

**PLANNING AND DEVELOPMENT DEPARTMENT MEMORANDUM
#30-2020**

DATE: August 3, 2020

TO: Honorable Mayor Meredith Leighty and City Council Members

THROUGH: Heather Geyer, City Manager 

FROM: Brook Svoboda, Director of Planning and Development 
Becky Smith, Planning Manager

SUBJECT: Xcel Energy Presentation – Building a Clean Energy Future

PURPOSE

Preston Gibson, Xcel Energy Area Manager, Community and Local Government Affairs, is presenting to City Council on Xcel Energy’s priorities, goals, and strategies to build a clean energy future.

BACKGROUND

In 2018, the City of Northglenn adopted its first Sustainability Plan. This plan outlines several goals related to energy conservation and using alternative energy sources. This plan led the City to join the Xcel Partner in Energy Program. Phase 1 of the program was to create an Energy Action Plan. We are currently in Phase 2, which is the implementation of the Energy Action Plan. During these planning efforts, it has been recognized that the utility providers play an important role in the City’s sustainability goals. Mr. Gibson will be presenting Xcel Energy’s initiatives to provide customers with clean energy and outline the company’s long term goals and strategies to work towards a carbon-free energy future.

BUDGET/TIME IMPLICATIONS

There are no budget implications.

STAFF RECOMMENDATION

This presentation is for informational and discussion purposes.

STAFF REFERENCE

If Council members have any comments or questions they may contact Brook Svoboda, Director of Planning and Development, at 303.450.8937 or bsvoboda@northglenn.org.

ATTACHMENTS

1. Xcel Energy Presentation – Building a Clean Energy Future



BUILDING A CLEAN ENERGY FUTURE

Northglenn
August 3, 2020

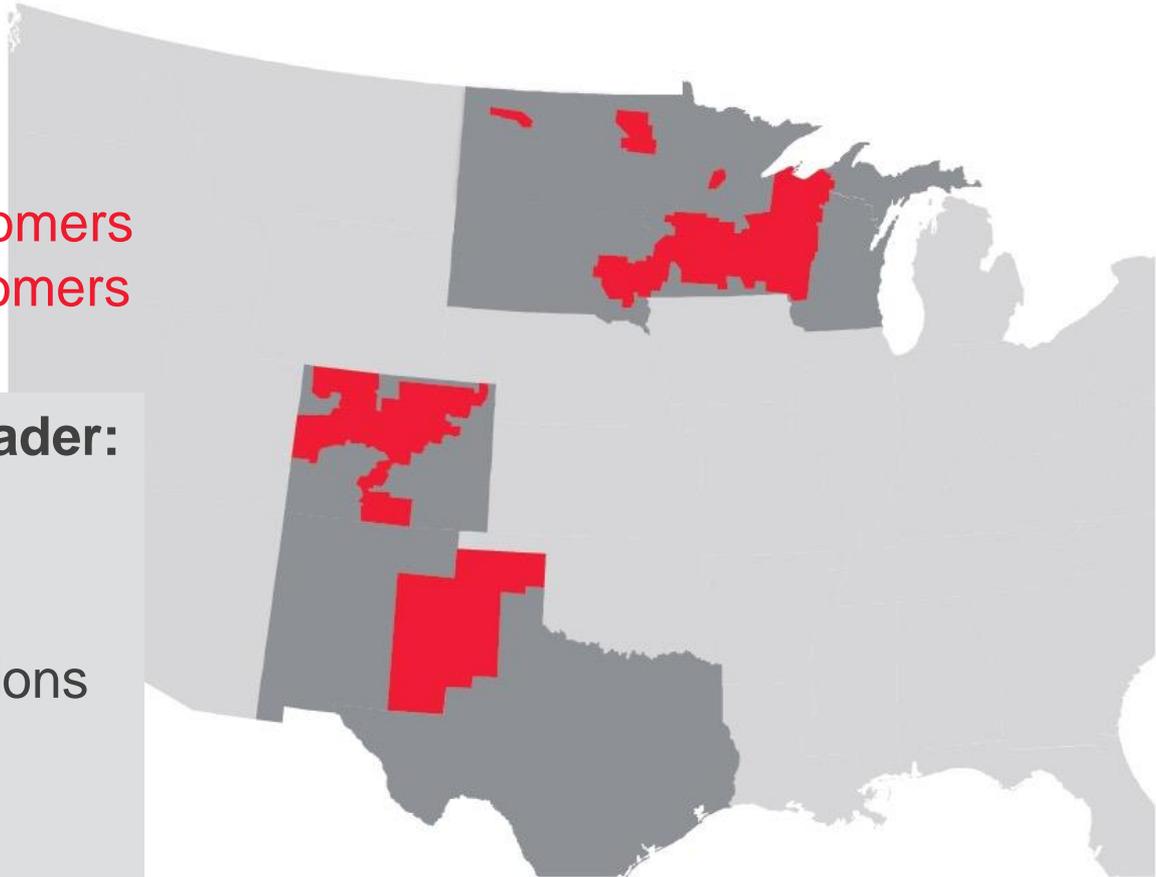
Xcel Energy

Serving eight states

- 3.6 million electricity customers
- 2 million natural gas customers

Nationally recognized leader:

- Wind energy
- Energy efficiency
- Carbon emission reductions and reporting
- Innovative technology



Xcel Energy Priorities



Lead the Clean
Energy Transition



Enhance the
Customer Experience

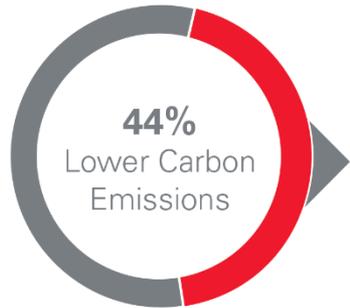


Keep Bills Low

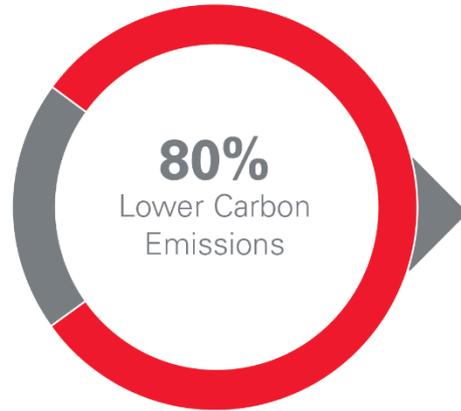
Leading the Clean Energy Transition

A bold vision for a carbon-free future

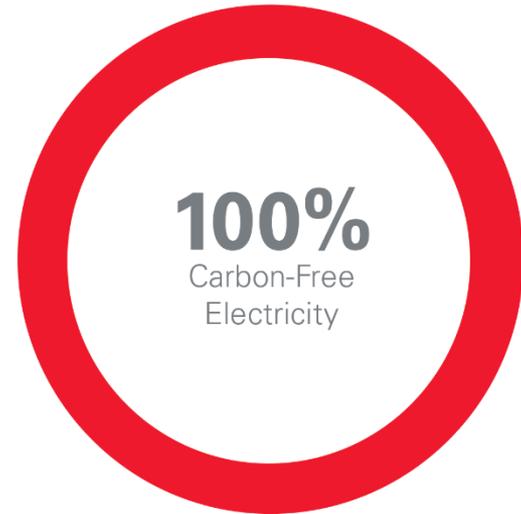
2019 Results



2030 Goal



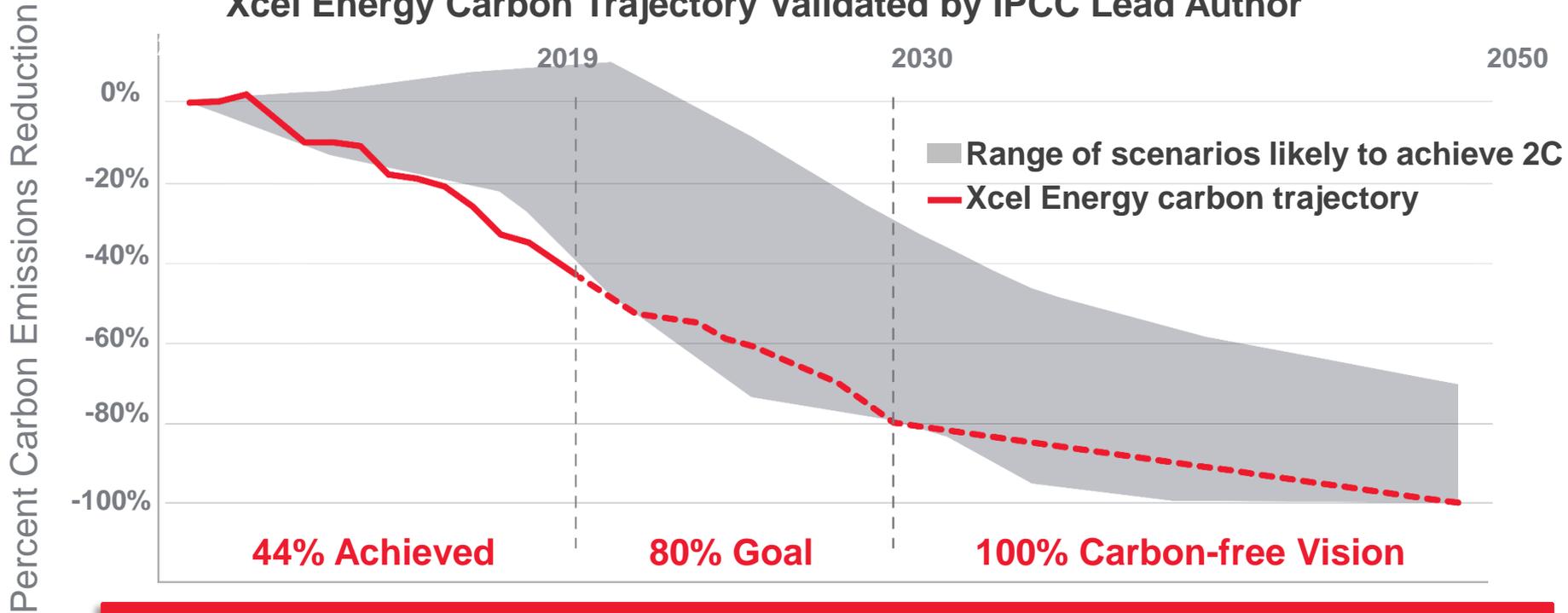
2050 Vision



Company-wide emissions reductions from the electricity serving our customers, compared to 2005

Goals Grounded in Science

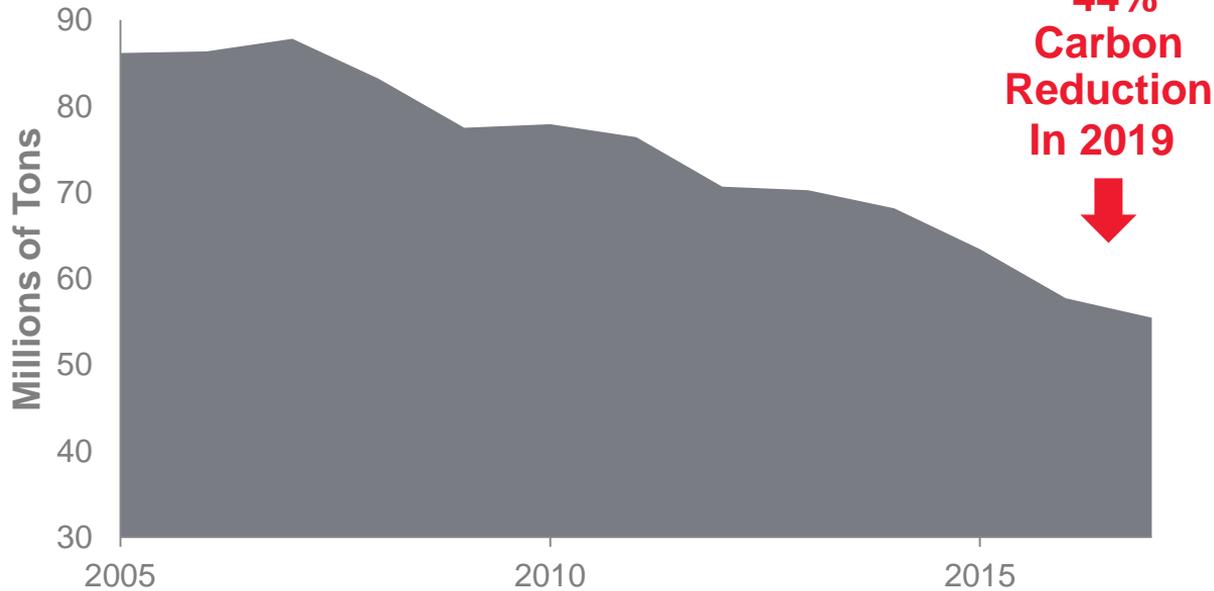
Xcel Energy Carbon Trajectory Validated by IPCC Lead Author



Goals align with Paris agreement temperature targets

Progress to Date

Xcel Energy Carbon Reductions



Reductions surpass:

- U.S. Paris climate commitment
- Clean Power Plan Goal

Achieving our Clean Energy Vision

Reducing carbon emissions is job #1

- Protect energy reliability and affordability**
- Support from our states and stakeholders**
- Advocate for constructive public policy**
- Develop carbon-free 24/7 technologies for 2050**

Path to 80% Reduction by 2030

Affordably and reliably with current technology

- Increase renewables
- Natural gas and energy storage
- Preserve nuclear
- Transition coal fleet
- Energy efficiency
- Strategic electrification
- Invest in the grid



Plans that Support the 2030 Goal



Colorado

- Colorado Energy Plan
- Upcoming clean energy plan under SB19-236



Upper Midwest

- Proposed energy plan filed July 2019
- Commission decision expected late 2020



Southwest

- Wind energy expansion
- Texas stakeholder discussions
- New Mexico Energy Transition Act

Path to 2050 Aspiration

Depends on 24/7 Carbon-free Technology

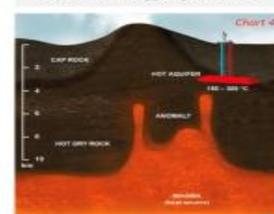
Possibilities:

- Natural gas with carbon capture and storage
- Deep rock geothermal
- Power to gas
- Advanced nuclear
- Seasonal storage
- Others

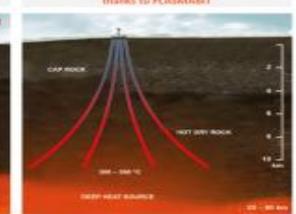


CURRENT GEOTHERMAL SYSTEMS: <3 km **ULTRA DEEP GEOTHERMAL SYSTEMS: 10 km**

Dependent on finding geological anomalies:



Economically accessible almost anywhere, thanks to PLASMAJET



10% of the inhabited world has great potential for geothermal power at 10 km depth

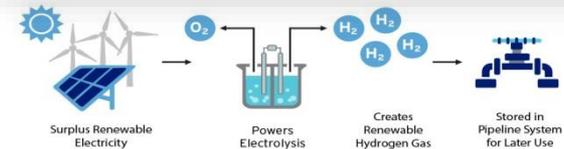


Diagram Courtesy of SoCal Gas

Supportive Innovation Policies

State and federal policy can drive innovation toward carbon-free technologies

RD&D

Focus on 24/7 carbon-free breakthrough technologies for commercialization

Incentives

Carbon-free, technology-neutral incentives

Ecosystem

Streamlined permitting, interconnection processes and workforce development; enable and encourage supporting infrastructure

Standards

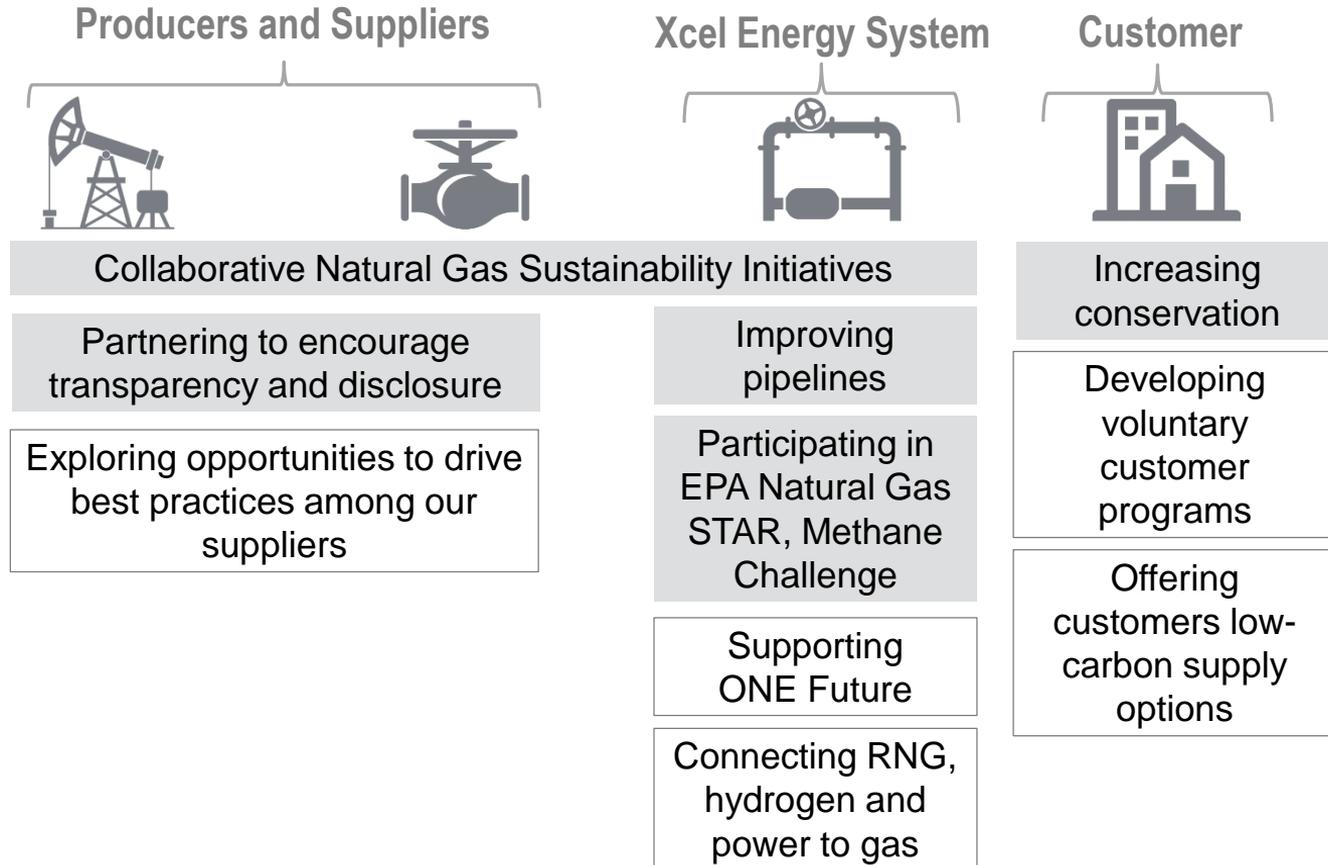
If necessary, standards for long-term carbon emissions reductions



Hydrogen Demonstration

Partnership with U.S. DOE and Idaho National Laboratory at one of Xcel Energy's two nuclear plants will produce hydrogen for commercial use and support growing wind and solar operations

Reducing Emissions from the Natural Gas System



Beneficial Electrification

Enabling new opportunities



Cut customer costs and emissions with EVs



Reduce upstream oil and gas emissions

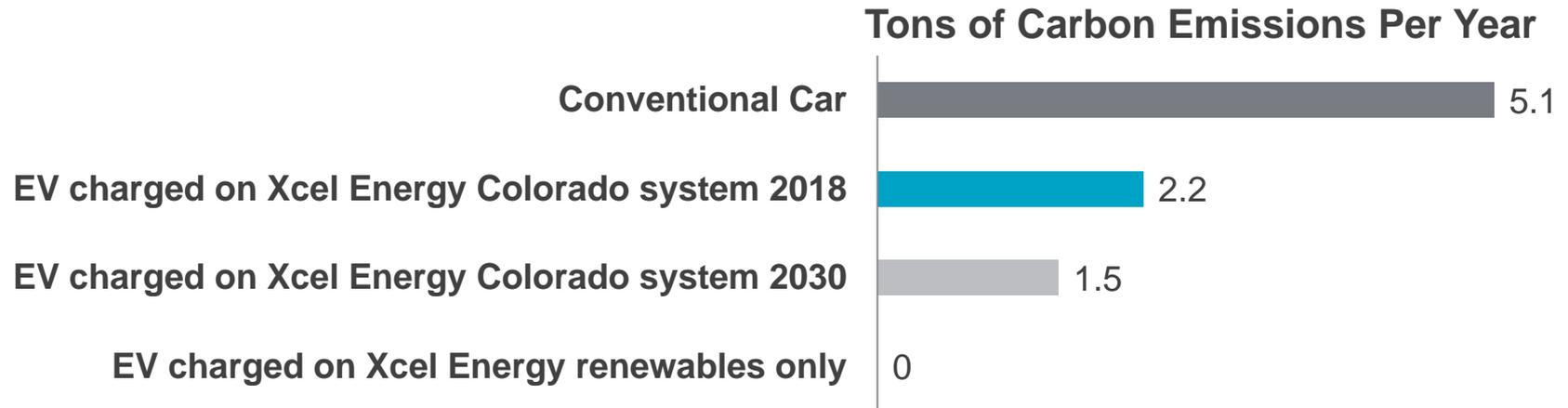


Offer low-carbon solutions for homes and businesses

Beneficial Electrification

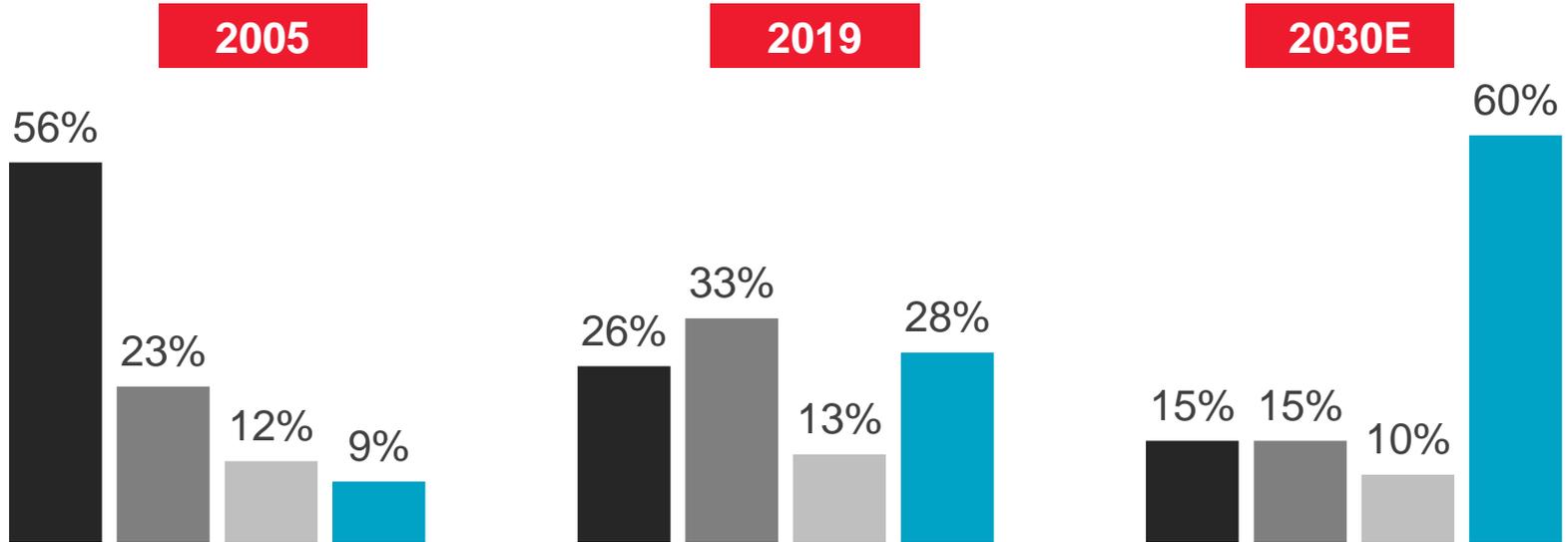
- Saves customers money
- Reduces emissions
- Improves power grid use

Driving electric is clean today, even cleaner in the future



Source: U.S. Environmental Protection Agency and Xcel Energy

Evolving Energy Mix

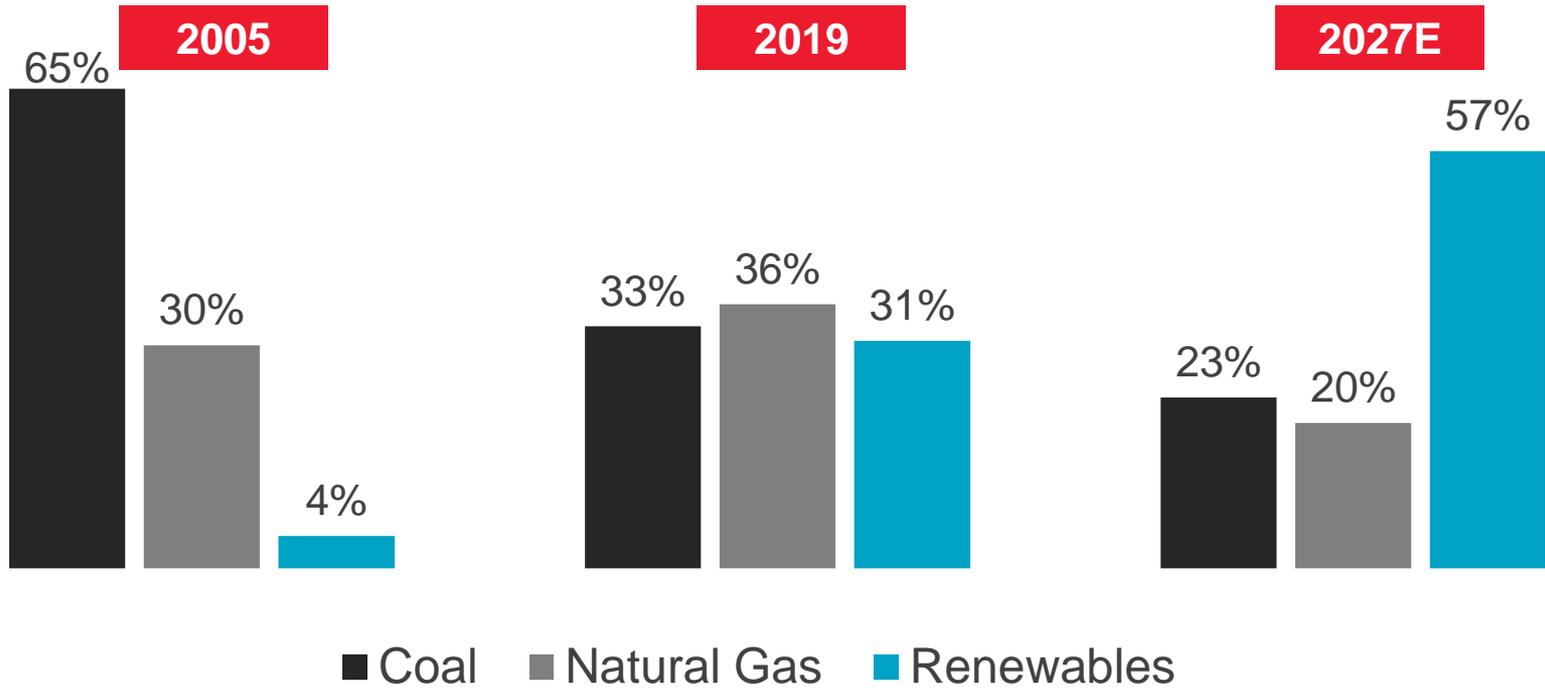


Results are estimated and reflect potential scenarios that achieve 80% by 2030; actual system depends on various factors, including regulatory approval of future plans

■ Coal ■ Natural Gas ■ Nuclear ■ Renewables

Increasing Renewables on the Grid

Colorado



Coal Plant Retirements

2005-2018 Retirements

Year	Plant	Units	Capacity
2007	High Bridge	3-6	353 MW
2008	Riverside	6-8	371 MW
2010	Cameo	1-2	73 MW
2011	Cherokee	2	106 MW
2012	Cherokee	1	107 MW
2013	Arapahoe	3-4	144 MW
2015	Cherokee	3	152 MW
2015	Black Dog	3-4	282 MW
2017	Cherokee	4	352 MW
2017	Valmont	5	184 MW
TOTAL			2,124 MW

25%
coal fleet
retirement



2017

2019-2027 Planned Retirements

Year	Plant	Units	Capacity
2022	Comanche	1	325 MW
2023	Sherco	2	682 MW
2025	Comanche	2	335 MW
2025	Craig	1	42 MW*
2026	Sherco	1	680 MW
TOTAL			2,064 MW

50%
coal fleet
retirement



2027

2028-2030 Proposed Retirements

Year	Plant	Units	Capacity
2028	King	1	511 MW
2030	Sherco	3	517 MW*
TOTAL			1,028 MW

60%
potential
coal fleet
retirement



2031

*Based on ownership

Steel for Fuel

Nation's largest multi-state wind investment

Xcel Energy Owned Wind Projects



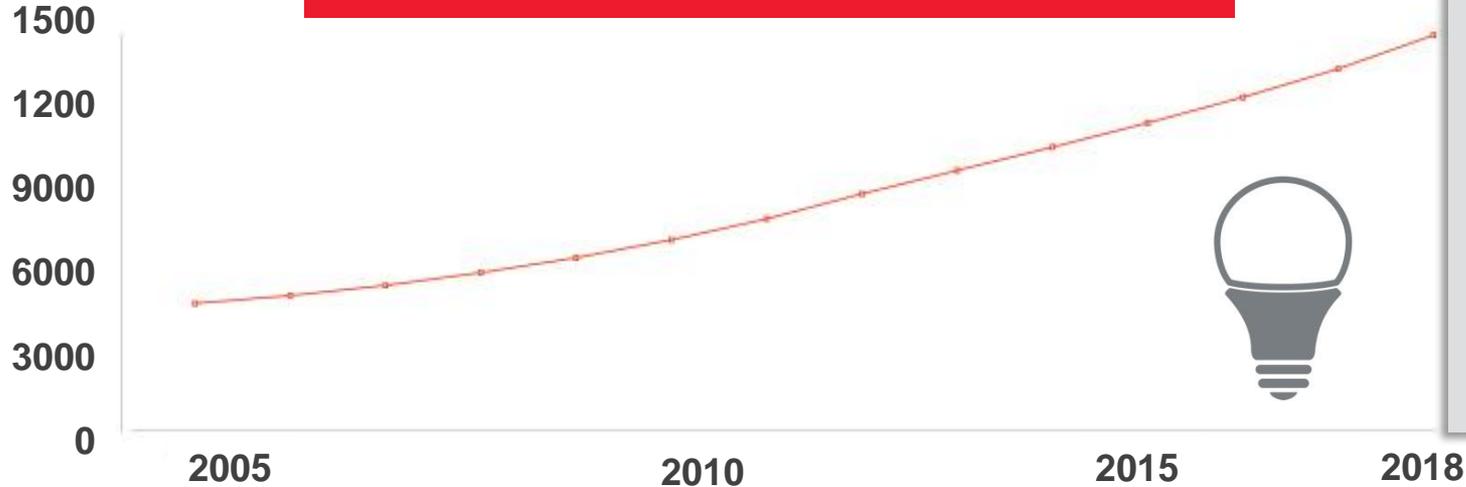
- Enough new wind by 2022 to power 2.3 million homes
- 70% increase in our wind portfolio
- 5X the owned wind capacity compared to 2016

A Range of Renewable Choices

Program	Description	REC Attribution
 Renewable*Connect[®]	Flexible and affordable way to subscribe for up to 100% wind and solar	Participant
 Windsource[®]	Easy, low-risk way to subscribe for up to 100% wind	Participant
 Solar*Rewards[®]	Incentive program for private on-site solar; customer earns an incentive for transferring RECs	All Customers
Solar*Connect Community[®]	Subscribe to a solar garden and get full rights to solar claims	Participants
 Solar*Rewards Community[®]	Subscribe to a third-party solar garden and receive bill credits	All Customers

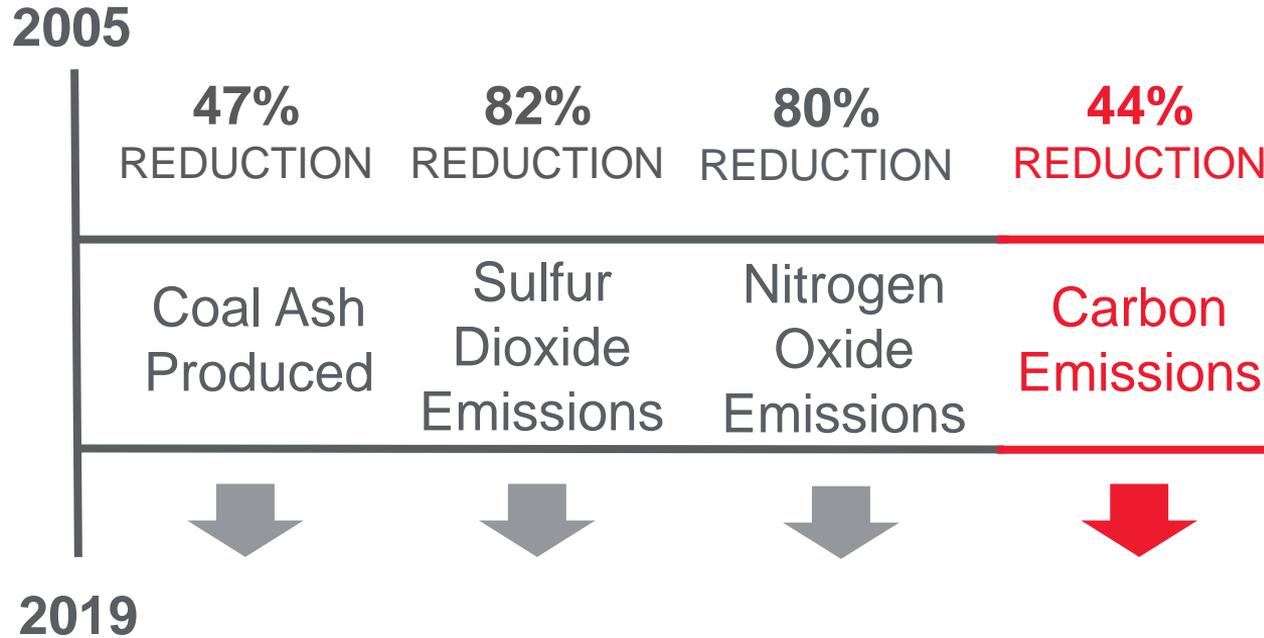
Energy Efficiency Leadership

Cumulative Customer Energy Savings



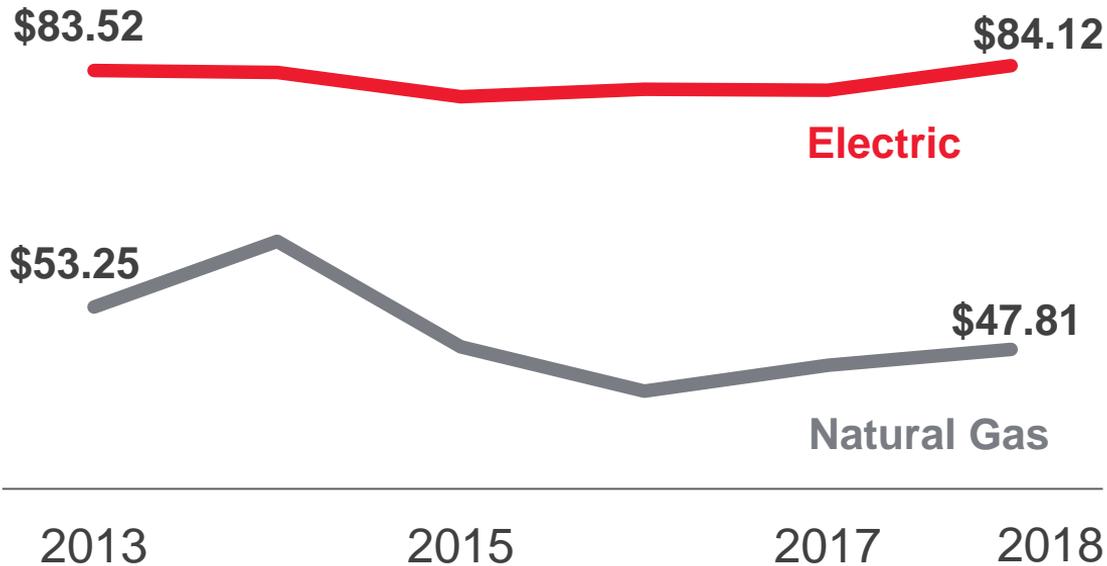
- 150 programs
- 21 avoided power plants
- 780,000 tons avoided carbon in 2018

Environmental Benefits



Keeping Customer Bills Low

Average Residential Customer Bill



Xcel Energy gas and electric bills are below the national average

Thank You

Preston Gibson
Area Manager, Community and Local Government Affairs
5460 W. 60th Avenue
Arvada, CO 80003
PHONE 303.425.3944
E-MAIL Preston.E.Gibson@xcelenergy.com

