REDUCING AIR AND OTHER EMISSIONS

Xcel Energy is significantly reducing air and other emissions by changing its operations and transitioning to cleaner sources of energy.

We are focused on reducing air and other emissions from the combustion of fossil fuels to generate electricity, primarily from coal. Since the 1990s, we have worked with environmental agencies, utility regulators and other stakeholders on proactive environmental initiatives that support our states as they manage air quality challenges associated with growth and an influx of people, vehicles and new industries.

The communities we serve continue to benefit from innovative air quality initiatives that we put in place years ago, such as the Colorado Clean Air Clean Jobs and Minnesota Metro Emissions Reduction Projects. These major programs served as national models for significantly reducing emissions from generating plants while giving power providers enough operational flexibility to ensure reliable, affordable electricity for customers.

For well over half a century, coal has served as a steady source of low-cost, dependable electricity, providing our customers with comfort and convenience and communities with economic growth. As technology and customer interests evolve, we are transitioning away from coal to cleaner natural gas and wind and solar power. We have changed the way we operate in order to run our coal plants less and are implementing plans that we expect will retire approximately half of our coal-fueled capacity between 2006 and 2027. In the Upper Midwest, we have proposed retiring all our coal-fueled plants by 2030 or 10 years early.

While renewable energy is replacing most of our retiring coal generation, we need flexible, low-cost natural gas to integrate wind and solar generation and balance the system. Because natural gas has less than half the carbon emissions of coal, five times less emissions of nitrogen oxides, and virtually no emission of sulfur dioxide, mercury or particulate matter, it is a reliable, cost-effective combination for serving customers and significantly reducing environmental impacts.

HIGHLIGHTS

- From 2005 through 2019, we reduced carbon emissions approximately 44% from the electricity provided to customers. This puts us over halfway to achieving our interim goal to reduce carbon emissions 80% by 2030.
- Company-wide we continued to decrease emissions of sulfur dioxide, nitrogen oxides, mercury, lead and particulate matter to levels that were 82%, 80%, 92%, 80% and 77% lower, respectively, compared to 2005.
- Under the EPA's Toxics Release Inventory program, we have reduced releases by approximately 28%, compared to 2005 levels.
- The Colorado Department of Public Health and Environment through its Environmental Leadership Program recognized Xcel Energy as a Gold Leader for the company's comprehensive Environmental Management System as well as its clean energy leadership and environmental stewardship.
- Within our vehicle fleet, we essentially replace all sedans scheduled for retirement with plug-in electric vehicles. We estimate that our 49 plug-in hybrid electric vehicles helped to avoid nearly 123 metric tons of carbon emissions for the year.
- We offer discounted mass transit passes for employees at our two largest employee locations. With nearly 1,300 employees using the discounts in 2019, the program supports local community goals to improve air quality and reduce carbon emissions.

MAXIMIZING SYSTEM OPERATIONS TO REDUCE EMISSIONS

There is a significant shift in how we operate our generating plants compared to several decades ago. Not only are we changing the way we produce electricity, but the dispatch and operation of our generating resources is different too.

Through major clean energy initiatives in Colorado and Minnesota, we have retired coal units and replaced the power with cleaner, more flexible natural gas and clean renewable generation, and we have plans to do more. Our current plans include:

- Implementing the nation's largest multi-state wind investment under our Steel for Fuel growth strategy that will add at least 19 new wind farms to our system across seven states by 2022, including 13 which we will own.

- Moving forward with the transformative Colorado Energy Plan that will retire two coal units by 2026 and add significant new wind and solar resources, as well as large-scale battery storage.

- Proposing a new Upper Midwest Energy Plan that aims to continue our clean energy transition by closing our remaining coal units in the Upper Midwest, extending the use of carbon-free nuclear energy, using cleaner natural gas, and increasing wind and solar energy.

As renewable energy gradually becomes the majority energy source on our system, we now operate the system reliably and cost effectively to maximize clean electricity production, following the wind and sun. Advanced forecasting tools have dramatically improved the predictability of wind energy, making a variable energy source much more dependable. With reliable wind forecasts now available seven days in advance, we can make more accurate commitment and dispatch decisions associated with wind energy, which helps reduce fuel and other costs.

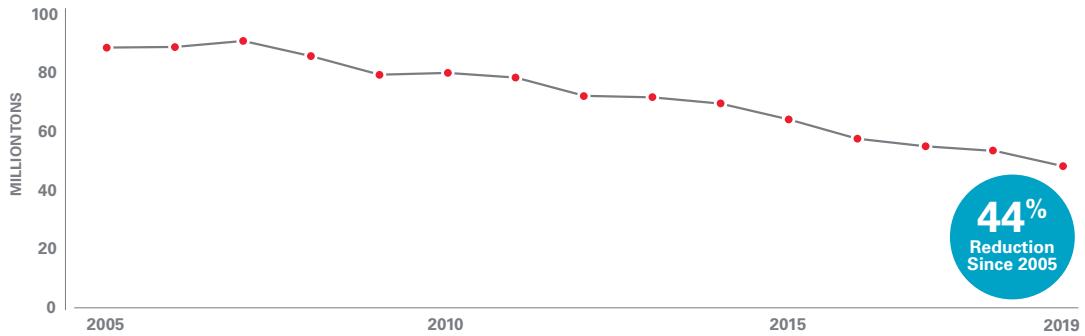
Cleaner natural gas generation is an excellent companion to renewable energy. It has long been used to manage the variability of wind generation, with natural gas units cycling up and down as needed to help meet electric loads as wind speeds rise and fall. Years ago, we began exploring how coal units could do the same, although ramping up and down coal units is much more challenging. Traditionally, coal units have provided baseload power for our system, with the capability to run dependably 24/7. The company's coal plants began testing and learning their limitations to identify minimum levels at which they could operate safely and most economically. They continued to challenge those minimum levels and find ways to drive them even lower while maintaining boiler stability and temperatures, which are required to operate emission controls and ensure environmental compliance.

With these new operating capabilities, we have changed how we offer some plants into regional markets based on economic as well as environmental considerations. For example, at the Tolk and Harrington generating plants in Texas, we changed how we offer the plants into the market to produce better economic results for customers and to conserve water at Tolk. Similarly, we have changed how we offer generating plants into the Midwest market and proposed seasonal operation of units at the Allen S. King and Sherco generating plants in Minnesota. The plants would be idled in spring and fall months when energy use is low and renewable energy is high. This change is expected to provide more certainty for operations, reduce carbon emissions, and lower operating, maintenance and capital improvement costs.

Our efforts to turn down and cycle off units in 2019 reduced coal generation by more than 837,000 megawatt hours, saving an estimated $10 million and avoiding approximately 938,000 tons of carbon dioxide, as well as other emissions. Building on this experience, we have begun to operate our nuclear plants in a similar way.

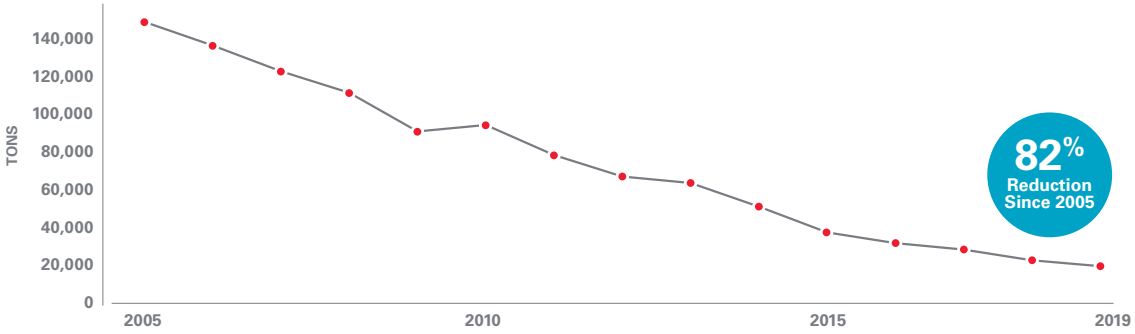
AIR EMISSIONS REPORTING

Carbon Dioxide from Electricity Serving Customers (Owned and Purchased Generation)

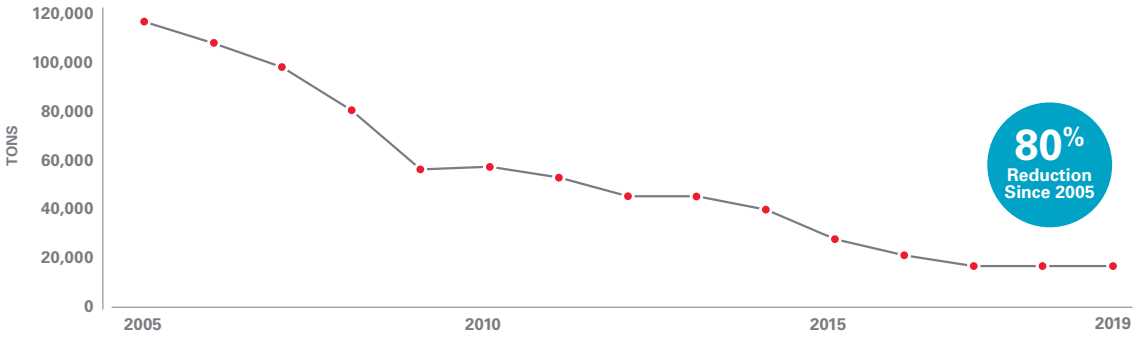


We report on our clean energy transition and aspiration to deliver 100% carbon-free electricity by 2050 in the Leading the Clean Energy Transition section of the Corporate Responsibility Report.

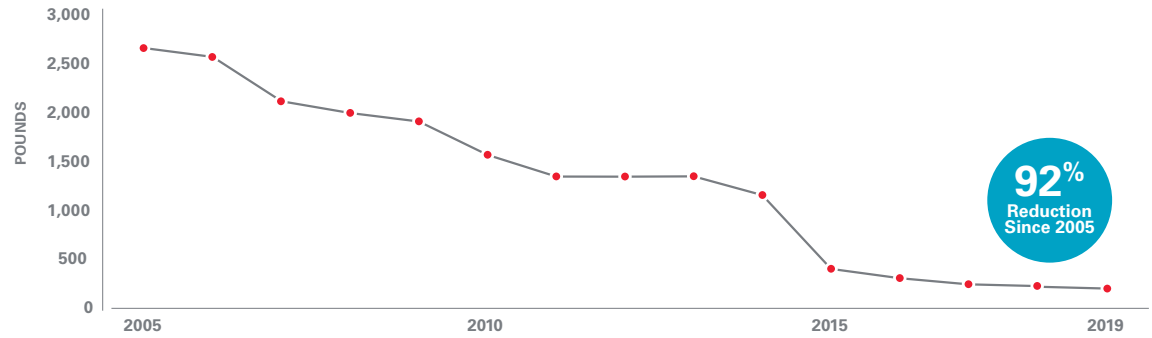
Sulfur Dioxide from Electricity Serving Customers (Owned Generation)



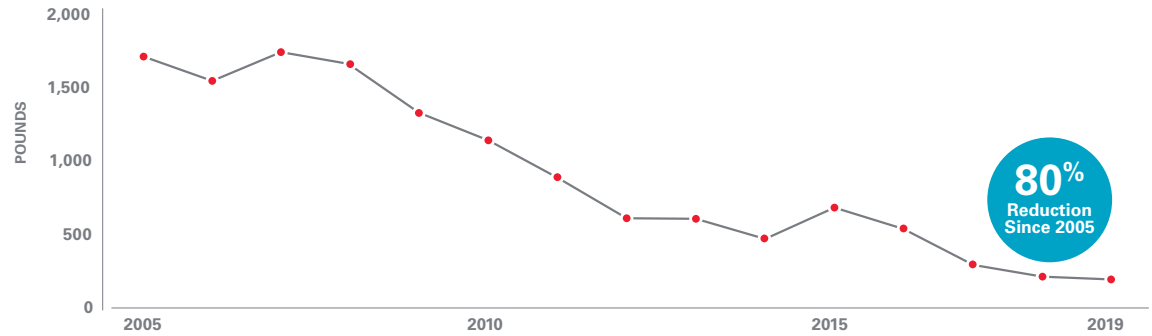
Nitrogen Oxides from Electricity Serving Customers (Owned Generation)



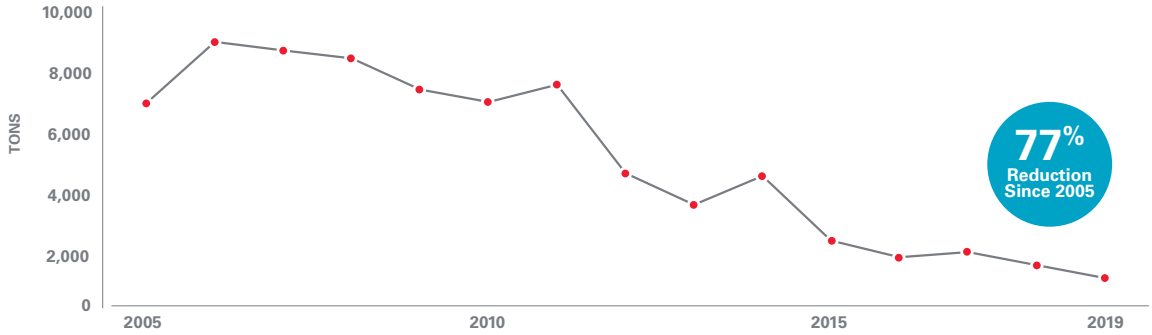
Mercury from Electricity Serving Customers (Owned Generation)



Lead from Electricity Serving Customers (Owned Generation)



Particulate Matter from Electricity Serving Customers (Owned Generation)



We provide additional emissions reporting for Xcel Energy and each of its operating systems in the Performance Summary of the Corporate Responsibility report.

REDUCING FLEET VEHICLE EMISSIONS

Our fleet of approximately 7,000 owned vehicles includes everything from small cars to light trucks, bucket trucks, excavators and trailers. In 2014, our vehicles were equipped with telematics to reduce fuel costs and improve driver safety. Using the technology has reduced idling and fuel consumption, wear and tear on vehicles, and emissions. We estimate that in 2019 the use of telematics saved approximately 65,000 gallons of fuel at a value of more than $185,000.

COMMUNITY RIGHT TO KNOW AND THE TOXICS RELEASE INVENTORY PROGRAM

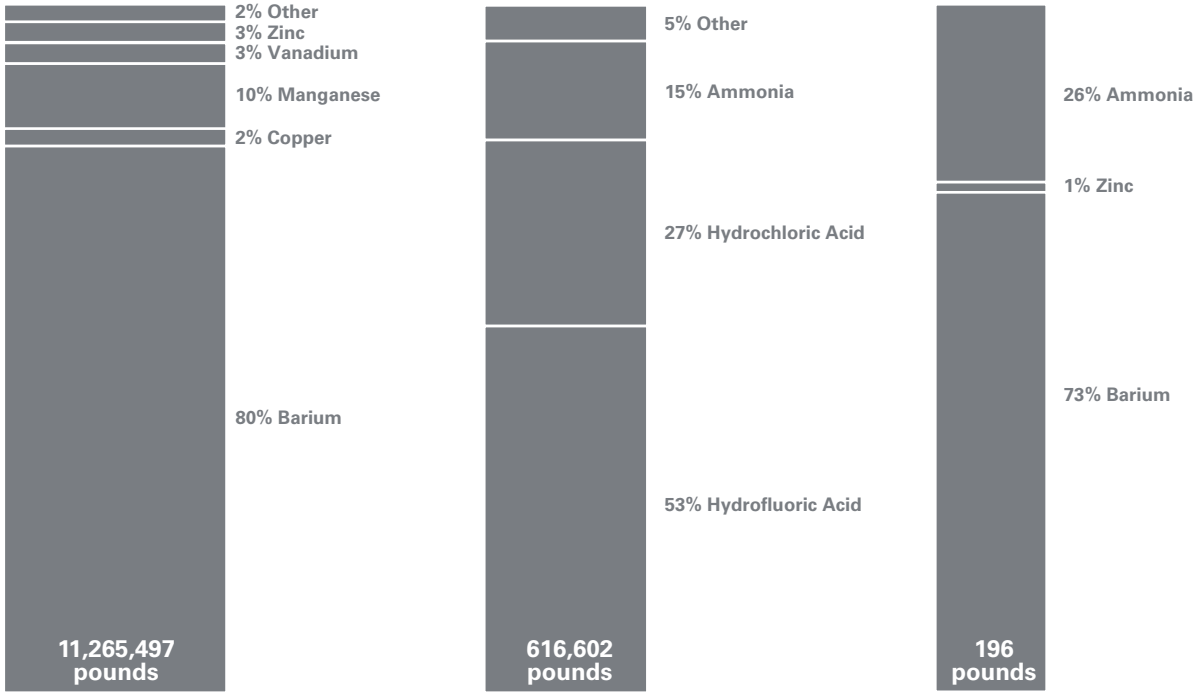
The EPA has administered the Emergency Planning and Community-Right-to-Know Act (EPCRA) since 1986. The program is intended to help communities protect residents from potential chemical hazards. Under EPCRA, residents have the "right to know" about chemicals in their communities. Each year, facilities in specific industries that manufacture, process or use the nearly 650 substances identified under the program must report their releases to air, land and water. The EPA manages the information in a publicly available database under the Toxics Release Inventory (TRI) program.

Xcel Energy supports this type of reporting and has participated since 1999 when the program was expanded to include electric utilities. We annually report to EPA our releases, which are the result of using coal, oil and refuse-derived fuel (processed municipal solid waste) to produce electricity. When these fuels are combusted, they release trace amounts of TRI reportable substances, including barium, chromium, copper, lead, manganese, mercury, nickel and zinc.

TRI reportable substances are reported by facility and release type — land, air and water. A facility's releases may change slightly from year to year based on the amount of electricity produced and the associated fuel that is consumed, as well as the fuel composition and mineralogy.

The vast majority of our TRI reportable substances are controlled at our facilities as part of the coal ash where they are contained, preventing them from entering the air. We capture about 95% of these substances and safely dispose of them in managed landfills.

2018 TRI Releases

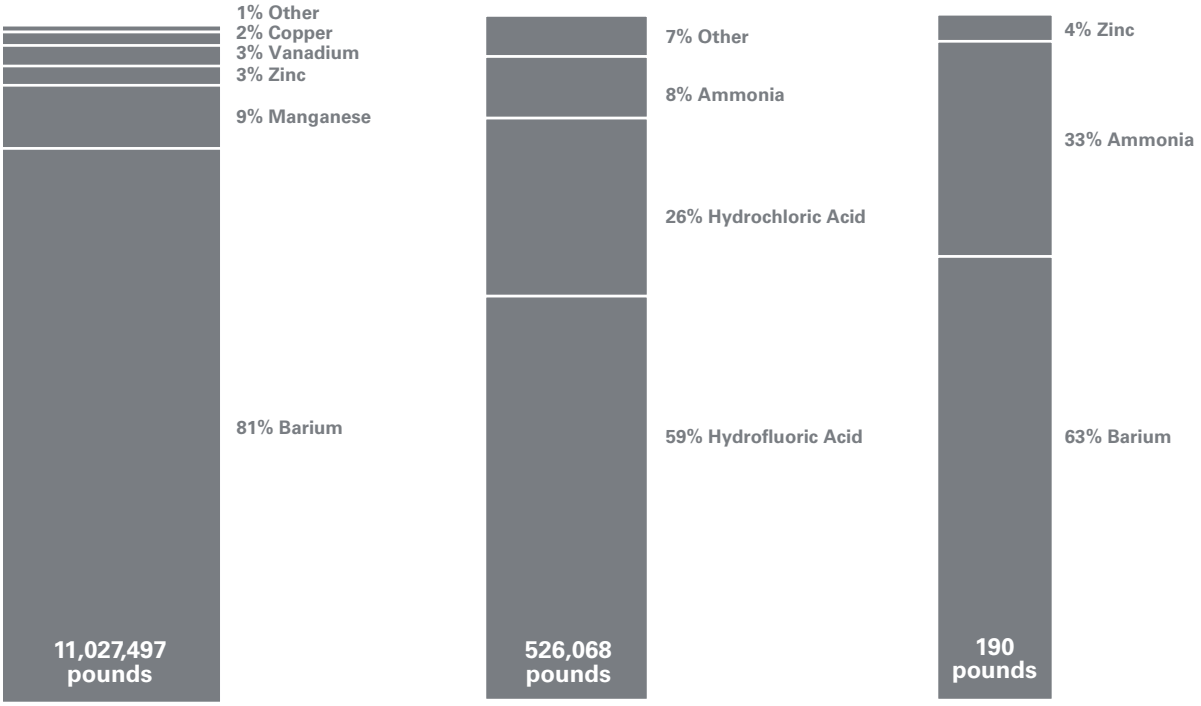


TRI Land Disposal (95 percent of total)

TRI Releases to Air (5 percent of total)

TRI Releases to Water (<0.01 percent of total)

2017 TRI Releases



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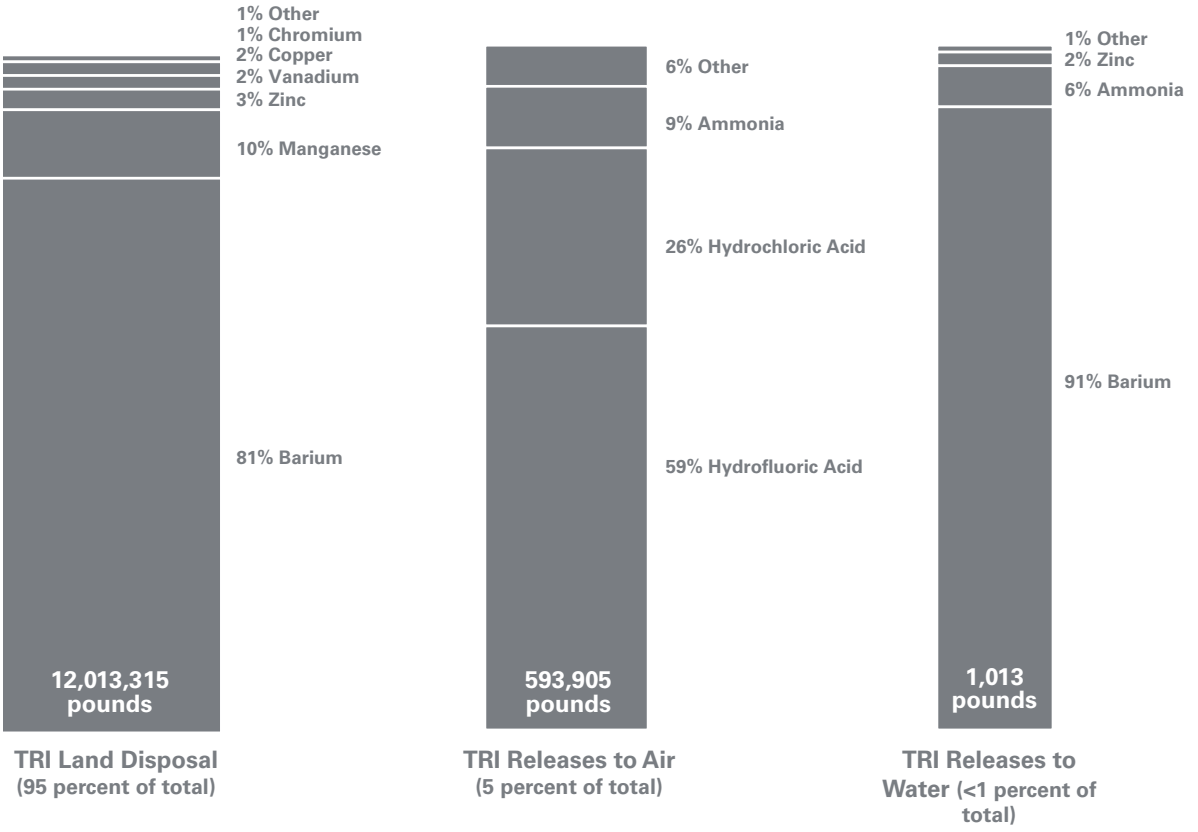

Releases provided here are from 11 generating plants in locations throughout our service territory. For individual plant information visit the EPA's TRI Explorer website or contact corporateresponsibility@xcelenergy.com.