



Colorado Springs Utilities
It's how we're all connected

Planning our Energy Future

Sustainable Energy Update Public Meeting

May 8, 2023

Our mission:

To provide safe, reliable, competitively-priced electric, natural gas, water, and wastewater services to the citizen owners and customers of Colorado Springs Utilities.

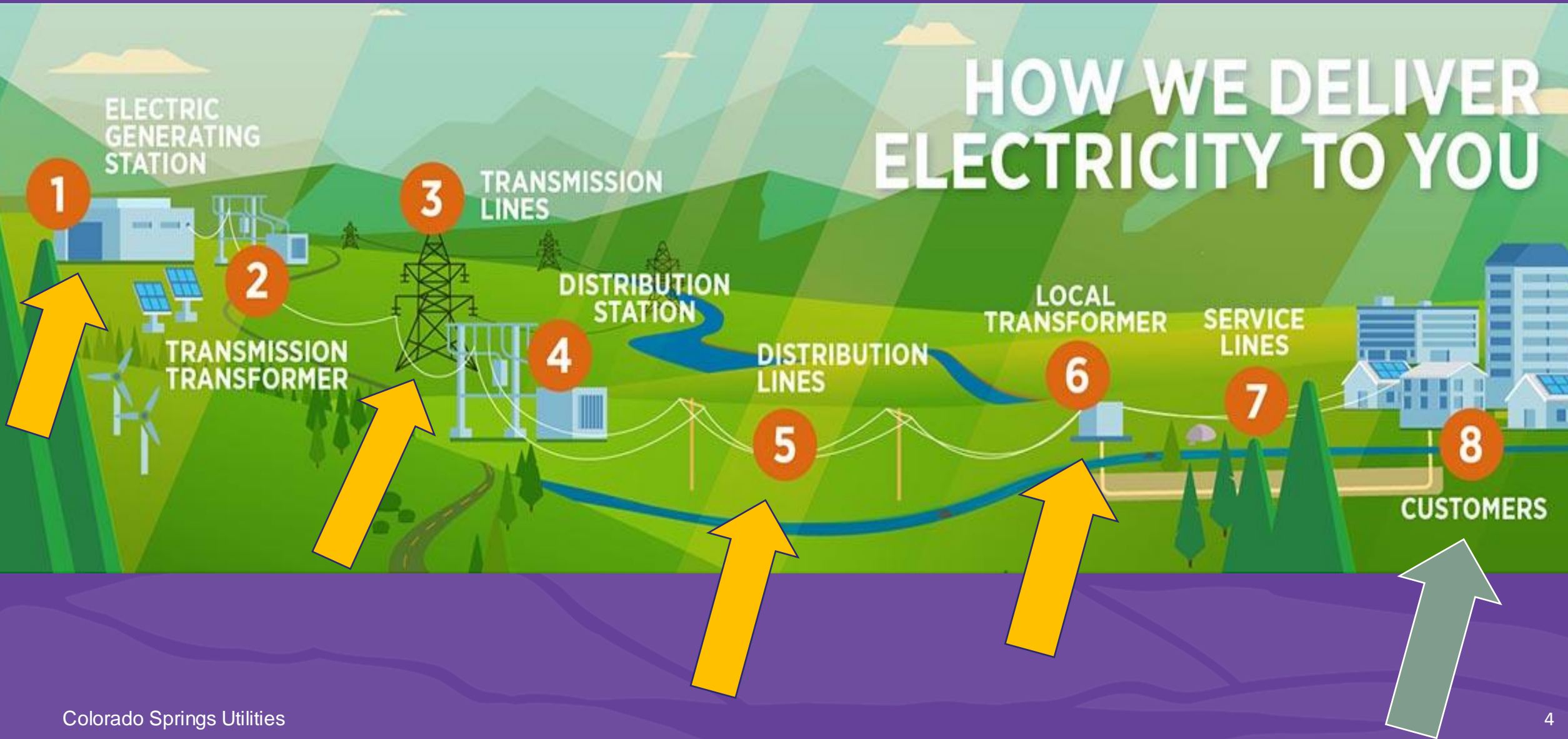


In consideration of energy use, which of these is your top concern?

- A. Reduction of greenhouse gas emissions
- B. Community air quality
- C. It is available when I need it
- D. Maintaining low costs
- E. Increasing the use of renewable energy

Generation to Customer

HOW WE DELIVER ELECTRICITY TO YOU



Grid Modernization

- Infrastructure Upgrades
- Distributed Energy Resources
- Market / Independent System Operator / Regional Transmission Organization
- Advanced Utility Infrastructure



Briargate Substation

- Project will increase transmission and distribution capacity on the north-east part of the city
- Substation was energized in late February 2023



Natural Gas Generators

- Project adds 162 megawatts of new natural gas generation to replace the retired Drake Power Plant
- Units are currently being tested and planned for operation in May



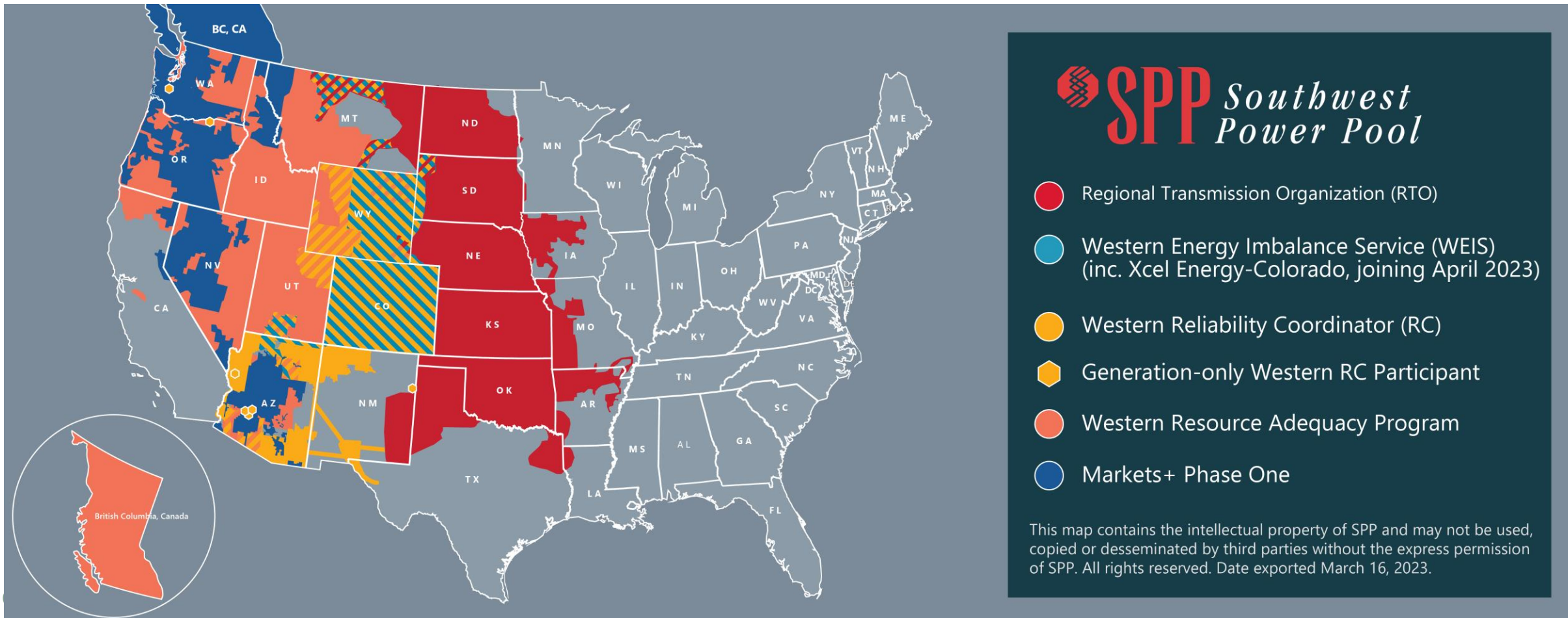
Renewable Energy

- Pike Solar will add 175 megawatts (MWs) of new solar generation
- Construction is underway and is expected to be operational in the first quarter 2024
- Developing 200 MWs of Battery Energy Storage in early 2025
- Evaluating additional wind and solar resources



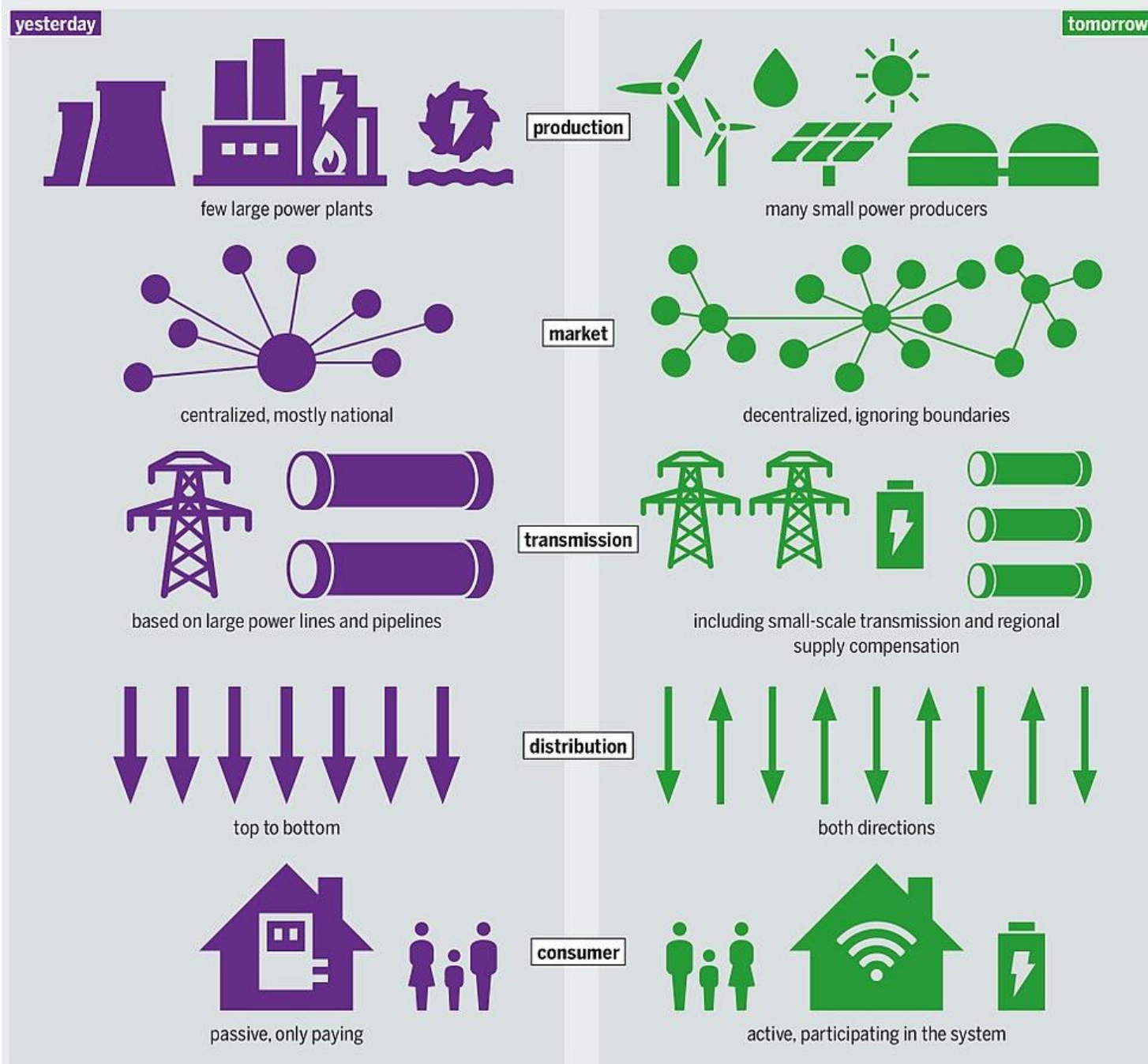
Western Energy Imbalance (WEIS)

- Entered Southwest Power Pool's WEIS in August 2022
- Improved reliability and cost-effective operations from access to additional generation resources and transmission capacity



Advanced Utility Infrastructure

- Fiber Network
- Advanced Metering Infrastructure
- Microgrids



What is your top priority related to energy?

- a. Environment/Stewardship
- b. Innovation
- c. Cost
- d. Reliability
- e. Diversity of generation resources

Regulatory Item #1

Clean Energy Plan Law

- Requires electric generation utilities to reduce greenhouse gases (GHG) emissions 80% by 2030 from 2005 levels
- Voluntarily submitted Clean Energy Plan to create a “safe harbor”



Regulatory Item #2

Clean Heat Plan Law

- Requires gas utilities to adopt programs to reduce greenhouse gas emissions
- 4% carbon emission reduction by 2025 with 2% cost cap
- 22% carbon emission reduction by 2030 with 2.5% cost cap of retail sales



Natural Gas vs. Coal Generation:

- 90 times less sulfur dioxide
- 5 times less nitrogen oxide
- 50% less carbon dioxide
- Natural gas is the least carbon-intensive fossil fuel



▶ WHAT CAN YOU
POWER **with one**
MEGAWATT HOUR
(MWH)?

 Cool a refrigerator for
3 MONTHS
(150 kWh)



Download
133,320
SONGS
(50 kWh)

BREW
2,400
pots of coffee



(200 kWh)

1

MWH = 1,000
kilowatt hours



HOST
600

Super Bowl
PARTIES
(300 kWh)



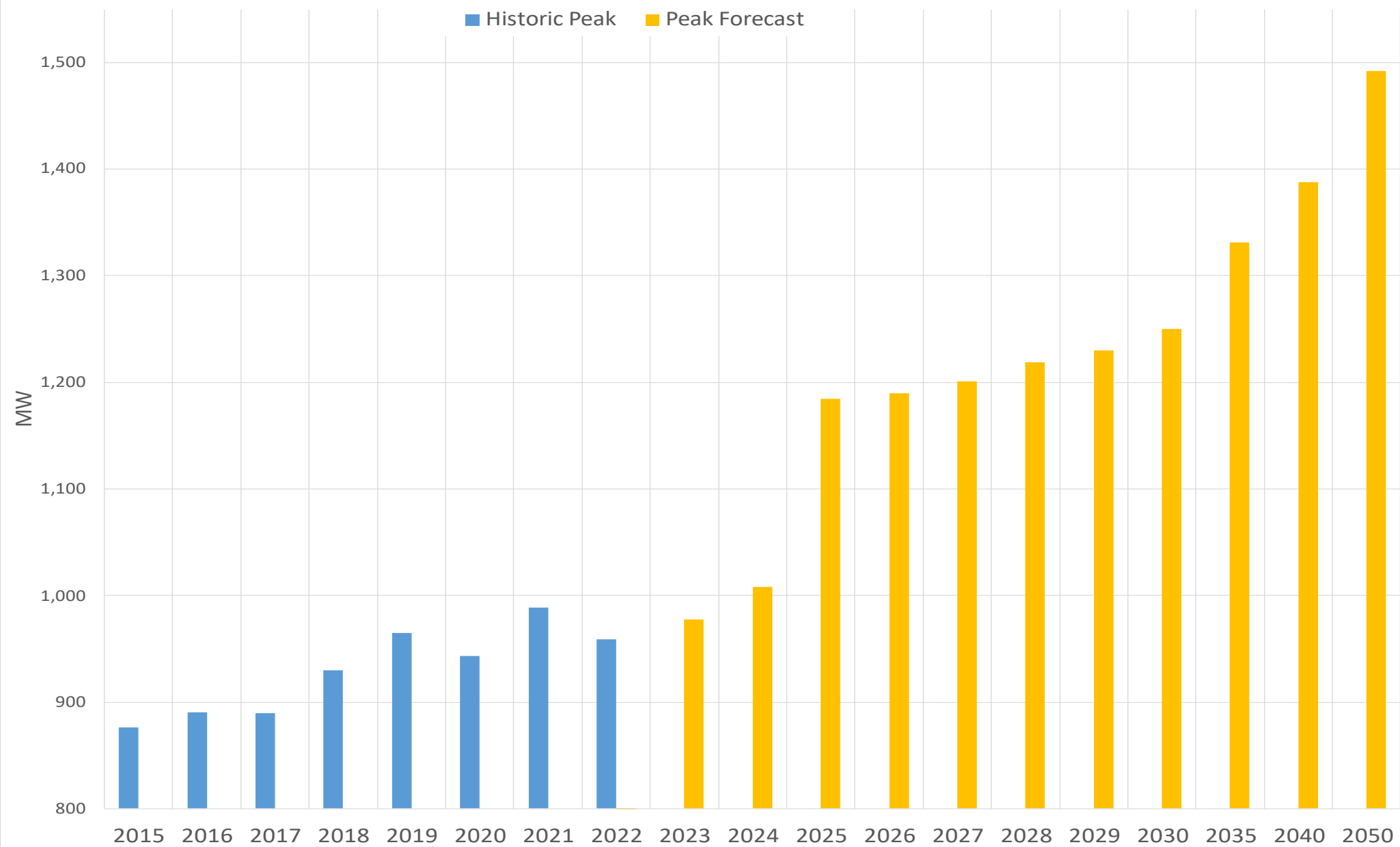
CHARGE
5,556 iPhones

(100 kWh)

Power a Traffic Signal
for **3 MONTHS**
(200 kWh)



Electric Peak Usage: 2015-2050



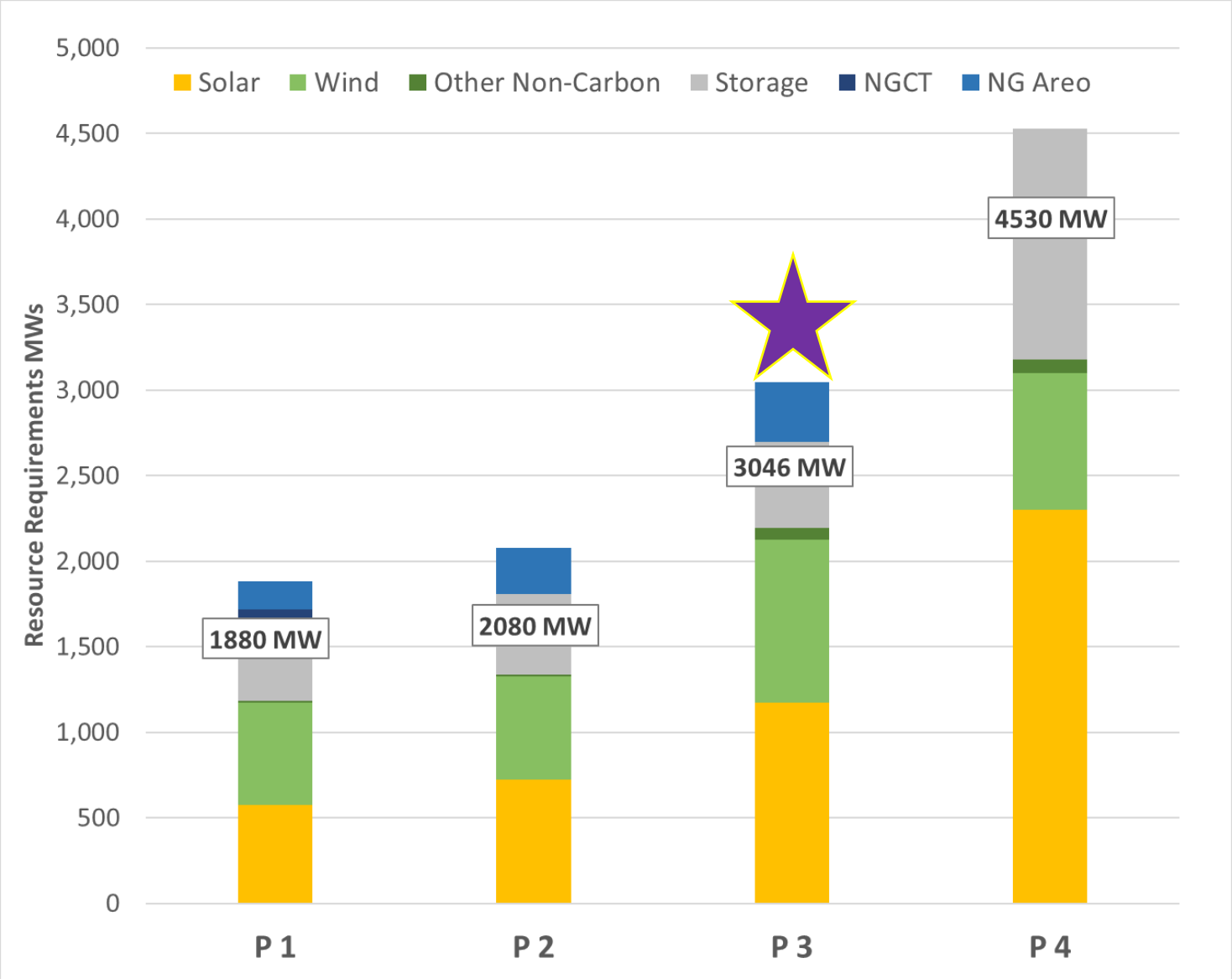
Generation Resource Retirement Dates

- **2025 – Birdsall 1 & 2 (32 MWs)**
- **2027 – Birdsall 3 (22 MWs)**
- **2029 – Nixon 1 (195 MWs)**

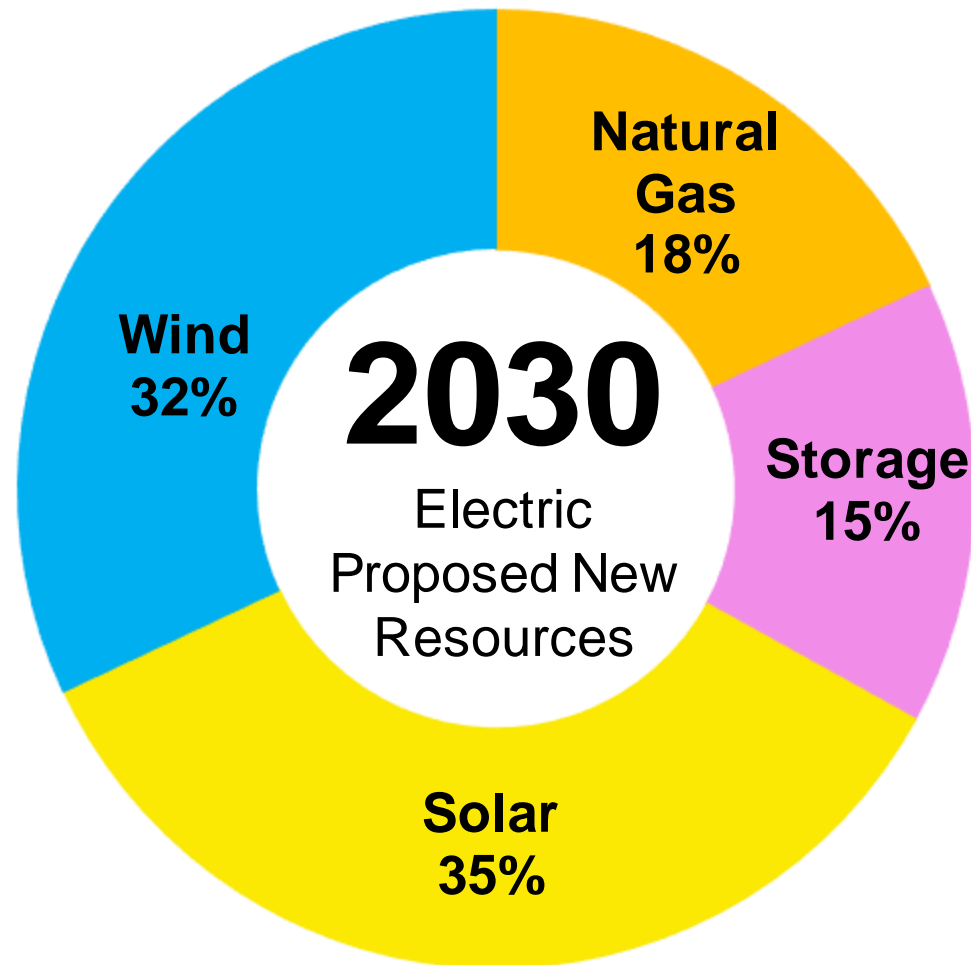


New Resource Additions through 2050: Portfolio Comparison

 = Staff's recommendation



Proposed Additional Resources Available by 2030



a greener **FUTURE**

- 175 MW Solar Underway
- 200 MW Battery Storage Underway
- 525 MW Solar
- 100 MW Storage
- 625 MW Wind
- 350 MW Gas Generation

What is your knowledge of Battery Storage?

- A. I have never heard of it
- B. I know a bit about it
- C. I am very familiar with it
- D. I would like to learn more
- E. I am a battery expert



Colorado Springs Utilities
It's how we're all connected

Colorado's Clean Heat Plan

Are you familiar with the State's Clean Heat Plan law?

- A. Yes
- B. No
- C. I hadn't heard of it until today

Clean Heat Plan

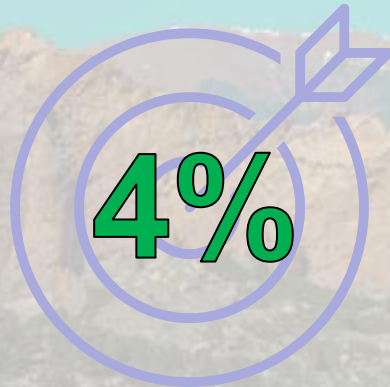
Colorado State Law as of 2021

2025

Spend

2%

of total gas revenue towards achieving



Target: reduction in greenhouse gas below 2015 levels

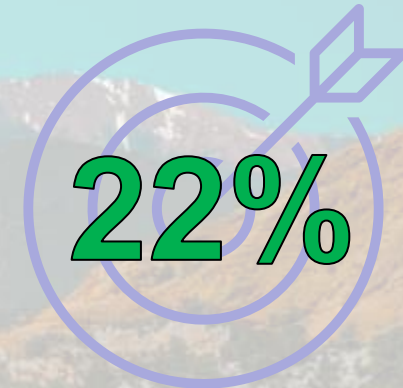
We must submit a plan to meet requirements by: August 1, 2023

2030

Spend

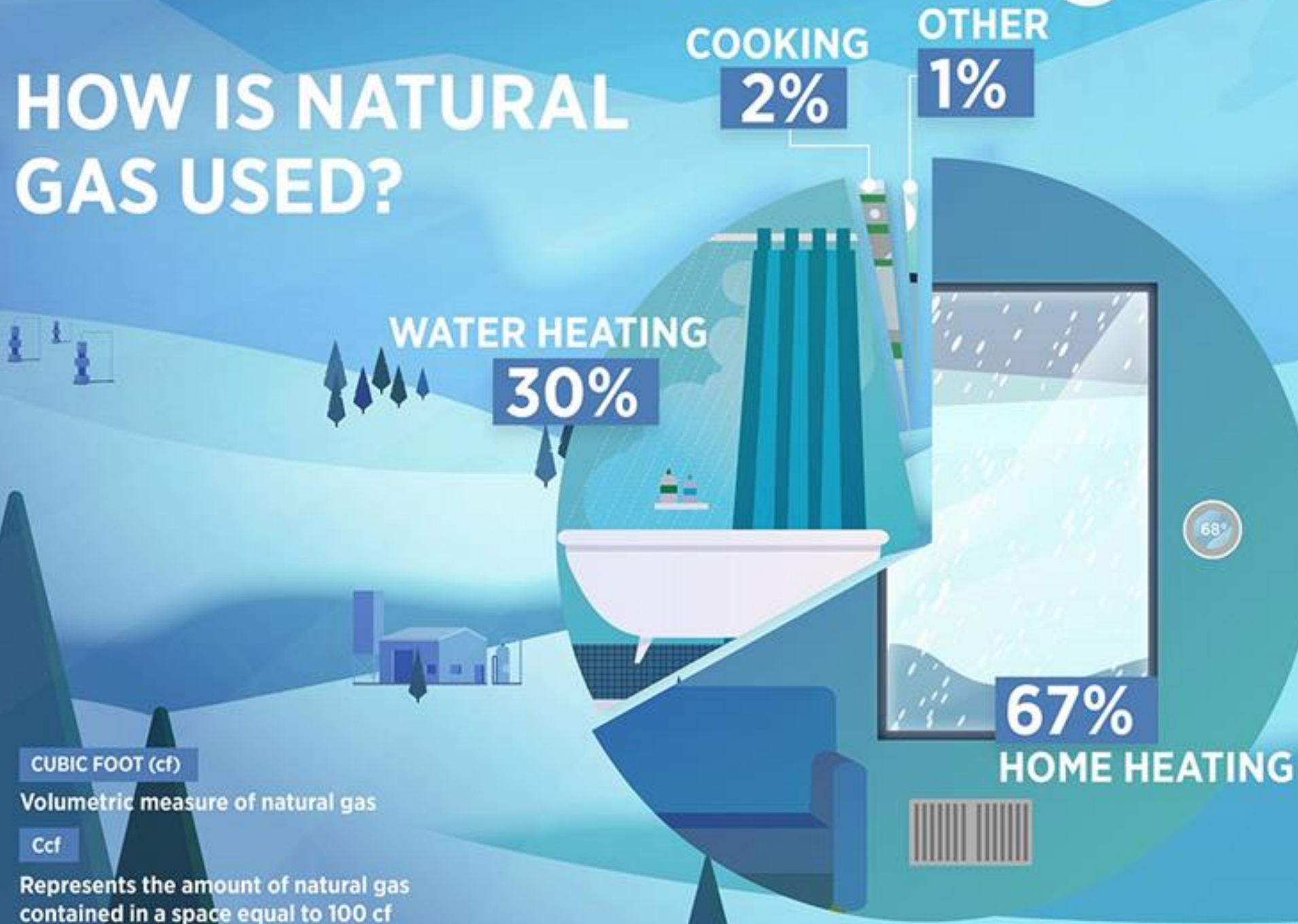
2.5%

of total gas revenue towards achieving



Target: reduction in greenhouse gas below 2015 levels

HOW IS NATURAL GAS USED?



Electrification can be a strategy to meet emission reduction requirements.

Which of the following would you consider?

- a. Purchasing an electric vehicle
- b. Electrifying space and/or water heating
- c. Electrifying appliances (oven/stove, fireplace)
- d. All of the above
- e. None of the above

Greenhouse Gas Reduction Tools

Primary sources for emission reductions

- Energy efficiency
- Beneficial electrification of customer end uses
- Cost-effective leak reduction on distribution system

Potential future reduction solutions

- Biomethane (renewable natural gas)
- Green hydrogen
- Recovered methane

Which one of these energy efficient products are you most interested in?

- A. Energy efficient heating & air conditioning
- B. Energy efficient windows
- C. Energy efficient insulation
- D. Energy efficient appliances
- E. Smart thermostat

Reducing Emissions with Our Customer Partners - You!

- Builder Incentive Program
- Home Efficiency Program
- Smart thermostat rebates
- Energy Star and cold climate heat pumps
- Hybrid heat pump water heaters
- Insulation and air sealing
- Energy Star water heaters
- Energy Star furnaces
- Low flow water fixtures



HVAC Rebates

ENERGY STAR® Heat Pump

\$500 Rebate

- ENERGY STAR® certified

Cold Climate Heat Pump

\$1,000 Rebate

- NEEP qualified

ENERGY STAR® Furnace

\$250 Rebate

- ENERGY STAR® certified



Smart Thermostat

\$50 rebate

- ENERGY STAR® certified

Peak Energy Rewards

\$50 bill credit to enroll

\$25 annual bill credit for continued participation

- ENERGY STAR® certified
- Smart thermostat must be used to control central air conditioning



Water Heating Rebates

Hybrid Heat Pump Water Heater

\$200 Rebate

- ENERGY STAR® certified

Natural Gas Storage Water Heater

\$50 Rebate

- ENERGY STAR® certified



To learn more about the Clean Heat and Sustainable Energy Plans, what would be helpful to you?

- a. In-person discussions with experts
- b. Public meetings
- c. On-line materials (www.csu.org)
- d. Digital and video resources
- e. Newsletter or other written materials

Please scan the code below to provide feedback and be entered into a drawing for a smart thermostat:





Colorado Springs Utilities
It's how we're all connected

Q & A

Somer Mese – Chief Operations Officer
David Longrie – Manager Energy Resource
Planning and Innovation