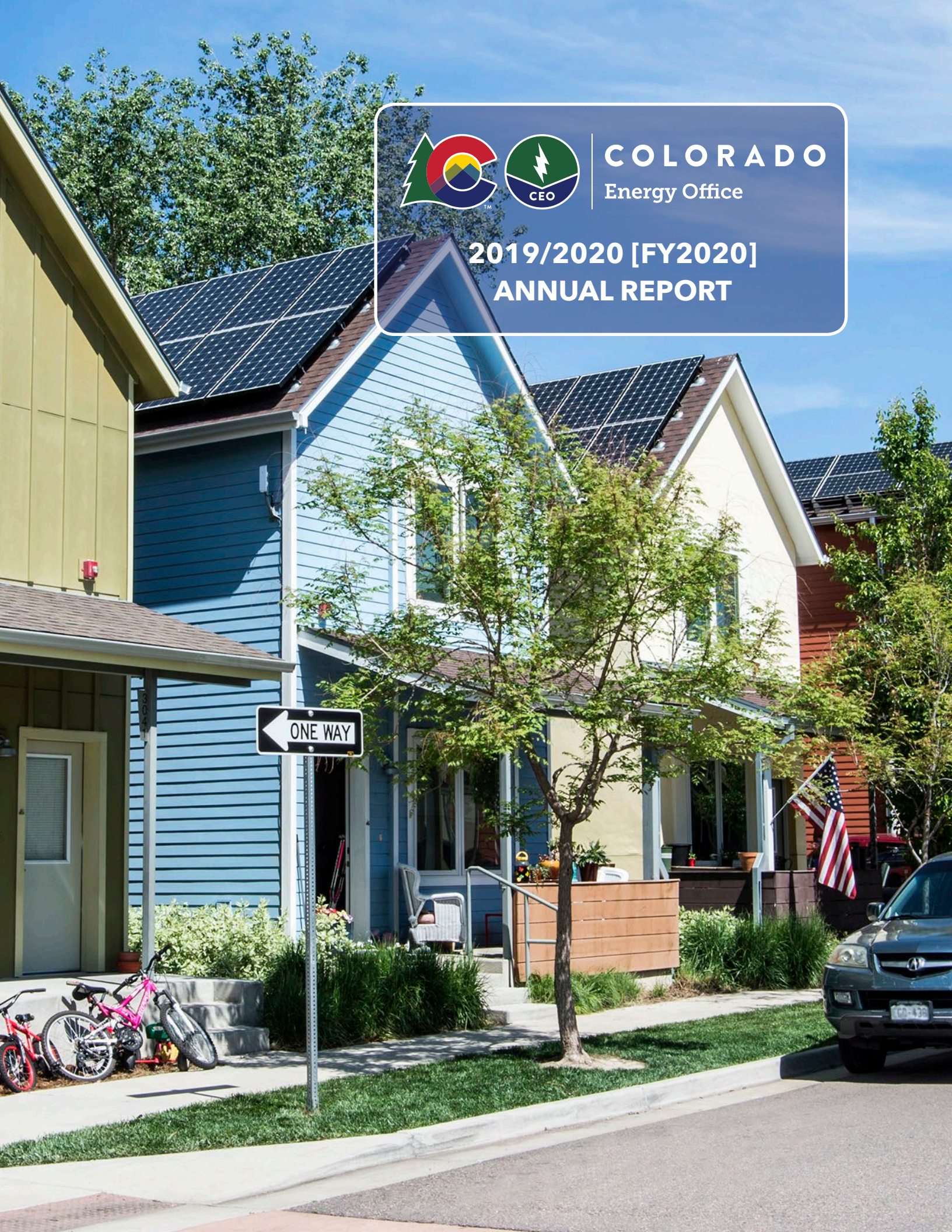


COLORADO
Energy Office

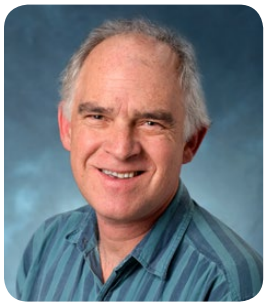
2019/2020 [FY2020] ANNUAL REPORT

Colorado Energy Office's fiscal year 2020 (FY20): 7/1/19–6/30/20. More information about CEO's policy work, programs, initiatives and studies can be found at **energyoffice.colorado.gov/**.

Table of Contents

1 Letter from the Executive Director 2
2 Mission & Vision 4
3 Policy 5
GHG Pollution Reduction Roadmap 5
CEO FY20 PUC Engagements 6
Local Government Engagement 7
Local Government Resource Guide 8
COVID-19 Impacts 8
Building Energy Codes 9
Energy Code Adoption Toolkit 9
Energy Code Troubleshooting Guide 9
COVID-19 Impacts 9
4 Programs & Initiatives 11
TRANSPORTATION 11
Charge Ahead Colorado 11
FY20 Charge Ahead Colorado Grant Recipients (CEO-funded projects) 11
COVID-19 Impacts 12
Colorado Electric Vehicle Coalition 12
Colorado Electric Vehicle Plan 2020 13
EV Corridors 14
COVID-19 Impacts 14
ReCharge Colorado 15
COVID-19 Impacts 15
BUILDINGS, FINANCE & WEATHERIZATION 16
Agricultural Energy Efficiency 16
COVID-19 Impacts 16
Beneficial Electrification League of Colorado 17
Clean Energy Workforce Development 17
Colorado Commercial Property Assessed Clean Energy 17
COVID-19 Impacts 17
Colorado Cultivators Energy Management 18
COVID-19 Impacts 18
Energy Performance Contracting 19
COVID-19 Impacts 19
Industrial Strategic Energy Management 20
COVID-19 Impacts 21
ReNew Our Schools 21
Renewable Energy Upgrade Loan 21
COVID-19 Impacts 22
Weatherization Assistance Program 22
COVID-19 Impacts 22
5 EVs & Local Government 23
Will Toor article in *Colorado Municipalities* magazine 23
6 Looking Ahead 25

1 Letter from the Executive Director



During fiscal year 2020, the Colorado Energy Office (CEO) continued to deliver on Governor Polis' commitment to climate action through policy implementation, regulatory engagement and program delivery to reduce greenhouse gas emissions (GHG)) and enable a clean energy transition along with the multiple benefits this transformation will convey. Supporting key groundbreaking legislation passed during the 2019 Colorado General Assembly session and signed into law by the Governor, CEO's work centered on state climate goals, the electrification of transportation, utility reductions in GHG emissions and clean energy access for local communities.

Several state agencies—led by CEO working in partnership with the Colorado Department of Health & Environment (CDPHE), the Colorado Department of Transportation (CDOT), the Colorado Department of Natural Resources (DNR) and the Colorado Department of Agriculture (CDA)—began developing a GHG Pollution Reduction Roadmap (Roadmap) to lay out a strategy to meet the science-based GHG emissions reduction targets set by House Bill 19-1261. The Roadmap will establish the 2005 GHG pollution baseline, assess the effects of recent legislative and administrative policy changes, and evaluate additional pathways to ensure timely progress toward the state's GHG pollution reduction goals. This has been a significant public process with a focus on addressing equity in the state's response to climate change with more than 40 stakeholder meetings held in FY20.

In August 2019, the Colorado Air Quality Control Commission (AQCC) voted 8–1 to adopt an alternate zero emission vehicle (ZEV) rule jointly submitted by CEO, CDOT and two major associations of automobile manufacturers. As of January 2, 2022, automakers must make an increasing minimum percentage of ZEVs available for sale in Colorado as part of their light-duty fleets. This alternate rule also provides automakers with early-action credits for sales before that time to incentivize companies to expand ZEV model availability before 2022.

Throughout the year, CEO continued to establish electric vehicle (EV) charging infrastructure through Charge Ahead Colorado, a grant program jointly administered with the Regional Air Quality Council, and EV Corridors, a program to bring high-speed charging stations to 34 locations statewide in partnership with ChargePoint and local site hosts such as local governments, utilities and private companies. In April, CEO released the Colorado Electric Vehicle Plan 2020 to guide a large-scale transition of the state's transportation system to ZEVs with a long-term goal of 100% of light-duty vehicles being electric and 100% of medium- and heavy-duty vehicles being zero emission.

In May, the state's two investor-owned utilities submitted their first Transportation Electrification Plans to the Colorado Public Utilities Commission (PUC)—pursuant to Senate Bill 19-077 passed in 2019—proposing over $100 million in investment in EV infrastructure and programs over the next three years. CEO provided input to the utilities as these plans were developed and is participating in the approval process at the PUC. CEO also worked closely with legislators and stakeholders on the passage of legislation allowing new market entrants which do not have traditional automobile dealerships—such as electric truck maker Rivian—the legal ability to sell vehicles in Colorado.

To accelerate investment in low carbon, energy-efficient solutions in the built environment, the office provided assistance to more than 40 jurisdictions during the year through energy code training or technical assistance at no cost. More than 50 local jurisdictions across Colorado have adopted the 2018 International Energy Conservation Code (IECC) or better. CEO led state engagement in developing the 2021 IECC to improve the energy efficiency of new construction and prepare buildings for new technologies.

To deliver on the promise of a clean energy transition, Tri-State Generation and Transmission, Colorado Springs Utilities and Platte River Power Authority announced voluntary commitments to retire existing coal-fired generation and replace it with a combination of clean energy resources. Together, the commitments of three of the state's largest electric utilities, which represent approximately 37% of the state's fossil-based generation, will shutter 1,552 MW of coal and reduce GHG pollution by 9.6 metric tons per year.

The state created the Office of Just Transition within the Colorado Department of Labor & Employment in 2019 to assist workers and communities that will be adversely affected by the loss of jobs and revenues due to the closure of coal mines and coal-fired power plants. In FY20, CEO participated on the Just Transition Advisory Committee, which includes representatives of coal communities, labor unions and utilities as well as issue experts and members of the Colorado General Assembly and the Governor's Cabinet.

The global COVID-19 pandemic's vast cascading impacts underscored the importance of ensuring affordability in energy. Early in the state's pandemic response, Governor Polis issued an executive order to place a moratorium on utility shut-offs, and CEO issued surveys to propane marketers to better understand energy assistance needs and inform recommendations. The state allocated $4.8 million in federal Coronavirus Aid, Relief and Economic Security (CARES) Act funding to support customer utility bills, and CEO provided these funds to Energy Outreach Colorado to assist residents whose ability to pay utility bills was impacted by the pandemic.

Given the circumstances surrounding COVID-19 and following guidance from the Governor's Office, CDPHE and the Colorado Department of Personnel & Administration, CEO undertook prudent measures to ensure employee, customer and contractor safety while continuing to deliver on program responsibilities, effectively continuing the office's work while sustaining very high levels of telecommuting. To help support COVID-19 recovery efforts, CEO initialized program design for a Can Do Colorado eBike for Essential Workers pilot program that will be launched in the fall of 2020 in partnership with Bicycle Colorado.

To provide insights into various aspects of a clean energy transition, CEO completed studies on beneficial electrification, clean fuels feasibility and EV marketing research.

Thank you to all of our partners for your continued support and commitment to energy efficiency, renewable energy, transportation electrification and energy access for low-income Coloradans.

Will Toor

2 Mission & Vision

Mission

Reduce greenhouse gas emissions and consumer energy costs by advancing clean energy, energy efficiency and zero emission vehicles to benefit all Coloradans.

Vision

A prosperous, clean energy future for Colorado.

To achieve our mission and vision, the Colorado Energy Office (CEO) works through policy and programs focused on zero emission vehicles, energy efficiency, renewable energy and weatherization assistance. CEO is a non-regulatory department within the Governor's Office.

3 Policy

During the 2020 Colorado General Assembly legislative session, CEO engaged in the development of several bills including direct EV sales, building benchmarking and beneficial electrification. Due to the COVID-19 pandemic, which truncated the legislative session, only the direct sales of EVs—Senate Bill 20-167—was brought to the floor. The bill passed, and as a result, Coloradans will have easier access to purchasing EVs.

GHG Pollution Reduction Roadmap

In FY20, several state agencies—led by CEO in partnership with CDPHE, CDOT, DNR and CDA—began the development of a GHG Pollution Reduction Roadmap which details early action steps the state can take toward meeting the near-term goals of reducing GHG pollution 26% by 2025 and 50% by 2030 from 2005 levels. The state hired Energy and Environmental Economics to help develop the Roadmap. The state is seeking comment on additional action steps to reduce GHG pollution and reap the full benefits of swiftly and equitably transitioning to a clean energy economy.

Initial results from this effort found there are four major areas for action that will be essential to achieving the state's 2030 GHG pollution goals: retiring coal plants and replacing them with wind, solar and storage to cut pollution from electric generation at least 80% by 2030; reducing methane pollution from the oil and gas industry by over 50%; maintaining strong pollution standards for car and trucks while accelerating the transition to EVs; and accelerating the move toward higher-efficiency buildings and building electrification. The analysis and public process will continue through 2020, and the final Roadmap will be released early in calendar year 2021.

Policy Success Snapshot: Direct Sales of EVs [Senate Bill 20-167]

One of the challenges to growing adoption of EVs in Colorado has been the availability of vehicles. While conventional automakers are increasingly shifting to EVs, many vehicles are manufactured by relatively new startups. Certainly, Tesla is the best known, but many new entrants are coming into the market such as Rivian, Workhorse, Lordstown Motors and others. Under Colorado law, however, it has been very difficult for new market entrants that do not have a traditional franchised dealer model to legally sell vehicles in the state. During the 2020 legislative session, CEO worked with stakeholders to help craft Senate Bill 20-167, which was passed by the legislature and signed into law by Governor Polis. This new law removes a significant barrier to EV availability for Colorado consumers and businesses.

CEO also engaged in interventions in PUC and AQCC proceedings; studies such as beneficial electrification; building energy code adoption trainings and technical assistance; and a US Department of Energy-funded award for the Colorado Residential Retrofit Energy District project.

In FY20, CEO recorded 33 PUC engagements excluding limited follow up meetings on closed proceedings. CEO also administered the execution of a triennial evaluation on low-income rate assistance programs. CEO participated at the AQCC in both the ZEV rulemaking and in helping to craft GHG reporting rules which were adopted pursuant to Senate Bill 19-096.

CEO FY20 PUC Engagements

- 16A-0588E Xcel Energy Advanced Grid Intelligence and Security
- 17M-0204E Xcel Energy Time-of-Use Pilot
- 18A-0279E Black Hills Electric Demand Side Management Plan
- 18A-0606EG Xcel Energy Electric Demand Side Management Plan
- 18A-0676E Black Hills Time-of-Use Plan
- 18AL-0852E Xcel Energy Distribution Line Extension Policy
- 18F-0866E Delta Montrose Electric Association Formal Complaint Against Tri-State Generation & Transmission
- 19A-0369E Xcel Energy Renewable Energy Standard Plan 2020-2021
- 19A-0471E Xcel Energy Electric Vehicle Infrastructure CPCN
- 19A-0660E Black Hills Renewable Advantage
- 19AL-0268E Xcel Energy Phase I Electric Rate Case
- 19AL-0290E Xcel Energy Electric Vehicle Rate
- 19AL-0687E Xcel Energy Time-of-Use Pilot
- 19D-0565EG CEO Petition for Declaratory Order on Low-Income Rate Assistance Evaluation
- 19M-0495E Commission Investigation on Energy Markets
- 19M-0574E Electric Vehicle Miscellaneous Proceeding
- 19M-0661EG Commission Investigation on Performance-Based Ratemaking
- 19M-0670E Commission Investigation on Distribution System Planning
- 19R-0096E Commission Proceeding Amending the Rules Regulating Electric Utilities

- 19R-0408E Tri-State Generation & Transmission Electric Resource Plan Rules
- 19R-0483ALL Commission Practice & Procedures Rulemaking
- 19R-0608E Community Solar Garden Rulemaking
- 19R-0654E Interconnection Rulemaking
- 19V-0311E Tri-State Generation & Transmission Electric Resource Plan Request for Variance
- 20A-0190G Black Hills Gas Demand Side Management Plan
- 20A-0195E Black Hills Transportation Electrification Plan
- 20A-0204E Xcel Energy Transportation Electrification Plan
- 20AL-0049G Xcel Energy Gas Phase I and II Rate Case
- 20AL-0191E Xcel Energy CEPA Rider
- 20D-0148E Colorado Solar and Storage Association Petition for a Declaratory Order
- 20D-0262E SunShare Petition for a Declaratory Order
- 20M-0008E 2020 Annual Transmission Plans
- 20M-0218E Tri-State Generation & Transmission Electric Resource Plan Miscellaneous Proceeding

Policy Success Snapshot: Xcel Energy Residential Time-of-Use Electric Rate Proceeding [19AL-0687E]

In December 2019, Public Service Company of Colorado (Xcel Energy) filed a proposal for a time of use (TOU) rate that would become the new default electric rate for its residential customers. A TOU rate is a rate design in which the amount a customer pays per kwh changes with the time of day; there are multiple time periods and a peak period that is more expensive. In short, this type of rate encourages customers to shift usage to lower cost hours which reduces system costs and GHG emissions, and it ultimately helps in achieving state policy goals. This rate case was about getting the details right, and the proposal had some shortcomings from CEO's viewpoint: it included a summer-only TOU component, no opt out provision, a weaker price signal, and minimal reporting on the rate and the future rate review.

In the office's filings in response to this proposal, CEO focused on three high level principles: (1) customer understanding and control of energy costs, (2) equity and fairness, and (3) support of public policy goals. CEO made the following recommendations to Xcel Energy and the PUC:

- Make the TOU component year-round instead of summer only, which would be simpler for customers and increase emissions reductions
- Include an opt out provision of the rate to protect low-income customers
- Include a stronger price signal to increase load shifting to off-peak hours
- Expand annual reporting requirements
- Require a rate review filing in 2025

A settlement agreement was reached in this case with eight other parties that included all of CEO's recommendations among other provisions. The settlement was approved by the PUC with no modifications. Because of CEO's advocacy in this case, residential customers of Xcel Energy will have more control over their energy costs and find the new rate easier to understand, and low-income customers will have a way to opt out. The state as a whole will benefit from reduced GHG emissions that come with shifting load from peak hours. Xcel Energy will be held accountable through additional reporting and a future rate review that will keep the PUC and stakeholders informed as to whether or not the rate is successful.

Local Government Engagement

FY20 was an opportunity to develop a strong platform for local government outreach and resources to build on going forward. In FY20, CEO conducted 52 local government outreach/ engagement events for 400+ estimated total attendees. These events were hosted in the following counties: Adams, Boulder, Broomfield, Chaffee, Denver, Eagle, El Paso, Garfield, Gunnison, Larimer, Mesa, Moffat, Montezuma, Pueblo, Routt, San Miguel, San Juan, Summit and Weld. CEO's local government-focused work also included support for Energy Performance Contracting MOUs, EV readiness plans and advanced building codes adoption.

During the fiscal year, CEO participated in the following advisory boards/committees:

- State Interagency Climate Team [Leadership Team]
- Denver RE100 Advisory Committee
- Just Transition Advisory Board [Co-chair of Subcommittee on Disproportionately Impacted Communities]
- Colorado Resiliency Working Group
- DOLA Energy/Mineral Impact Assistance Fund Grant Review Team
- Colorado Resiliency Framework Update [Infrastructure Sector Lead]

In May, CEO sent a local government survey to all mayors and county commissioners as well as local/county level staff throughout the state. The intent of the survey was to share information on available CEO and state resources and inform a broader local government outreach strategy that will address communities' needs throughout the state. The survey content was modified to include economic impacts of the COVID-19 pandemic in relation to renewable energy/energy efficiency work. Survey respondents represented 127 municipalities (47% of Colorado municipalities) and 31 county governments (48% of counties).

Local Government Resource Guide

In FY20, an online Local Government Resource Guide developed by LOTUS Engineering & Sustainability was developed that includes guidance for high impact action, community spotlights and information about available resources such as no cost technical and programmatic support through CEO as well as local, state and federal funding opportunities. The Local Government Resource Guide was sent to several hundred local governments contacts statewide and distributed through the Metro Mayors Caucus, Colorado Counties, Inc., Colorado Communities for Climate Action, the Colorado Resiliency Office and the Colorado Department of Local Affairs.

COVID-19 Impacts

Due to COVID-19, it was longer possible to meet in-person to communicate about CEO programs and state resources for local governments. In response, planned meetings went virtual. The tax base of local governments has been hit hard by COVID-19, which in turn impacted sustainability/renewable energy efforts, funding for these projects and staff capacity. However, because of the economic crisis, some local governments have decided to double-down on sustainability and resiliency work with greater motivation to move forward with cost-saving measures including Energy Performance Contracting and a shift to more renewable energy.

Building Energy Codes

CEO conducted 30 webinar training sessions with contractor NORESCO on building energy codes in FY20 with a total of 884 participants and eight in-person events with 95 attendees. The eight in-person training sessions were held in Denver, and attendees included construction, electrical contracting and architecture firms, the Rocky Mountain Association of Energy Engineers, and staff from the City and County of Denver building department. In FY20, CEO produced the following two resources that will be updated on a periodic basis.

Energy Code Adoption Toolkit

CEO created an Energy Code Adoption Toolkit to assist Colorado jurisdictions through the process of energy code adoption. The toolkit is based on input from jurisdictions interviewed as part of the energy code needs assessment CEO funded in 2018 to better understand roadblocks to adoption and compliance. The toolkit describes the benefits and costs of adopting the 2018 IECC, provides a summary of changes in the code from previous versions and offers tips on how to navigate the typical adoption process. It also includes several resources that detail the costs of updating an energy code, describe changes made in the latest version of the IECC, provide example language for the adoption of stretch codes that go beyond the 2018 IECC, and help jurisdictions verify code compliance.

Energy Code Troubleshooting Guide

To assist both building department staff and permit applicants in overcoming some of the more common roadblocks for applying the energy code, CEO created an Energy Code Troubleshooting Guide. Whether it is understanding a code trigger, designing to code or constructability, the guide dives into clarifications for application of the IECC. It includes a section on how the 2018 IECC interacts with the other I-Codes and definitions that are crucial for enabling industry professionals to decide which path to take for compliance. The guide goes into depth on envelope, mechanical and electrical energy code requirements for both residential and commercial applications.

COVID-19 Impacts

A handful of scheduled in-person building energy codes trainings were initially postponed but ultimately canceled or moved to an online webinar format due to COVID-19. Technical assistance work also slowed due to the pandemic. Jurisdictions started experiencing furloughs which stymied communication, and the economic downturn related to stay-at-home orders led many jurisdictions to delay code adoption timelines. After attempting to continue technical assistance efforts, CEO found that it was not what jurisdictions needed under the circumstances. Instead, CEO provided webinar trainings for those considering adopting IECC 2018 and what to expect with IECC 2021. Since code officials were working remotely, this training better aligned with what was needed to increase comfort with the more recent code versions.

Building Energy Codes Success Snapshot: Breckenridge, Frisco and Summit County

To improve codes that will help in meeting local climate goals, Breckenridge, Frisco and Summit County adopted new building and energy codes including a sustainable building code in 2020. The sustainable building code goes beyond the 2018 IECC and includes provisions designed to achieve greater energy savings and water efficiency, better indoor air quality as well as solar and EV ready requirements. CEO helped prepare the mountain communities to understand and comply with the new codes by hosting a customized series of webinars taught by expert trainers that focused on residential new construction requirements and the US Department of Energy Zero Energy Ready Home program.

STUDY: Beneficial Electrification in Colorado

In FY20, CEO funded a beneficial electrification (BE) potential study developed by GDS Associates that estimated the technical, economic and achievable potentials for BE in buildings in Colorado. The report found that although the BE market is nascent in Colorado, the state has substantial opportunities to develop building electrification over the next decade and beyond. The research identified key technologies and sectors that can benefit from this transition, noting that the residential sector has the most potential due to the use of standardized space heating and water heating technologies. The report also analyzed market barriers that will impede electrification efforts and provided policy and program recommendations to support market transformation. The next five years will be a critical period to develop policies, programs, outreach, awareness, contractor training and the supply chain to drive higher adoption rates of BE technologies over the long term.

4 Programs & Initiatives

TRANSPORTATION

Charge Ahead Colorado

Charge Ahead Colorado (CAC) is an EV infrastructure grant program jointly administered by CEO and the Regional Air Quality Council (RAQC). In FY20, CEO funded 36 projects and 62 charging stations ($677,002) through CAC, and RAQC funded 165 charging stations ($1,540,473.85) and two EVs ($16,520). Site location types for FY20 CEO-funded CAC charging stations were categorized as follows: workplace (10 locations), transit (4), municipality (5), university/medical campus (1), parking lot/garage (4), HOA/apartment (2), retail (3), fleet (1), leisure (4), hotel (1) and gas station (1).

FY20 Charge Ahead Colorado Grant Recipients (CEO-funded projects)

- Aspen School District [1 L2, 2 ports]
- Atlasta Solar Center—Paonia [1 L2, 2 ports]
- Town of Basalt [1 L3, 2 ports]
- Beaver Creek [1 L2, 2 ports]
- Breckenridge Grand Vacations (Peak 8) [1 L2, 2 ports]
- Town of Carbondale [1 L3, 2 ports]
- Colorado Springs Airport [1 L2, 2 ports]
- Colorado Springs Utilities [4 L2, 8 ports]
- Colorado State University—Fort Collins [3 L2, 6 ports]
- City of Cortez [1 L2, 2 ports]
- Town of Crested Butte [2 L2, 2 ports]
- Eagle County Government—Project 1 [3 L2, 1 L3, 8 ports]
- Eagle County Government—Project 2 [1 L2, 2 ports]
- Eagle River Water and Sanitation District [2 L2, 4 ports]
- First SW Bank—Alamosa [1 Level 2 charger, 2 ports]
- City of Fort Collins [3 L2, 6 ports]
- City of Fort Collins, Light and Power [7 L2, 14 ports]
- City of Glenwood Springs [3 L2, 6 ports]
- City of Grand Junction [2 L2, 4 ports]
- Grand Valley Power—Grand Junction [1 L2, 2 ports]
- The Group, Inc—Fort Collins [1 L2, 2 ports]
- Gunnison County Electric Association [2 L3, 4 ports]
- Town of Kersey [1 L2, 2 ports]
- Lightning Systems—Loveland [1 L2, 1 L3, 4 ports]
- Montgomery's General Store—Yampa [1 L2, 2 ports]
- Town of New Castle [1 L2, 2 ports]
- Old Stage, LLC—Salida [1 L2, 2 ports]
- Riverwalk at Edwards POA—Edwards [1 L2, 1 L3, 4 ports]
- Roaring Fork Transportation Authority—Carbondale [2 L2, 4 ports]
- San Isabel Electric Association, Inc. [1 L2, 2 ports]
- Town of Silt [1 L2, 2 ports]
- Southeast Colorado Power Assn—La Junta [2 L2, 4 ports]
- Surface Creek Valley Historical Society (Pioneer Town)—Cedaredge [1 L2, 2 ports]
- Tolmar—Windsor [1 L2, 2 ports]
- Town of Winter Park [1 L2, 2 ports]
- Woody Ventures, LLC—Carbondale [1 L2, 2 ports]

COVID-19 Impacts

Many Charge Ahead Colorado projects were delayed due to COVID-19 but very few were cancelled. The canceled projects directly related to the tourism industry. Delayed projects were granted contract extensions and continue to move toward completion.

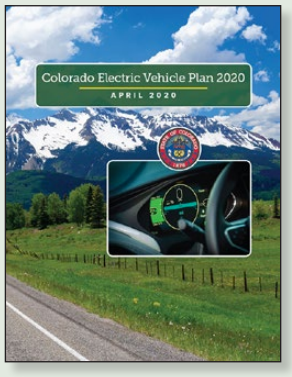
Charge Ahead Colorado Success Snapshot: Gunnison County Electric Association

Coloradans need access to level 3 fast-charging infrastructure along the state's scenic and historic byways to make driving an EV as convenient as driving a gas-powered car. With funding assistance from Charge Ahead Colorado, Gunnison County Electric Association (GCEA) installed two level 3 fast-chargers along scenic byways: one along the West Elk Loop Scenic Byway in Crested Butte, and one along the Silver Thread Scenic Byway in Lake City. With these new GCEA charging stations, Silver Thread has a level 3 fast-charger at least every 50 miles along the byway, and West Elk Loop has achieved almost the same density of charging infrastructure.

Colorado Electric Vehicle Coalition

CEO leads the Colorado Electric Vehicle Coalition (CEVC), an EV stakeholder group consisting of community advocates, utilities, government, auto manufacturers and dealers, trade groups, nonprofits, academia, research and industry organizations. The CEVC meets every two months and has six subcommittees: Policy, Beneficial Electrification, EV Equity, Transit, Marketing & Outreach and Retail Charging. This coalition facilitates networking, the sharing of information among stakeholders and contributes to the development of state policy, studies and standards. The CEVC and its subcommittees provided input for both the 2018 and 2020 Colorado EV plans.

Colorado Electric Vehicle Plan 2020



In April, CEO and state partners CDOT, CDPHE and the RAQC released the Colorado Electric Vehicle Plan 2020 to guide a large-scale transition of Colorado's transportation system to ZEVs with a long-term goal of 100% of light-duty vehicles being electric and 100% of medium- and heavy-duty vehicles being zero emission. This will be accomplished by taking actions to meet five goals:

1) Increasing the number of light-duty EVs to 940,000 by 2030
2) Developing plans for transitioning medium-duty (MDV), heavy-duty (HDV) and transit vehicles to ZEVs
3) Developing an EV infrastructure goal by undertaking a gap analysis to identify the type and number of charging stations needed across the state to meet 2030 light-duty vehicle (LDV), MDV and HDV goals
4) State government agencies meeting directives and goals related to EVs from the updated Greening State Government Executive Order
5) Developing a roadmap to full electrification of the light-duty vehicle fleet in Colorado

State-level planning, a progression of legislation and clean vehicle regulatory standards, utility and community-level planning, strategic infrastructure investments, fleet transition, incentives, programming and steady market share growth are occurring simultaneously, propelling the state forward in terms of EVs. As one example, state policy makers worked with Lyft during the 2019 legislative session to update legislation for EV tax credits to allow rideshare rental programs to qualify at the same level as consumers. In November of 2019, Lyft deployed 200 long-range EVs into the rental program for its drivers which is estimated to save their drivers $70–100 per week on average. By achieving its goal of 940,000 EVs by 2030, the state will see compelling environmental and health benefits from significant emissions reductions as well as economic gains across Colorado.

STUDY: Colorado EV Education & Awareness Roadmap

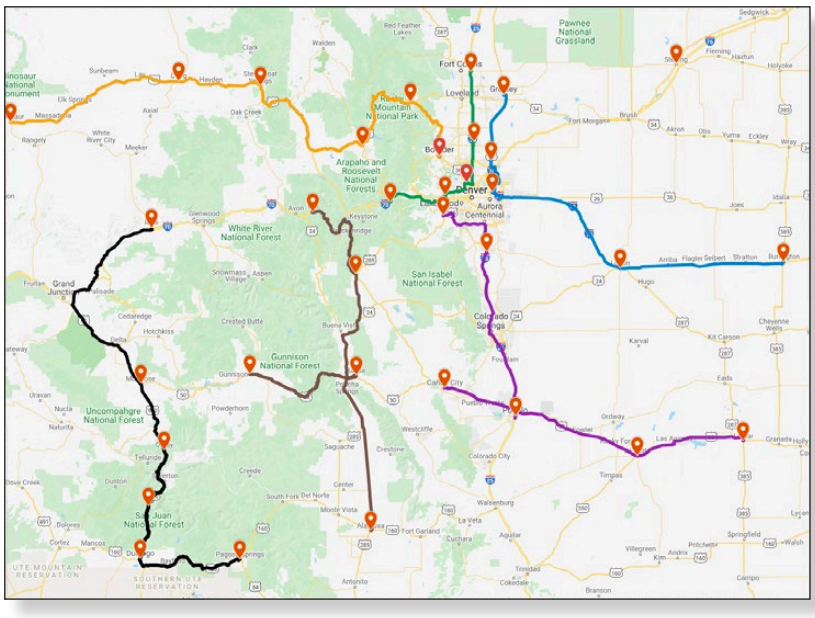
In FY20, CEO funded the development of a Colorado EV Education & Awareness Roadmap. Completed by E Source, the roadmap included a review of nationwide EV market studies covering consumer awareness and barriers to electric transportation, more than 20 in-depth interviews with EV leaders, and a survey of 2,000 Coloradans to gauge knowledge of EVs. The roadmap identified the types of information consumers need before making an EV purchase and recommendations to develop a broad campaign to raise awareness about EVs. CEO, CDOT and the RAQC will be collaborating with partners to implement these strategies going forward.

STUDY: Colorado Low Carbon Fuel Standard Feasibility

In FY20, CEO engaged ICF to conduct a feasibility study to understand and quantify, where possible, the benefits, costs, considerations and feasibility of a Low Carbon Fuel Standard Fuel Standard (LCFS) for Colorado. The study examined and assessed how an LCFS could be implemented in Colorado based, in part, upon experiences of other states and countries

EV Corridors

EV Fast-Charging Corridors Site Locations



To deliver its EV Corridors program, CEO awarded ChargePoint a $10.33 million grant to install high-speed charging stations at 34 locations across six corridors comprising interstate, state and US highways. Community locations include Dinosaur, Craig, Steamboat Springs, Granby, Estes Park, Boulder, Georgetown/ Idaho Springs, Golden, Westminster, Frederick/Dacono, Fort Collins/Wellington, Burlington, Limon, Aurora, Brighton, Greeley, Cortez, Durango, Pagosa Springs, Silverton, Montrose, Rifle, Vail, Fairplay, Salida, Gunnison, Alamosa, Conifer, Castle Rock, Pueblo, Canon City, La Junta, Lamar and Sterling/Julesburg. FY20 work on the EV Corridors program focused on site host agreements and funding match requirements.

There are two system types in the EV Corridors program, referred to as Tier 1 and Tier 2. Tier 1 sites are generally located along interstates in urban areas and will consist of four dual connector fast-chargers. These chargers are modular and share 156 kW between every two chargers. Tier 2 sites are generally located along Colorado highways in rural areas and will consist of two dual connector fast-chargers. These chargers are also modular and share 156kW between the two chargers. Each site is being future proofed to allow for space to double the amount of chargers initially installed.

COVID-19 Impacts

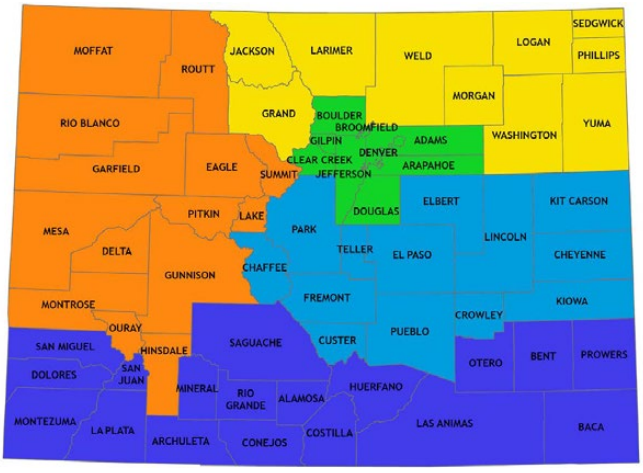
In FY20, the EV Corridors program experienced significant delays and challenges, many due to COVID-19. Impacts on site hosts included budget concerns and constraints which delayed required matching funds, competing priorities which delayed legal review of site host agreements, and workforce implications due to closures and social distancing requirements. Additionally, ChargePoint experienced supply chain disruptions. CEO and ChargePoint addressed these issues by integrating a program option that allows a third party to own and operate chargers on a site host's property. The third party model increases flexibility and opens up a site host's options for securing the required matching funds. Given the delays due to COVID-19, CEO modified the project schedule through FY21, when all chargers are expected to come online.

ReCharge Colorado

In FY20, ReCharge Colorado coaches hosted 40 outreach events including ride-and-drives, educational webinars and virtual test drives that reached 832 participants. The vast majority of outreach events in FY20 happened after the COVID-19 pandemic began and were virtual. FY20 outreach events were distributed by location as follows: Pueblo/Colorado Spring (2 events), Durango/SW Colorado (4), Denver Metro (19), Northern Front Range (10) and Western Slope (5).

In FY20, ReCharge Colorado coaches organized a total of three EV group buy events with local dealerships which resulted in deep purchase discounts and the sale of 42 EVs. ReCharge Colorado coaches also worked with local governments and private businesses across the state to submit grant applications to Charge Ahead Colorado. The coaches' efforts resulted in 22 Charge Ahead Colorado grant awards for locations that included ski resorts, rural corridor sites, hotels and multi-family dwellings.

ReCharge Colorado Territories



Four Corners Office for Resource Efficiency (4CORE)
Archuleta, Dolores, La Plata, Montezuma, San Juan, San Miguel, Mineral, Saguache, Rio Grande, Alamosa, Conejos, Costilla, Huerfano, Las Animas, Otero, Bent, Prowers, Baca

Northern Colorado Clean Cities (NCCC)
Grand, Jackson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, Yuma

Clean Energy Economy for the Region (CLEER)
Delta, Eagle, Garfield, Gunnison, Hinsdale, Moffat Lake, Mesa, Montrose, Ouray, Pitkin, Rio Blanco, Routt

Denver Metro Clean Cities Coalition (DMCC)
Adams, Arapahoe, Boulder, Broomfield Clear Creek, Denver, Douglas, Gilpin, Jefferson, Summit

Denver Metro Clean Cities Coalition (DMCC)
Park, Chaffee, Fremont, Custer, El Paso, Pueblo Elbert, Lincoln, Crowley, Kit Carson, Cheyenne, Kiowa

COVID-19 Impacts

ReCharge Colorado coaches were unable to host in-person ride-and-drive events after COVID-19 lockdown measures were put in place. To adjust to this environment, ReCharge coaches adapted the ride-and-drive experience to a virtual format. ReCharge coaches experimented with livestream events but often had connectivity issues that made this format challenging. ReCharge coaches pivoted once again to pre-recorded virtual test drive experiences shown to audiences via educational webinars. The number of group buys and EVs sold through these events was lower than in previous years due to the economic downturn that resulted from the COVID-19 pandemic.

ReCharge Colorado Success Snapshot: Clean Energy Economy for the Region (CLEER)

Colorado has made important progress in building out EV charging stations across the state to make driving electric easy for both residents and travelers. In FY20, ReCharge Colorado coach Clean Energy Economy for the Region (CLEER) partnered with 14 organizations to help secure over $300,000 in Charge Ahead Colorado grant funding to install 24 new EV charging stations across the Western Slope. From a startup office in downtown Grand Junction to a visitors center in the Grand Mesa National Forest, these new charging stations mean the Western Slope is well on the way to transportation electrification. Thanks to CLEER and the Charge Ahead Colorado program, the rapid expansion of charging stations is making it not only possible but enjoyable for residents and visitors alike to explore the culture and natural beauty of this region by EV.

BUILDINGS, FINANCE & WEATHERIZATION

Agricultural Energy Efficiency

During FY20, CEO's Agricultural Energy Efficiency (AgEE) program administrator Nexant completed 40 technical energy audits and leveraged $534,688 in applications for funding through the US Department of Agriculture, CDA, utility rebates and CEO incentives. The 40 completed energy audits included 32 for irrigation, three greenhouses, one livestock operation, one dairy and one agricultural mixed use. The 40 energy audits completed in FY20 identified $227,000 in total annual energy cost savings, nearly 1.9 million avoidable kWh, 4,000 in therms savings and 119,260 kgal in water savings. The energy audits were located in the following counties: Bent (1), Cheyenne (1), Douglas (1), El Paso (1), Jefferson (1), Larimer (1), Las Animas (1), Moffat (1), Phillips (5), Pueblo (1), Rio Blanco (2), Saguache (1), Sedgwick (4), Washington (2), Weld (1) and Yuma (16). The AgEE program saw significant interest from agricultural producers in potential solar adoption at operations, and 10 renewable energy assessments were conducted during FY20.

Eleven agricultural producers—seven irrigators, two dairies and two greenhouses—that have received technical energy audits through the program in the past moved forward to implement 14 recommended measures providing $24,800 in total annual energy cost savings and 176,370 Kwh in energy savings. The implemented/verified measures included lighting retrofits, variable frequency drive installations, high-efficiency space heating, thermal curtains and high-efficiency motors. These 11 AgEE projects were located in the following counties: Alamosa (1), Larimer (1), Moffat (1), Prowers (2), Rio Blanco (1), Routte (1), Weld (2) and Yuma (2).

COVID-19 Impacts

The economic uncertainties and stay-at-home orders associated with COVID-19 led to a decrease in AgEE program applications and placed on-site energy audits on hold. In response to these challenges, CEO developed a remote process for energy audits that was utilized to apply for US Department of Agriculture Natural Resources Conservation Service funding. In addition to the remote energy audit process, CEO developed stringent on-site COVID-19 protocols to ensure the safety of both program participants and energy auditors.

Agricultural Energy Efficiency Success Snapshot: Gunnison Gardens

CEO's AgEE program helped Gunnison Gardens, a four-acre diversified farm supplying a variety of produce and livestock products to the Gunnison Valley, save money and energy with a no-cost energy audit and technical assistance. Gunnison Gardens had a cold climate greenhouse for both crops and livestock but regulating temperature proved challenging year-round. Following a greenhouse energy audit, Gunnison Gardens received free support in pursuing grant funding from CDA's ACRE3 program that covered 50% of costs for a lighting upgrade, variable speed motors in greenhouse fans and fan controls. Thanks to AgEE program support, Gunnison Gardens was now armed with the technical know-how to allow them to triple their spring plant sale through dramatically improved seedling production. They are now seeing real energy cost savings of $500/year, reduced labor and better sales as a result of this effort.

Beneficial Electrification League of Colorado

In FY20, CEO joined with a coalition of stakeholders including the Southwest Energy Efficiency Project, Tri-State Generation & Transmission Association, Rocky Mountain Institute, Western Resource Advocates, Colorado Rural Electric Association and the Energy Efficiency Business Coalition to form the Beneficial Electrification League of Colorado (BEL-CO). The group's mission is to advance building electrification in Colorado through building leadership, sharing knowledge, fostering collaboration, coordinating market development strategies and increasing consumer awareness. BEL-CO is also supported by the Natural Resources Defense Council and the National Rural Electric Cooperative Association, which sponsor the national Beneficial Electrification League**.**

Clean Energy Workforce Development

In FY20, CEO funded outreach and training, testing and quality assurance guidance to support the energy efficiency contractor workforce in rural, mountain and underserved regions of Colorado. Five individuals from Eagle, Summit and San Miguel counties earned Building Performance Institute (BPI) Building Analyst Professional certifications. One-on-one trainings and quality assurance checks were provided to analysts who perform home energy assessments in mountain and rural regions. Several analysts earned continuing education units to maintain their certifications or achieve additional certifications through trainings held on a variety of topics including combustion appliance zone safety, healthy homes, infiltration and duct leakage, and commercial building site visits. Additionally, CEO funded partial scholarships for 11 individuals in mountain and underserved communities to become certified Home Energy Rating System (HERS) raters. These professionals play an important role in helping builders comply with advanced building energy codes.

Colorado Commercial Property Assessed Clean Energy

In FY20, CEO's Colorado Commercial Property Assessed Clean Energy (C-PACE) program—administered by Sustainable Real Estate Solutions (SRS)—closed 24 projects that leveraged $18.6 million in funding. These projects are located in 10 counties: Adams, Arapahoe, Delta, Denver, Jefferson, Larimer, Otero, Ouray, Pueblo and Summit. These C-PACE projects represent $12.7m in projected lifetime cost savings, 23.7 million in projected energy cost savings per year (kBtu/year), and 79,852 in lifetime GHG emissions reduction (tons). Project measures included HVAC, control systems, solar PV and new construction. Eight rural counties opted into the program including Baca, Crowly, Huerfano, La Plata, Logan, Morgan, Prowers and Yuma. Stakeholders continue to engage with counties with large commercial building stocks that have not yet opted into the C-PACE program. In FY20, C-PACE installed seven solar PV projects totalling 192.71 kW.

COVID-19 Impacts

C-PACE is a program for commercial properties, and these property types were hit especially hard with COVID impacts in the spring which resulted in many projects being cancelled or delayed.

Colorado C-PACE Success Snapshot: Box Canyon Lodge & Hot Springs [Ouray County]

Box Canyon Lodge & Hot Springs leveraged Colorado C-PACE financing to support a 58 kW solar PV system installation on its 18,386 sf hotel and lodging facility located in Ouray. This is the first C-PACE project for Ouray County. Over the years, the Box Canyon Lodge owner has installed many energy efficiency measures, earning the facility a 4 Green Key rating for its strong commitment to sustainability. Solar energy was the next step in the owner's commitment to making Box Canyon Lodge as eco-friendly as possible. The project will provide estimated cost savings of more than $500,000 over the effective useful life of the equipment including tax benefits and grants. The owner used the C-PACE program's unique capital provider open market selection process to shop around for the lowest rate. After reviewing multiple bids, the Box Canyon Lodge owner settled on employee-owned Alpine Bank for the project's approximate $165,000 in financing.

Colorado Cultivators Energy Management

In FY20, CEO launched the Colorado Cultivators Energy Management pilot working with program administrator Cultivate Energy Optimization to provide educational support services for cannabis cultivators and utilities. The pilot provided five rural utilities with assistance in serving cultivators through no cost technical services, outlining rebate offerings and development of both short- and long-term engagement strategies for each utility provider to consider. Program services were provided within the following rural utility territories: San Isabel Electric Association (8 cannabis cultivators within its territory), La Plata Electric Association (4), United Power (1), Mountain Park Electric (1) and Colorado Springs Utilities (1)

During this pilot phase, the Colorado Cultivators program conducted 15 audits that identified 1,596,000 kWh of annual electric energy savings. Fifteen renewable energy assessments outlining solar potential were also provided to program participants. Energy efficiency measures identified included:

- Replacement of high-intensity discharge or fluorescent lighting with LED fixtures
- Photoperiod and daily light integral controls (lighting controls for greenhouses that take into account sunlight during the day)
- Efficient dehumidification
- Integrated HVAC/dehumidification
- Destratification fans
- High-efficiency circulation fans
- VFD equipped exhaust fans
- VFDs for irrigation pumps
- Drip irrigation systems
- Envelope improvements
- Integrated environmental controls
- Energy/thermal curtains
- Potential renewable energy options (solar, wind, geothermal, CHP, hydro)

COVID-19 Impacts

COVID-19 restrictions compressed the on-site energy audits timeline for the Colorado Cultivators Energy Management pilot program, and CEO was forced to postpone some audits until stay-at-home orders were lifted. In response, CEO developed a comprehensive energy audit protocol to ensure the safety

of program participants and the program administrator once on-site visits were approved. CEO utilized the months of March and April to conduct additional outreach to rural cannabis cultivators, ensuring the enrollment of 15 program participants.

Energy Performance Contracting

During FY20, CEO completed 12 Energy Performance Contracting (EPC) projects through pre-approved Energy Service Companies (ESCOs) and signed 21 MOUs with the following types of public jurisdictions: state (1), county (2), municipality (8), school district (3), special district [hospitals, water districts] (7). The EPC program also entered into the two largest contracts in program history: Denver Public Schools ($35m) and Colorado State University—Pueblo ($17m).

The EPC FY20 portfolio comprised 934 buildings, 7,178,685 sf and $71,411,427 in total project investment. During the fiscal year, the program engaged the following counties through an MOU, investment grade audit or EPC: Adams (3 program engagements), Arapahoe (1), Baca (1), Bent (2), Boulder (3), Cheyenne (1), Custer (1), Clear Creek (1), Denver (6), El Paso (1), Elbert (1), Garfield (1), Gunnison (3), Jefferson (1), Kiowa (1), Montezuma (1), Phillips (3), Pueblo (2), Rio Grande (1), Saguache (1), San Miguel (2) and Summit (1). EPC measures included investment grade audit, solar PV, retrocommissioning and system optimization, lighting upgrades, building envelope improvements, motor efficiency upgrades, ground source/thermal systems, HVAC and controls, water metering infrastructure, water efficiency (turf, fixtures, low-flow aerators) and building electrification. These measures represent annual O&M savings of $92,672; annual cost savings of $29,856,092; annual kWh savings of 29,856,092, annual therm savings of 423,104 and annual water (kGal) savings of 19,605.

COVID-19 Impacts

CEO released a survey in April of 2020 to determine the immediate needs of public jurisdictions in response to COVID-19. The survey findings indicated access to funding is, and will continue to be, an issue for public jurisdictions as budgets are reallocated to health and safety needs. EPC kept its momentum during this time by pivoting its message to highlight how the program is a method for improving facilities and providing job opportunities while not relying on additional budget requests—a budget neutral approach. To align EPC with health needs, school districts and hospitals across Colorado are identifying ventilation technologies that meet updated codes and function more efficiently.

Energy Performance Contracting Success Snapshot: Colorado State University—Pueblo

Colorado State University—Pueblo (CSU-Pueblo) wanted to lower energy and operating costs, increase resiliency during power outages, and achieve GHG emissions and energy use intensity reduction goals. As a solution, CSU-Pueblo executed a power purchase agreement for 7.2 MW of solar on 22 acres of campus land, offsetting the electricity needs for the main campus meter. In February, CSU-Pueblo announced a partnership with Energy Performance Contracting ESCO Johnson Controls, financier Capital Dynamics and Black Hills Energy with support from CEO to make it the first campus in the state to reach net zero efficiency through solar panels, battery storage and energy efficiency upgrades. Through EPC, the CSU-Pueblo campus will benefit from predictable electricity costs and $2m in guaranteed utility savings while maximizing the 30% federal investment tax credit.

Energy Performance Contracting Success Snapshot: Denver Public Schools

In consultation with CEO, ESCO McKinstry and Denver Public Schools began work in FY20 on an EPC project to upgrade 27 buildings in the district—totaling more than 3.8 million sf—to improve the learning environment, address maintenance challenges, reduce utility costs through efficiency improvements and fund capital upgrades. These improvements are expected to provide nearly $1.5 million in annual utility and O&M cost savings as well as an estimated $215,000 in utility rebates—savings guaranteed by McKinstry. The EPC project includes rooftop solar installations at 14 schools that will generate electricity, fund additional improvements and help the district meet its sustainability goals in a fiscally responsible manner. This project is the result of a technical energy audit that included a thorough evaluation of capital retrofits, utility efficiency measures, solar and renewable energy options and opportunities for improving occupant comfort. The project will provide a healthier, more comfortable classroom learning environment for students while also providing up to five MW of solar energy to reduce annual carbon dioxide emissions by almost 10,000 tons.

Industrial Strategic Energy Management

The Industrial Strategic Management (I-SEM) program is designed to identify foundational operations, maintenance and behavioral energy management strategies to not only provide quick energy wins (i.e. lighting upgrades) but cement energy management as a core component of business operations. In FY20, I-SEM program administrator Stillwater Energy conducted four program workshops and recruited three program participants.

In FY20, each program participant received an on-site energy walkthrough that identified operations, maintenance and behavioral opportunities along with capital improvement measures to consider. Walkthrough results were compiled into an "opportunity register" for each participant which detailed walkthrough findings, project prioritization recommendations and a plan of action to complete each action. In total, over 120 energy-saving actions were identified for the three participants ranging from air leaks and VFD recommendations to equipment setpoint and energy policy/team development opportunities.

The I-SEM program also conducted two energy management assessments (EMA) with each participant. An initial EMA for each participant was conducted at the beginning of the program to help baseline how well energy was integrated into current business practices, which assisted the development of action plans for participants to implement over the course of the year-long engagement. A second EMA, conducted at the conclusion of the program, afforded each participant the opportunity to examine progress made and prioritize actions moving forward. The I-SEM program also developed energy models for each participant to utilize that clearly display how and where energy is used. These models are easily updated and proved to be valuable to participants, an approach that allows for sustained energy savings to be realized.

COVID-19 Impacts

COVID-19 restrictions eliminated the opportunity for in-person I-SEM activities such as workshops and energy management assessments while shifting participant focus to remaining economically viable through this time. In response, I-SEM adapted program design and offerings, developing an extensive catalog of ready-to-use virtual resources for participants so that continual energy progress can be made now and in the future.

ReNew Our Schools

CEO and ReNew Our Schools (RNOS) program administrator Resource Central worked in Delta County with Delta County School District 50J schools in the fall of 2019. The program awarded a total of $50,000 with 32,359 kWh of energy savings and $3,200 of energy cost savings identified over 19 days of the RNOS competition. Installed measures included 4400 LED lights within the school district, one marquee replaced with LED lighting and 12 eGauges. Preliminary portfolio analysis of all Delta County School District 50J schools included:

- Absolute and square foot normalized comparisons of power interval data across all schools in district and similar schools outside of district
- Absolute and square foot normalized comparisons of load profile power stats (kWh/day)
- Comparisons of load profile time stats (minimum, peak and startup times)

ReNew Our Schools Success Snapshot: Delta High School

For generations, students in Delta County could generally walk into coal jobs directly following high school, but with the region's shift toward renewable energy, those positions are no longer available. Delta High School utilized a solar energy training course and the RNOS program to teach students about clean energy, clean energy jobs, and the alternative route available for them to succeed if college was not in their field of vision. RNOS provided the school with accessible CEO energy mentors and a competition format to increase participation in energy efficiency/renewable energy concept development at the high school. This positive, "just transition" story garnered regional and national media attention including coverage in the *Delta County Independent, Mother Jones* and *The Atlantic*.

Renewable Energy Upgrade Loan

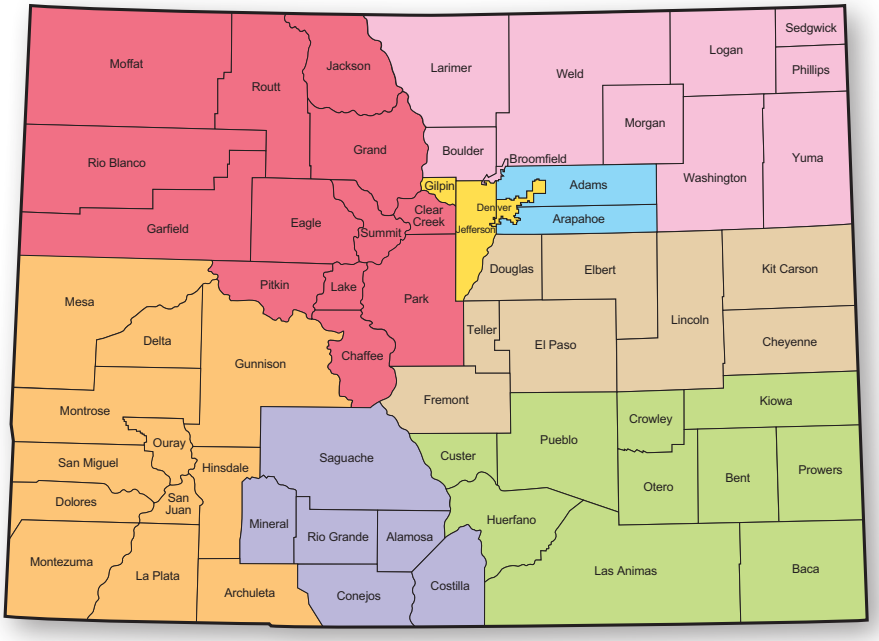
In FY20, the Renewable Energy Upgrade (RENU) loan program financed $10,586,844 for 617 projects through lender Elevations Credit Union in the following 33 counties: Adams, Alamosa, Arapahoe, Archuleta, Boulder, Broomfield, Custer, Delta, Denver, Dolores, Douglas, Eagle, El Paso, Elbert, Fremont, Garfield, Grand, Gunnison, Huerfano, Jefferson, La Plata, Larimer, Mesa, Montezuma, Montrose, Otero, Ouray, Pitkin, Pueblo, Routt, Summit, Teller and Weld. Project measures included sealing and insulation, solar hot water, solar PV, space heating and cooling (furnace, boiler, A/C, heat pump, whole house fan), water heating, windows and doors. Of the 617 projects, 486 were for solar PV with 2.9 MW installed capacity.

COVID-19 Impacts

The RENU program experienced lower than anticipated loan volumes at the end of FY20 due to the statewide COVID-19 shut downs and the resulting economic downturn. Virtual onboarding webinars remained available to contractors to help ensure a pathway to contractor authorization and program participation.

Weatherization Assistance Program

In FY20, CEO's Weatherization Assistance Program (WAP) completed 1,285 projects in 55 counties across the state. WAP results for the fiscal year included $14,587,442 leveraged, $498,580 annual cost savings, 1,752,000 estimated annual kWh savings and 270,000 estimated annual therms savings. Installed measured were as follows: air infiltration sealing, air source heat pump, ASHRAE fan, attic insulation, carbon monoxide detectors, duct insulation, duct sealing, furnace/boiler, health and safety measures, LED lightbulbs, low flow shower heads, pipe insulation, refrigerator, replacement doors and windows, rooftop solar, sink aerators, smoke alarms, storm windows, subspace insulation, wall insulation and water heater. In FY20, WAP launched an air source heat pump pilot to begin training WAP staff on how to install air source heat pumps in propane- and electrically-heated homes.



Weatherization Service Providers

Arapahoe County Weatherization Division
303-636-1982 | www.arapahoegov.com

Energy Outreach Colorado (EOC)
303-226-5069 | www.energyoutreach.org
[EOC serves multifamily residence buildings statewide]

Energy Resource Center
719-591-0772 | Colorado Springs
720-236-1321 | Denver
970-617-2801 | Loveland
719-587-9492 | San Luis Valley
www.erc-co.org

Housing Resources of Western Colorado
970-241-2871 | www.hrwco.org

Northwest Colorado Council of Governments
1-800-332-3669 | www.nwccog.org

Pueblo County Department of Housing and Human Services
719-583-6110 | http://county.pueblo.org

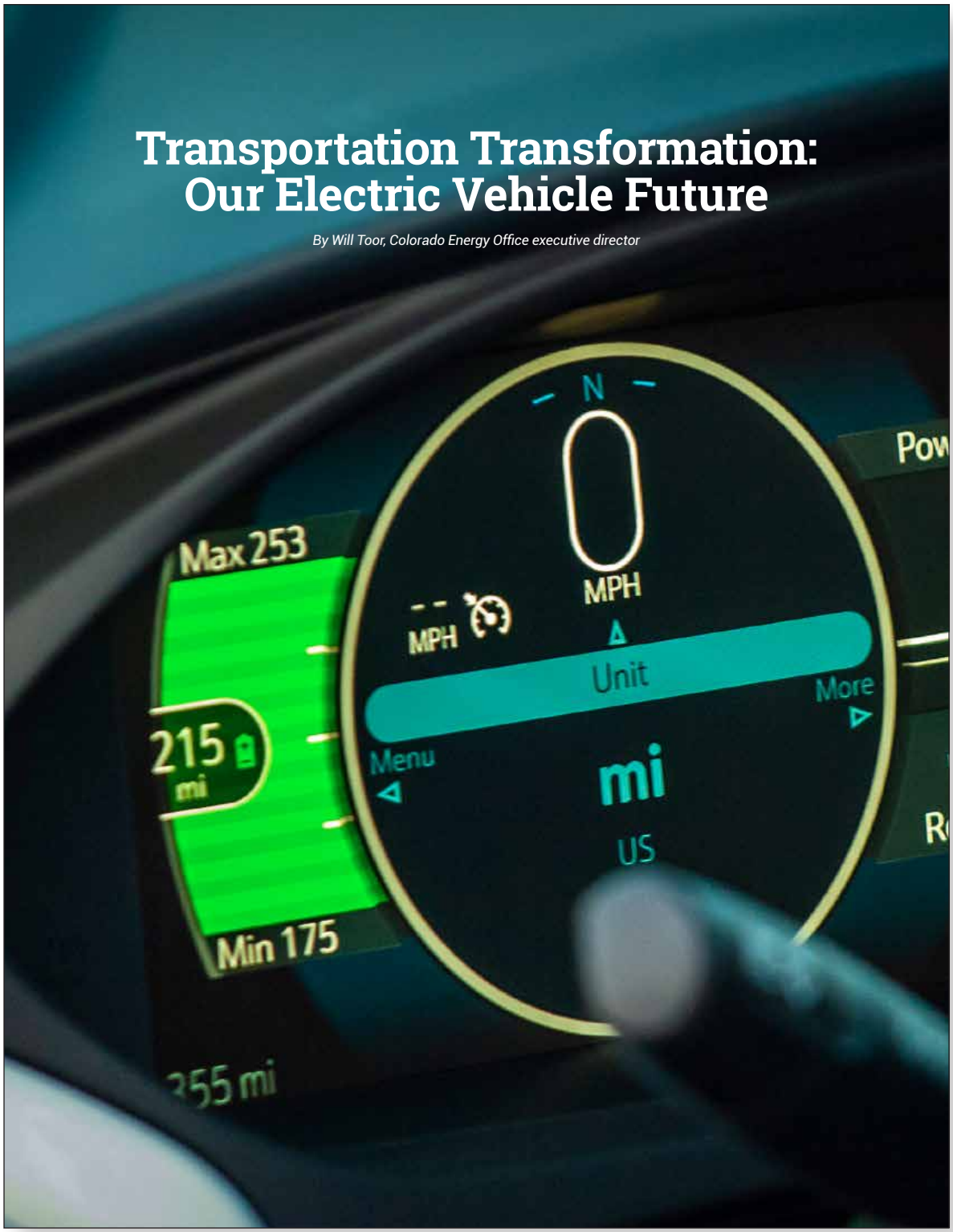
[Updated Program Year 2019-2020]

COVID-19 Impacts

COVID-19 shut down WAP production from mid-March to early May depending on the local health orders where service was occurring. WAP collaborated with its service providers and other stakeholders to create a robust set of protocols for serving clients and protecting staff during COVID-19. Despite the COVID-19 shut down, WAP was able to provide services to 400 homes in Q4 of FY20. WAP was able to keep services providers employed by focusing on training during the approximately 50 days of shut down.

5 EVs & Local Government

The following is an article published in the April 2020 issue of Colorado Municipal League's *Colorado Municipalities* magazine.



As we move toward a prosperous and healthy clean energy future for Colorado, no one is better suited to help maximize the benefits of this transition than local governments. The shift to clean energy preserves and protects the health of our communities and natural environment, provides access to lower-cost clean energy resources for rural and urban areas, increases investment and economic growth opportunities, and expands clean energy jobs.

In Colorado, transportation is eclipsing the electricity generation as the largest contributor to greenhouse gas emissions. Meanwhile, we are making enormous progress on the transition to clean renewable energy for electricity production. Already, utilities representing over 80% of the electricity generation in Colorado have adopted plans to reduce emissions by 80% or more by 2030 through closing down older pollution-generating stations and replacing them with wind, solar, and batteries. This clean electricity magnifies the benefits of switching to electric vehicles (EVs).

In January 2019, Gov. Jared Polis issued an Executive Order supporting a "Transition to Zero Emission Vehicles" to accelerate the widespread electrification of cars, buses, trucks, and other vehicles across Colorado. This transition delivers substantial economic benefits, from lowered gas costs and downward pressure on electric rates to economic development and jobs to build the infrastructure that supports electrification.

Many Colorado cities and towns are planning for EV readiness in their communities, and other municipalities can follow their lead by taking advantage of planning toolkits and funding opportunities to support this transition.

- GoEV City (*goevcity.org*) provides a toolkit of local policies, strategies, and programs to help cities advance adoption of EVs. GoEV City's approach to transportation electrification includes policy recommendations for public transit, municipal fleets, taxis, ride-hail services and personal car ownership. GoEV City's tools have been implemented in cities, counties, states, and utilities in Colorado and across the country.
- Managed by the Colorado Energy Office (CEO) and the Regional Air Quality Council, Charge Ahead Colorado provides funds to local governments for EV chargers and vehicles. ReCharge Coaches are available statewide and free of charge through CEO's ReCharge Colorado program to help municipalities identify advantages, monetary savings, and available incentives associated with converting to electric fleets. Refuel Coach 4CORE (*fourcore.org*), through EV ride-n-drive events, has increased consumer awareness and ownership in Durango.
- In 2018, the City of Fort Collins developed an EV Readiness Roadmap to support current and future EV adoption within its community. It informs policies, programs, and strategies for increasing and leveraging investment in EVs and charging infrastructure. Three communities — Colorado Springs, Pueblo County, and Estes Park — were recently awarded Colorado Department of Local Affairs planning grants to develop EV readiness plans. A core component of these plans will be strategies for municipalities to incorporate EVs into their fleets. A number of case studies from around the country have demonstrated significant operating cost reductions for EVs versus conventional vehicles.

By embracing electric vehicles, communities across the state will have access to the economic, health, and environmental benefits of emissions reduction while actively preserving and protecting this beautiful state we call home. To learn more, please join CEO Executive Director Will Toor for the CML Annual Conference session Transportation Transformation: Our Electric Vehicle Future.

6 Looking Ahead

December 2020—Fiscal year 2021 will be a big year for clean energy and climate action in Colorado. Despite the impacts of the COVID-19 pandemic, state agencies have been working together with stakeholders and members of the public to develop strategies to achieve Colorado's science-based GHG pollution reduction goals, and much of this work will move forward in the coming fiscal year.

The GHG Roadmap will be completed and issued in January of 2021, setting the stage for an ambitious agenda of investment, legislative initiatives and regulatory proposals designed to achieve over 65 million tons a year of reductions in GHG pollution statewide by 2030. CEO will be engaged in helping to move multiple strategies forward including continuing the switch to clean electricity, expanding energy efficiency investments by natural gas utilities, creating building electrification programs with utilities, supporting benchmarking and performance improvements for commercial buildings, enhancing funding for low-income weatherization and bill assistance, expanding clean energy finance programs and accelerating the transition to electric cars, trucks and buses.

In November of 2020, Governor Polis released his budget request to the legislature, which included over a billion dollars of one-time stimulus investments intended to help Colorado recover from the economic impacts of the COVID-19 pandemic. This budget includes $40 million dollars to CEO for expanding clean energy programs including RENU and C-PACE, capitalizing the Colorado Clean Energy Fund and expanding the Charge Ahead Colorado program. The budget also expands funding for the clean energy grants to local governments offered by the Colorado Department of Local Affairs. Governor Polis also convened a special legislative session which allocated funding to address near-term economic impacts of the pandemic including increased assistance for utility bill payments. CEO will distribute these funds to Energy Outreach Colorado to help ensure that Coloradans affected by the pandemic don't lose access to heat or electricity over the coming months.

The state's electric utilities are continuing to lead in the move away from coal and toward using wind, solar and storage to achieve deep reductions in pollution while maintaining affordable and reliable power. In the fall of 2020, four of Colorado's major utilities made big new clean energy commitments. Tri-State Generation and Transmission built on last year's announcement that it will retire all of its Colorado coal plants and filed a plan at the PUC to add nearly two gigawatts of wind, solar and storage and cut pollution by 80%. Platte River Power Association adopted a resource plan that retires all coal and achieves a 90% reduction in pollution. And—setting a new bar for Colorado utilities—Holy Cross Energy announced a plan to go 100% carbon free by 2030. Xcel Energy, the state's largest utility, will be filing a Clean Energy Plan at the PUC in March 2021 that will achieve at least an 80% pollution reduction. CEO will both work with the utilities and participate at the PUC and AQCC to evaluate and operationalize these commitments and plans.

Another big move in fiscal year 2021 (FY21) is PUC consideration of utility transportation electrification plans (TEPs), the largest filed by Xcel Energy. The utility's original TEP included approximately $100 million in investments in EV charging infrastructure and customer rebates for charging over three years. CEO has proposed an additional $30 million in point of sales rebates to help customers acquire new or used EVs—especially low-income Coloradans, who would get a larger benefit under this approach. The PUC will decide on this proposal in FY21, and CEO looks forward to working on its implementation.

In July of 2020, Colorado signed an MOU with 14 other states to work collaboratively to advance the market for electric trucks and buses. CEO joined with CDPHE and CDOT to launch a stakeholder process to develop a Colorado Clean Trucking Strategy, which will examine how to advance low and zero emission trucks and buses through infrastructure investment, incentives for clean vehicles and consideration of regulatory options such as fleet rules and advanced clean truck standards. As part of this effort, CEO has contracted with a consulting firm to do a deep dive technical analysis of the Colorado truck market, which will be completed in the summer of 2021 and inform the state's decisions on potential regulations.

In September, General Motors joined Nissan to become the second automaker using the assignability provisions in the state EV tax credit statutes to effectively make the credit available at point of sale. This is an important step, as research shows that incentives available when a consumer is buying a vehicle have a much larger impact on purchase decisions.

Electrification isn't just for cars, buses and trucks—it's also for bicycles. In September, CEO launched a new eBike pilot program with Bicycle Colorado for low-income essential workers in the fall of 2020 with plans to use lessons learned to roll out a larger program in 2021.

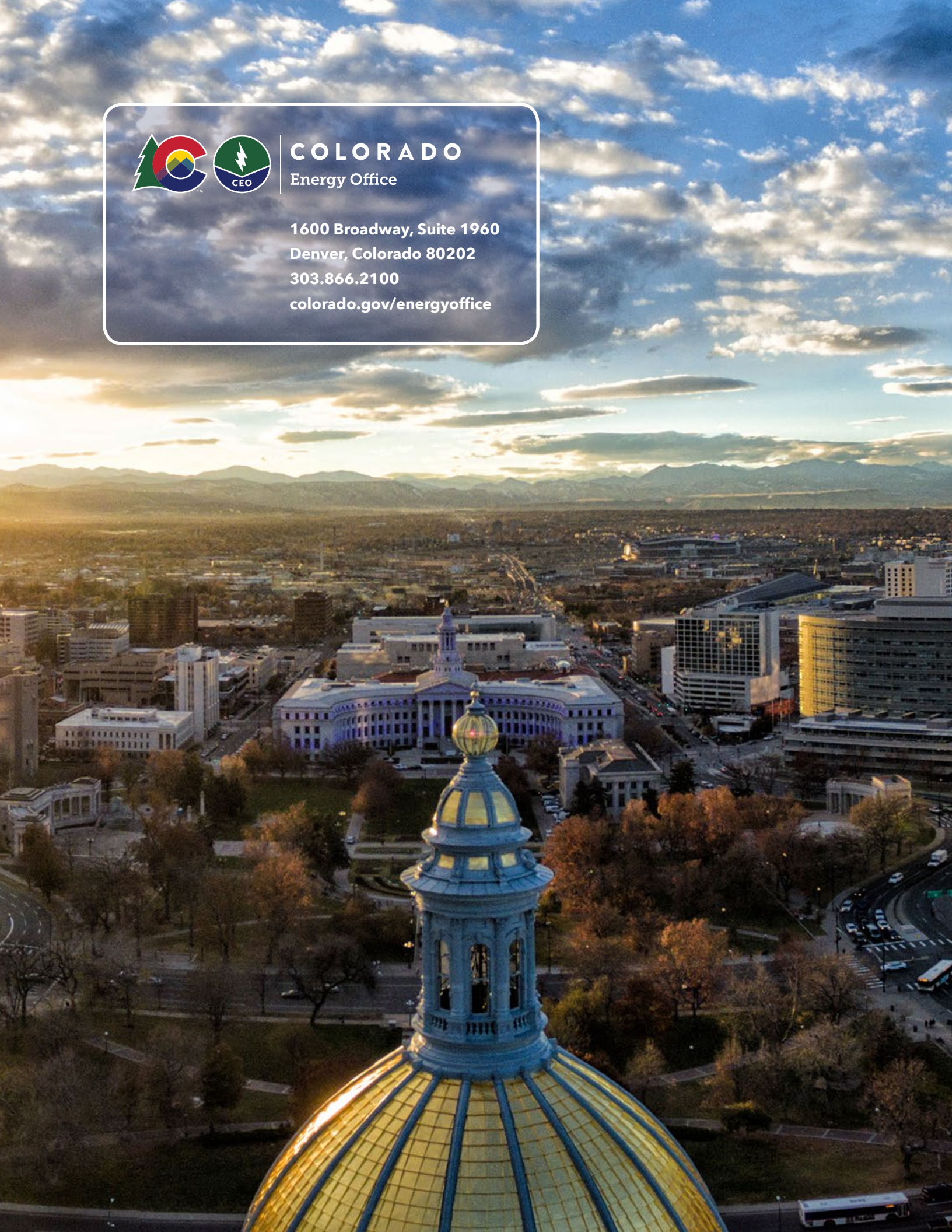
CEO is also launching a buildings benchmarking effort in FY21. The office is working with a consultant to build a database of covered buildings and conduct utility workshops to improve access to building-level energy use data that will enable commercial building owners to report energy performance data to the state. CEO will provide outreach and training to building owners to assist them in compliance with reporting requirements. The office will develop publicly available, digitally interactive maps and lists that show building energy performance data in a transparent manner. CEO is coordinating closely with local governments that already have building benchmarking requirements or intend to adopt such an ordinance so these can be integrated seamlessly and support local climate goals.

In an effort to develop the beneficial building electrification market, CEO is convening meetings with utility program managers across the state to coordinate and support quality installation heat pump contractor trainings. The office is also conducting outreach to heat pump manufacturers and distributors to identify pathways whereby the state and stakeholders can strengthen the equipment supply chain, develop markets, and increase marketing to consumers and businesses. Through the Beneficial Electrification League of Colorado, CEO is working to launch a statewide consumer-focused website on building electrification that will feature information about heat pumps, heat pump water heaters, induction cooktops, fact sheets on the costs and benefits of these technologies, links to utility rebates and buying guides, a directory of qualified contractors as well as case studies and testimonials.

CEO will be undertaking the following studies in FY21:

- **Low-Carbon Hydrogen Roadmap Study**: This study will provide background on low-carbon hydrogen including how it is produced, transported and utilized. It will examine the opportunities, barriers and potential steps to overcome, and the economic potential of low-carbon hydrogen in the state.
- **EV Equity Study:** This study will baseline, define and map marginalized, minority and frontline communities including rural locations in Colorado that may be disproportionately impacted by transportation pollution and/or are experiencing barriers preventing equitable access to electric transportation and associated benefits. Transportation air pollution, including MDV and HDV emission impacts, will be evaluated and summarized graphically by mapping. Barriers (economic, infrastructure, social) to EV adoption and strategies to overcome these barriers will be examined. Criteria to evaluate and prioritize potential programming, including vehicle replacement programs, will be developed, and stakeholder engagement will provide inputs into study findings.
- **Roadmap to 100% LDV Electrification**: This study will support goals and actions in the Colorado EV Plan 2020 by developing a roadmap for a transition to 100% electrification of the light-duty transportation sector. The analysis will consider short, mid- and long-term strategies including public investment, administrative activity, regulatory activity and potential legislation as well as the development of future LEV and ZEV standards.

Additionally—and following Governor Polis' executive order on equity, diversity and inclusion (EDI) that directs state agencies to create and implement policies to prioritize a more inclusive workforce—CEO has formed a working group to review and make EDI recommendations for the office's programs and operations going forward.



COLORADO
Energy Office

1600 Broadway, Suite 1960
Denver, Colorado 80202
303.866.2100
colorado.gov/energyoffice