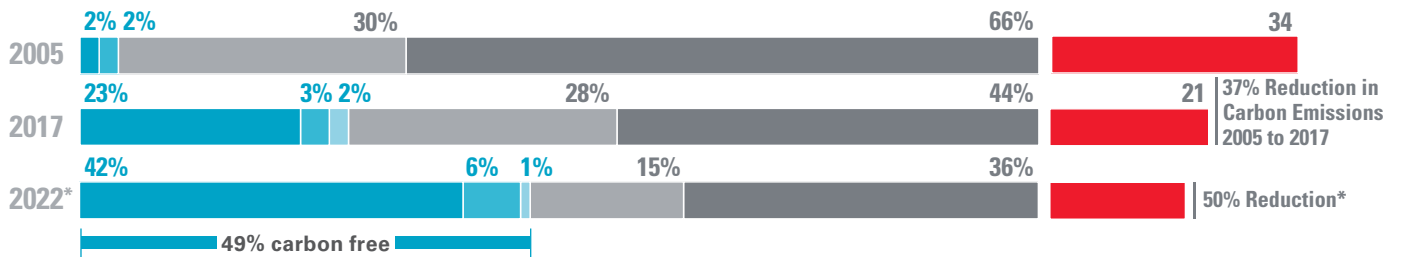
#### Xcel Energy



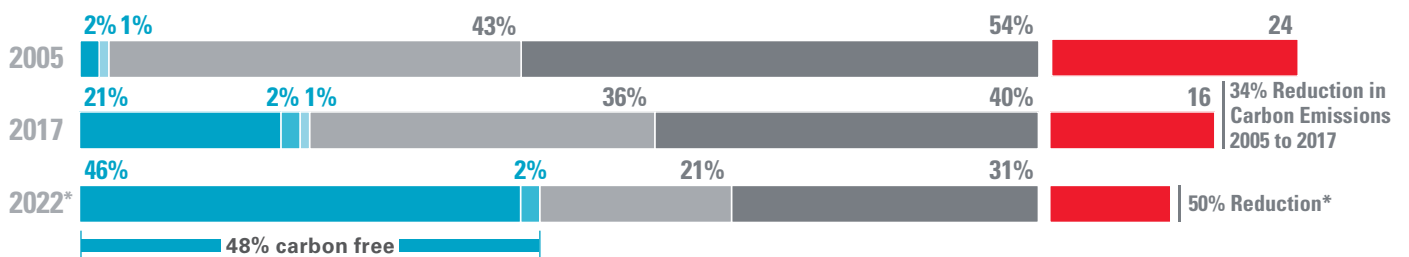
#### Upper Midwest (Michigan, Minnesota, North Dakota, South Dakota, Wisconsin)



#### Colorado



#### Southwest (New Mexico, Texas)



Wind

Solar

Other Renewables

Nuclear

Natural Gas

Coal

Million Tons Carbon Emissions

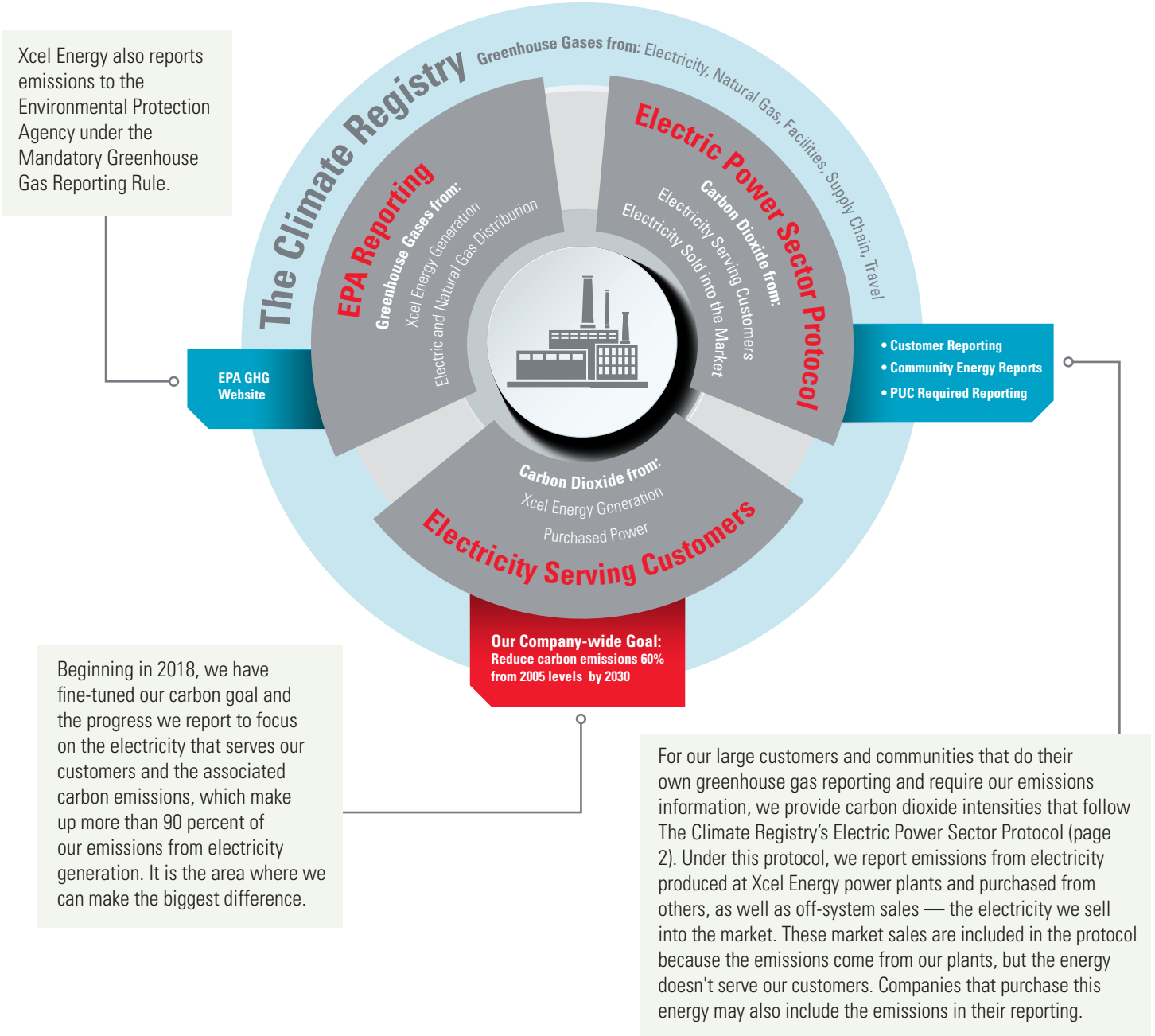
\*Projected 2022 energy mix and reductions in carbon emissions if our current plans can be achieved

# Measuring Progress

## Reducing emissions requires that we accurately measure and report performance

Counting greenhouse gas emissions is a complex business that continues to evolve. Xcel Energy joined The Climate Registry as a founding member in 2007 to help establish a consistent and transparent standard for calculating, verifying and reporting greenhouse gases. Today, our reporting is based on The Climate Registry and its Electric Power Sector Protocol, which aligns with the World Resources Institute and ISO 14000 series standards.

We publicly report greenhouse gases, primarily carbon dioxide, through a number of different programs that require a specific look at our emissions, and we continue to add more disclosures to ensure transparent, complete reporting in a way that meets our customers' needs for their own reporting and business decisions. All of the information we provide starts with the same foundational data that is third-party verified and registered with The Climate Registry. This includes verified emissions from 2005 through 2016, with work underway to verify our 2017 emissions by the end of 2018.



Find Xcel Energy's full greenhouse gas reporting at [xcelenergy.com/CorporateResponsibility](http://xcelenergy.com/CorporateResponsibility). Send questions to [CorporateResponsibility@xcelenergy.com](mailto:CorporateResponsibility@xcelenergy.com).