



Summit County 2015 Climate Action Plan



COUNTY COUNCIL MEETING

July 29, 2015



Project Overview

- Greenhouse gas (GHG) emission inventory update for Summit County
 - ▣ Build on 2012 effort
 - ▣ Business-as-usual forecast
- Roadmap for climate action and GHG reduction
 - ▣ Review of existing goals and programs
 - ▣ Analysis of reduction opportunities
 - ▣ A plan for action





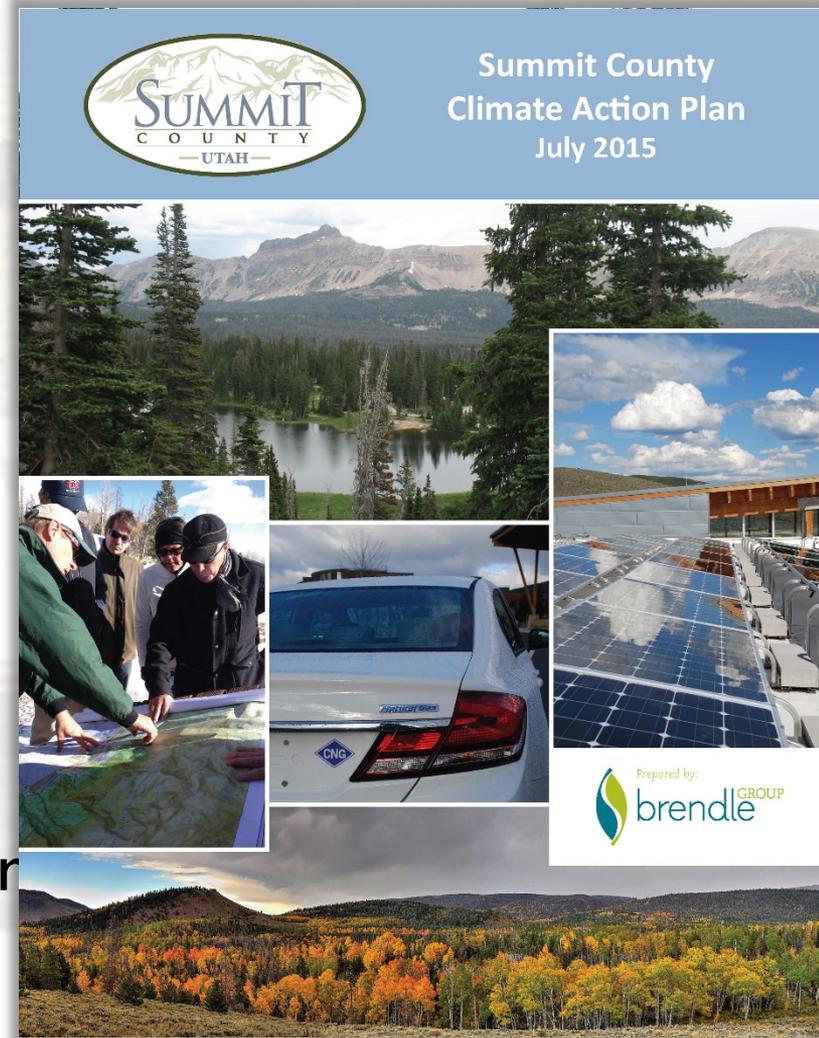
Stakeholder Group

- Diverse group of residents, technical experts, and other interested parties
 - ▣ 3 in-person group meetings
 - ▣ Several follow-up discussions
- Groups Roles
 - ▣ Technical expertise/oversight
 - ▣ Sounding board/voice of the community
 - ▣ Implementation support

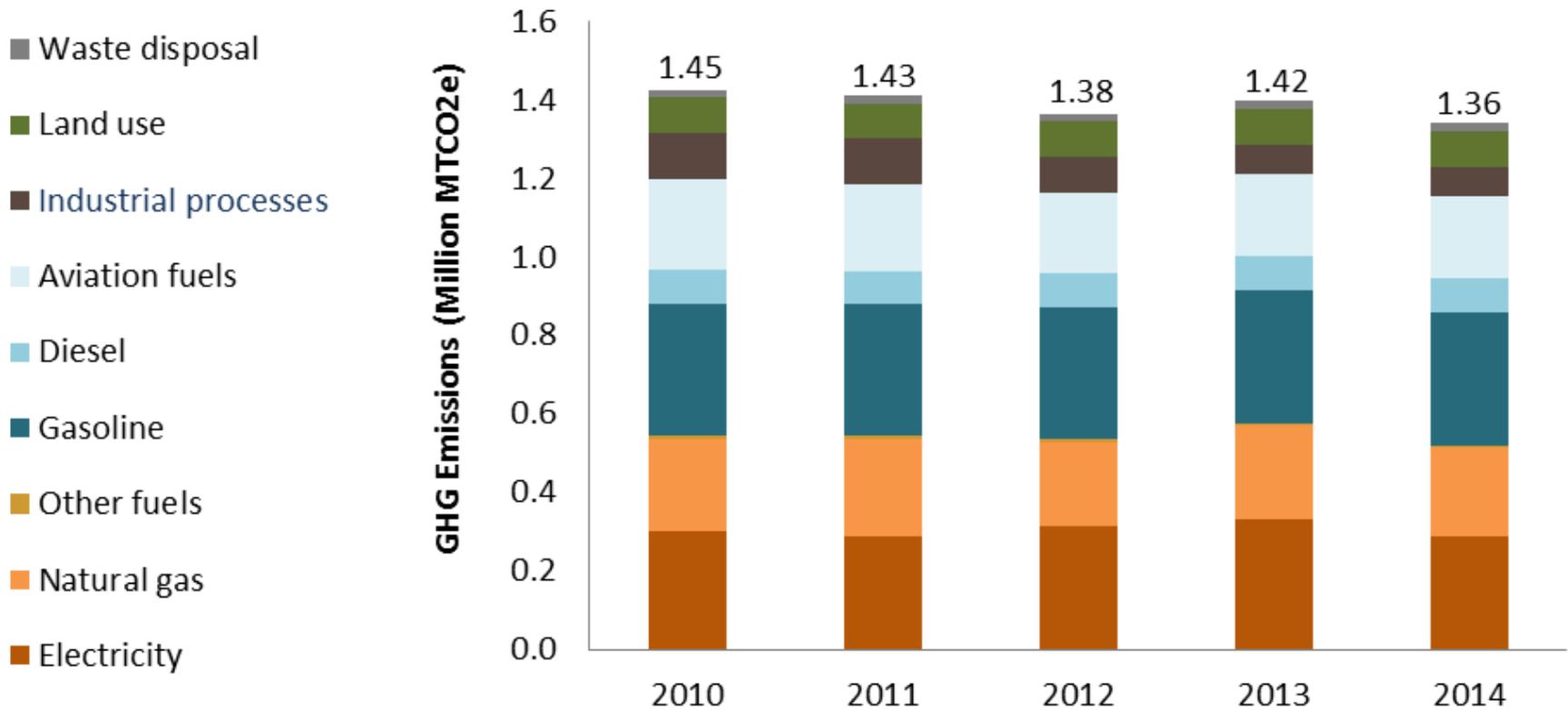


Contents Overview

- Executive Summary
- Emissions Trends & Forecast (GHG inventory)
- Framework for Climate Action
 - ▣ Emissions Reduction Goal
 - ▣ Critical Elements of Success
 - ▣ External Factors
 - ▣ Emissions Reduction Strategies
- Playbook for Implementation



Emissions Trends by Source

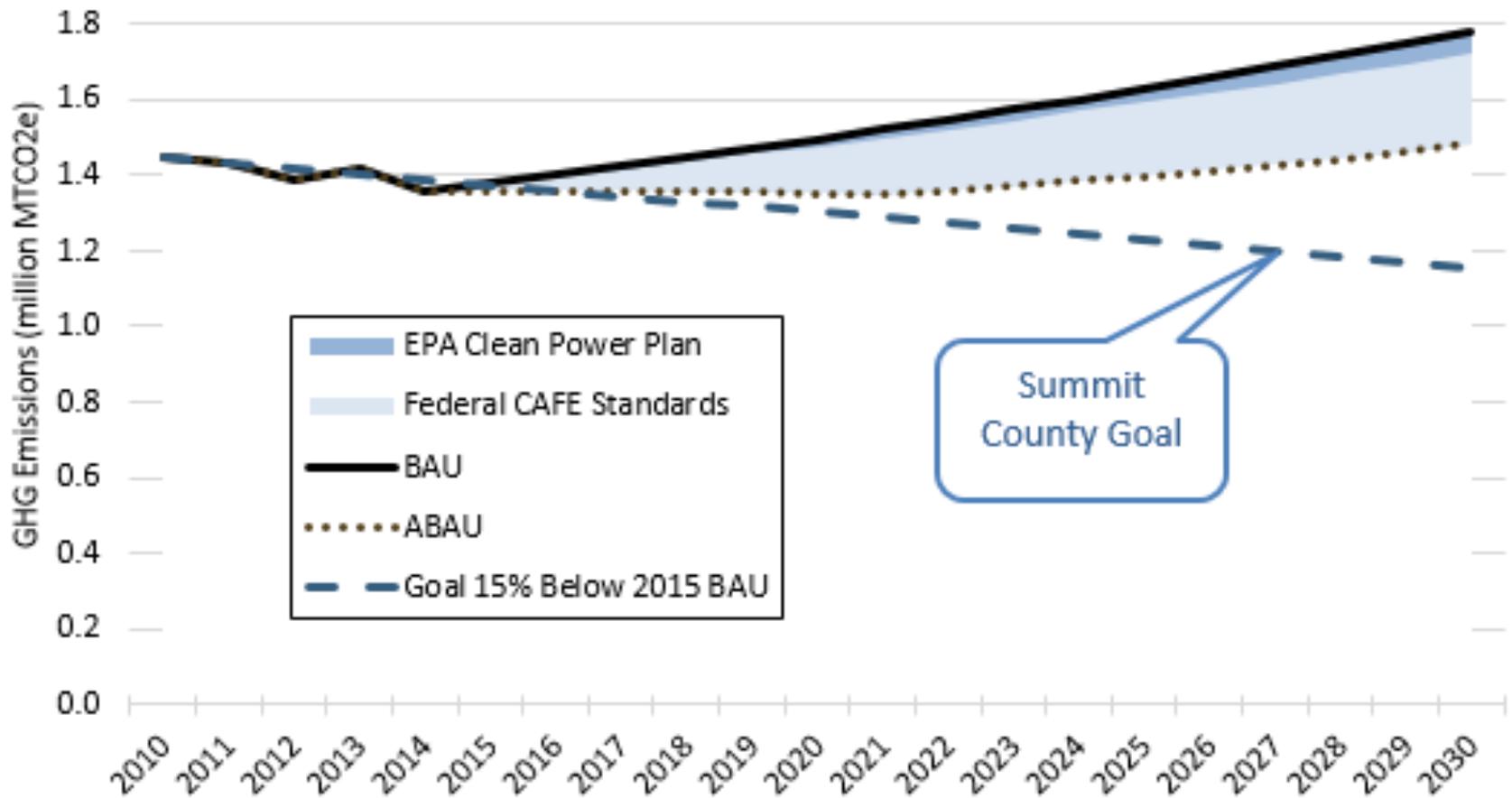




Emissions Forecast & Goal

15% in 15 years

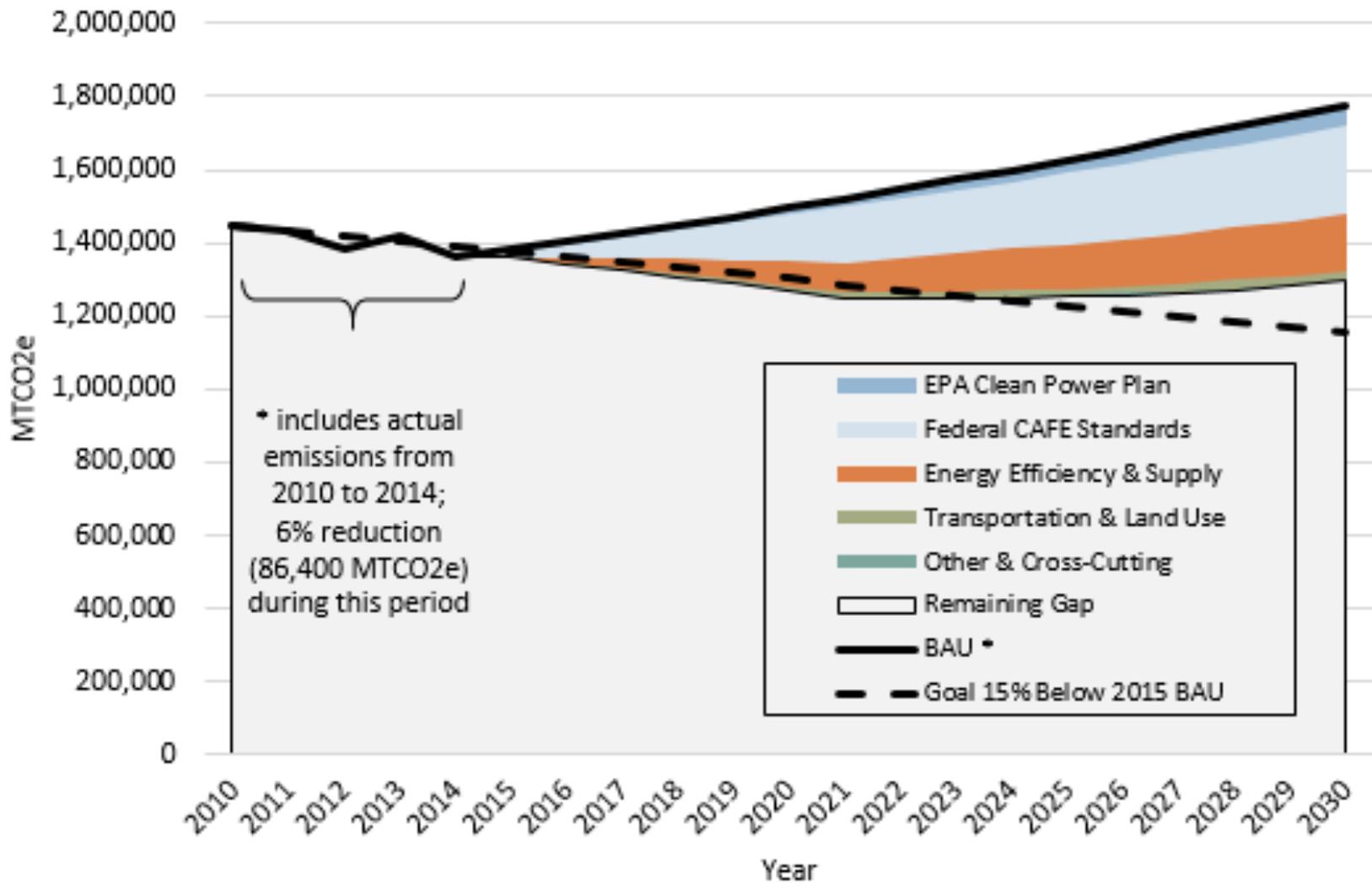
7.72 million MTCO₂e (or equivalent of ~9 cars per County resident)



Framework for Climate Action



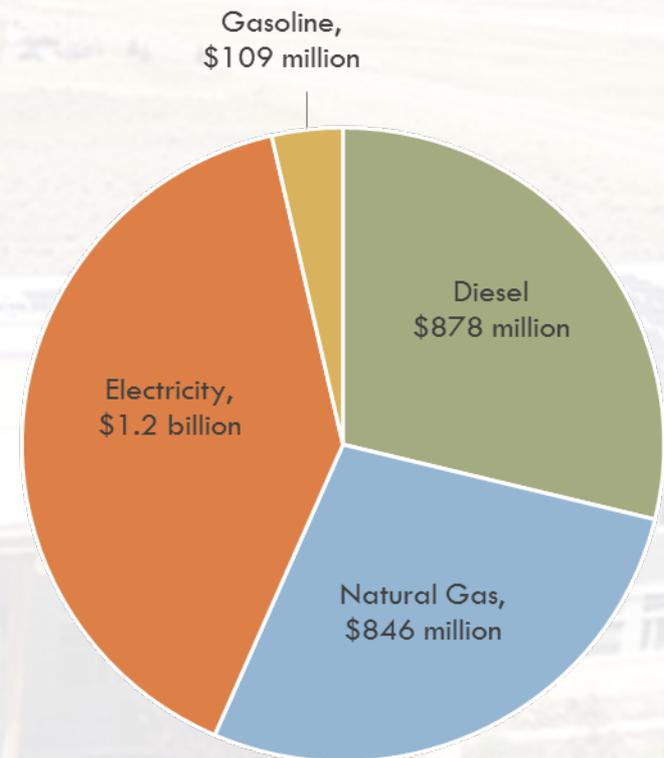
Analysis Summary: All Strategies Implemented



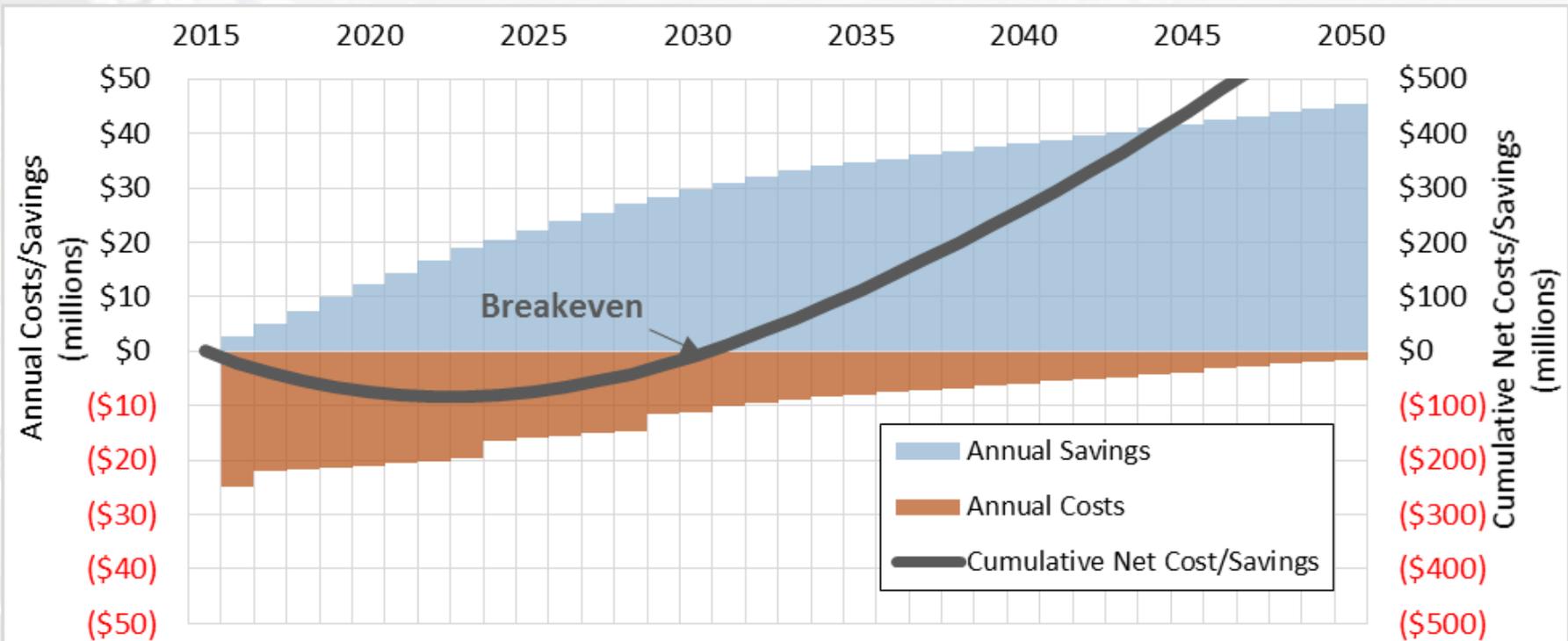
Energy Costs: The Big Picture

- **\$200 million/year:** estimated average annual spending on energy by Summit County businesses and residents
- **\$272 million:** estimated total costs to implement all of the strategies
- **\$264 million:** estimated total savings/avoided costs from implementing all strategies
- **\$58 million:** estimated Summit County 2015 budget

Cost of Energy through 2030
(\$3 billion total)



Analysis Summary: All Strategies Implemented



How can implementation be funded?



County & Local Government	Households & Businesses	Others
<ul style="list-style-type: none">• Bonds• Tax increment financing• Consumer grants, loans, and direct installs• Community Choice Aggregation• Funding program development and delivery	<ul style="list-style-type: none">• Self-funded• Mortgage/Home equity• Traditional bank loans or consumer lending• Energy efficiency loans• Property Accessed Clean Energy (PACE) Programs• On-bill tariffs or financing	<ul style="list-style-type: none">• Sponsorships and donations• User fees and revenue• Regional, State and Federal grants• Development exactions



Implementation Initiative

- Types of Initiatives
 - ▣ Programs
 - ▣ Outreach campaigns & resources
 - ▣ Supporting plans & policies
 - ▣ Projects & investments
- Plan identifies potential timing & roles

Our playbook for implementation:



Implementation Responsibilities

- Most initiatives led by Summit County or Summit Community Power Works
 - ▣ Additional County staffing may be necessary for full implementation
 - ▣ Stakeholder Group to continue provide ongoing input and serve as technical resource





Next Steps

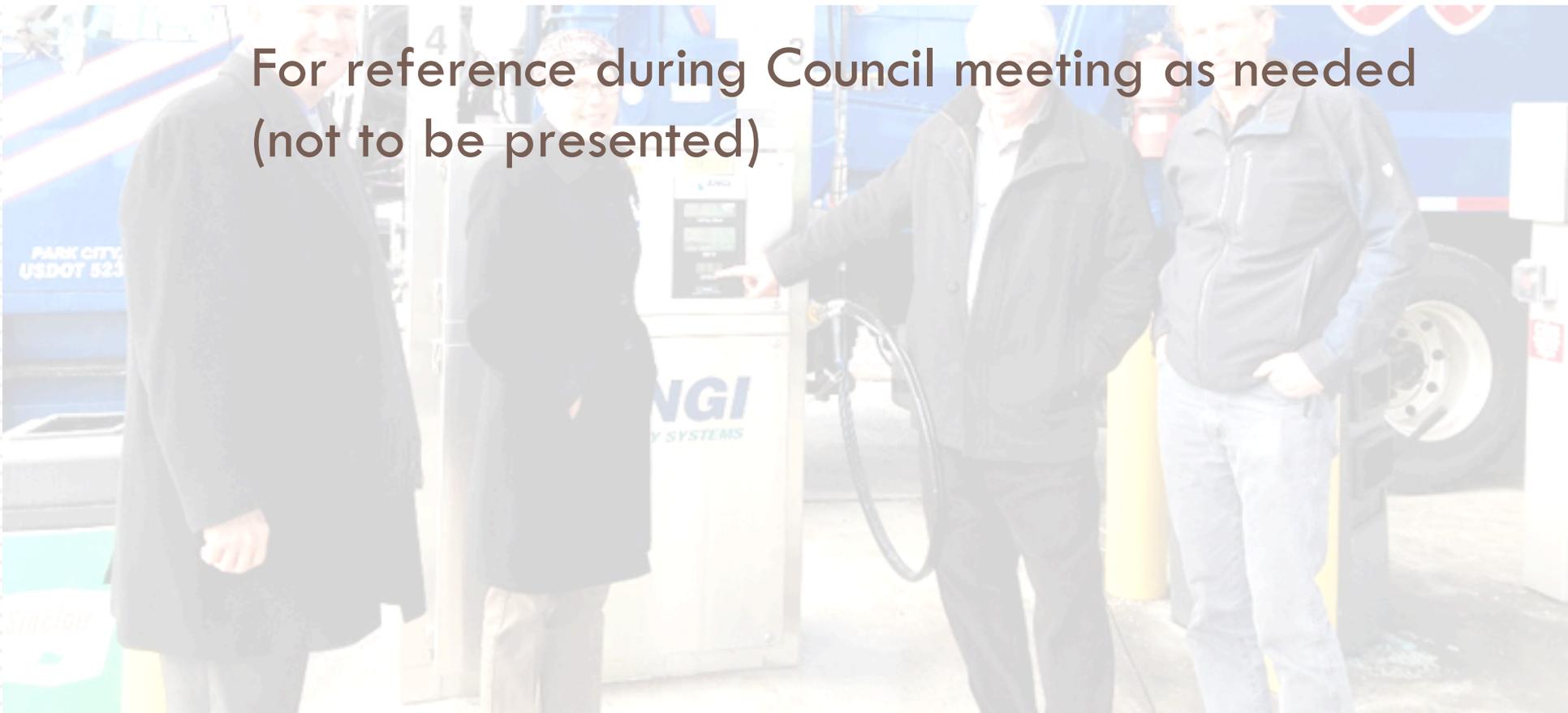
- County Council review and adoption (July)
- Implementation begins (August)

Questions?



Additional Slides

For reference during Council meeting as needed
(not to be presented)





Analysis Methodology

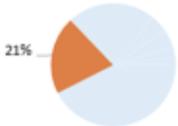
- Business as Usual (BAU) Forecast
 - Growth rate of approximately 2% each year
- Adjusted Business as Usual (ABAU) Forecast
 - ▣ Includes expected reductions as a result of federal standards
 - Corporate Average Fuel Economy (CAFÉ) standards for vehicular mileage improvements
 - EPA Clean Power Program to reduce carbon intensity of power plants
- Costs & Savings
 - Incorporates County and utility data wherever available
 - Also reflects regional and national best practices

Strategy Example

E2: Above Code Construction

This new strategy focuses on voluntary adoption of practices for new construction and major renovations that go beyond state-mandated building and energy codes.

% Contribution to Total Emissions Reduction



ANALYSIS SUMMARY	
<p><i>Potential Cumulative Emissions Reduction</i></p> <p>360,000 MTCO2E by 2030</p> <p><i>Cost Effectiveness (\$ per MTCO2E Reduced)</i></p> <p>\$150 by 2030</p>	<p><i>Assumptions</i></p> <ul style="list-style-type: none"> By 2030, 50 percent of new construction will be 30 percent more energy efficient than code SCPW expands scope to provide training and energy advisors for new construction

IMPLEMENTATION PATHWAY		
<p><i>County Initiatives</i></p> <ul style="list-style-type: none"> Develop a technical assistance program and/or County certification system to incentivize and recognize above-code construction (e.g., LEED Gold for Commercial and HERS Rating of 54 or above for residential) Provide education and develop incentives for site-specific design considerations to take advantage of passive solar, shade, transit access, etc. 	<p><i>Role of Others</i></p> <ul style="list-style-type: none"> Builders and contractors are encouraged to learn about above-code construction practices and may elect to participate in any incentive programs offered Residents and businesses who are planning new construction or major renovation projects should work with their builders and the County to learn about and take advantage of any above-code incentive programs 	<p><i>Related Efforts to Leverage</i></p> <ul style="list-style-type: none"> Park City will be piloting a priority processing and permit fee incentive program that may help inform Summit County and other municipalities' efforts

Analysis Summary: All Strategies



Emissions Reduction Strategy	Potential Cumulative Emissions Reduction	Economic Value (\$ per MTCO _{2e} reduced)
E1: Distributed Renewable Energy	430,000	-\$280
E2: Above Code Construction	360,000	\$150
E3: Summit Community Power Works	335,000	\$85
E4: Outdoor Heating and Snowmelt Systems	115,000	\$150
E5: Increased Energy Consumption Data	80,000	\$17
E6: Building Recommissioning and Tune-ups	70,000	\$130
E7: Engaging Second Homeowners and Lodging Properties	48,000	\$90
TL1: Regional Transit Expansion	84,000	-\$10
TL2: Sustainable Development Patterns	56,000	-\$10
TL3: Agriculture, Livestock, and Land Use Management Practices	35,000	-\$7
TL4: Pedestrian and Bicycle Infrastructure Improvements	17,000	-\$12
TL5: Alternatively Powered Vehicles	6,000	-\$163
O1: Recycling Program Expansion	31,000	-\$155
O2: County Leading by Example	13,000	\$45
O3: Supporting Others' Climate Response Efforts	10,000	\$99



Implementation Costs & Savings: Above Code Construction Example

□ Who pays?

▣ Building owners

- Higher cost of construction on a per square foot basis (~\$1/sq. ft., \$230,000 annually)
- Costs may ultimately be passed along to occupant

▣ County

- Ongoing program administration and incentives (~\$32,000 annually)

▣ Total estimated cost through 2030 = \$3.4 million

□ Who saves?

▣ Utility bill payers

- Building owners or occupants
- Avoided costs due to more efficient buildings

▣ Total estimated cost savings through 2030 = \$57.3 million