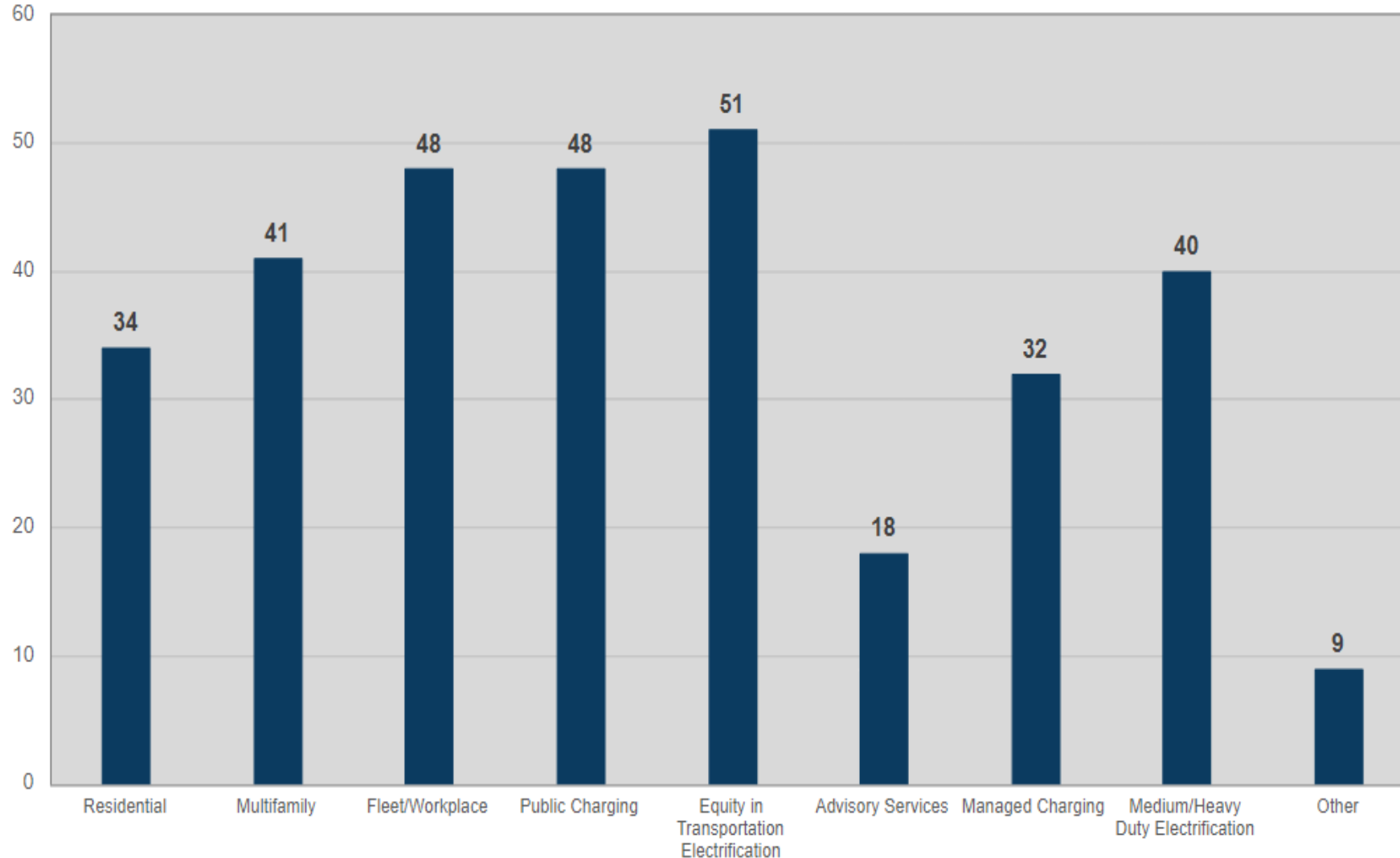




**PUBLIC SERVICE COMPANY OF COLORADO
2021-2023 AND 2024-2026 TRANSPORTATION
ELECTRIFICATION PLAN (TEP)
STAKEHOLDER WORKSHOP**

December 16, 2022

Registration Survey for Breakout Discussion Topics



Strong interest in:

- Equity, public charging, medium/heavy electrification, and managed charging (breakout sessions for later today).
- Other commercial (MFH, fleet, workplace) and residential topics can be covered in other group discussions today.

PARTICIPATION

Those attending in person:

- Please hold questions until the end of presentations. We have reserved time for Q&A.
- We've reserved time for deeper conversation later in the agenda during breakout and group discussions. Xcel Energy and Guidehouse are also available for any follow-up discussions.
- Before speaking, please state your name and organization so those attending virtually know who is speaking.
- If you need to leave early, please find an Xcel Energy staff person. They will escort you to the front of the building.

Those attending virtually:

- During presentations, please submit your comments and questions in the chat. GPI staff will monitor the chat to address during Q&A as time permits.
- During breakout discussions, you will be sent links to select which group you would like to join.
- Please contact Katelyn Bocklund via chat if you are having any sound/video issues.



AGENDA

- 9:00 am Welcome and Introductions
- 9:05 am Xcel Energy Clean Transportation Vision and Background
- 9:20 am CO TEP 2021-2023 Updates and broad program enhancement ideas for CO TEP 2024-2026
- 10:30 am Break
- 10:45 am CO TEP 2024-2026 Breakout Sessions #1 (Managed Charging, Equity)
- 11:20 am Reporting out on Sessions #1
- 11:30 am Lunch Break
- 12:15 pm CO TEP 2024-2026 Breakout Sessions #2 (Public Charging/MD&HD, PRI)
- 12:50 pm Reporting out on Sessions #2
- 1:00 pm Discussion on any other new ideas
- 1:25 pm Wrap up and next steps
- 1:30 pm Adjourn

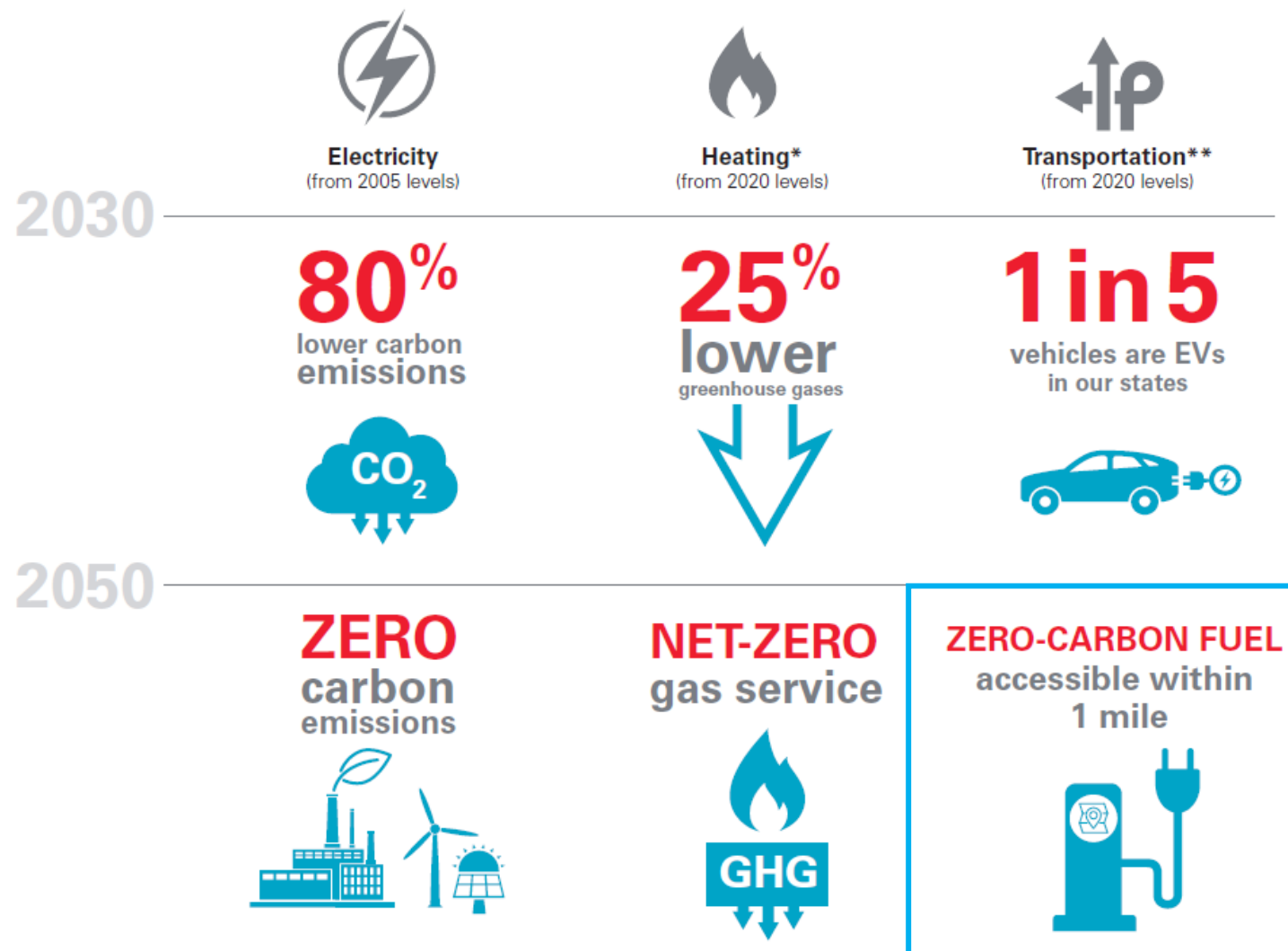


XCEL ENERGY CLEAN TRANSPORTATION VISION AND TEP BACKGROUND



Net-Zero Energy Provider by 2050

Goals that cover all the ways our customers use energy



*Spans natural gas supply, delivery and customer use

**Includes the Xcel Energy fleet; zero-carbon fuel is electricity or other clean energy

← New (2022)

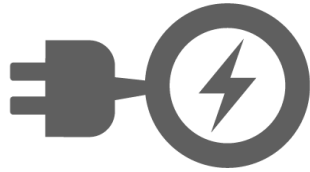
Clean Transportation Vision

Our Vision is to enable one out of five vehicles in the areas we serve to be electric by 2030 and all vehicles to run on carbon-free electricity or other clean energy by 2050



ZERO CARBON ENERGY

Provide the fueling infrastructure and energy system to run all vehicles on carbon-free electricity or other clean energy



EASY CHARGING

All customers can conveniently access affordable EV charging at home or within one mile of home



ACCESS

Underserved communities can participate in our programs and the related economic development benefits



XCEL ENERGY FLEET

Our entire fleet runs on carbon free electricity or other clean energy

Achieving the Vision – 2030 Benefits

Enabling one out of five vehicles in the areas we serve to be electric by 2030 delivers significant benefits



\$1 BILLION

In customer fuel savings annually by 2030



**\$1 OR LESS
PER GALLON
(EQUIVALENT)**

To drive an EV with Xcel Energy's low, off-peak electricity prices at home



**5 MILLION TONS
OF CARBON
EMISSIONS**

Eliminated annually by 2030 with our clean energy

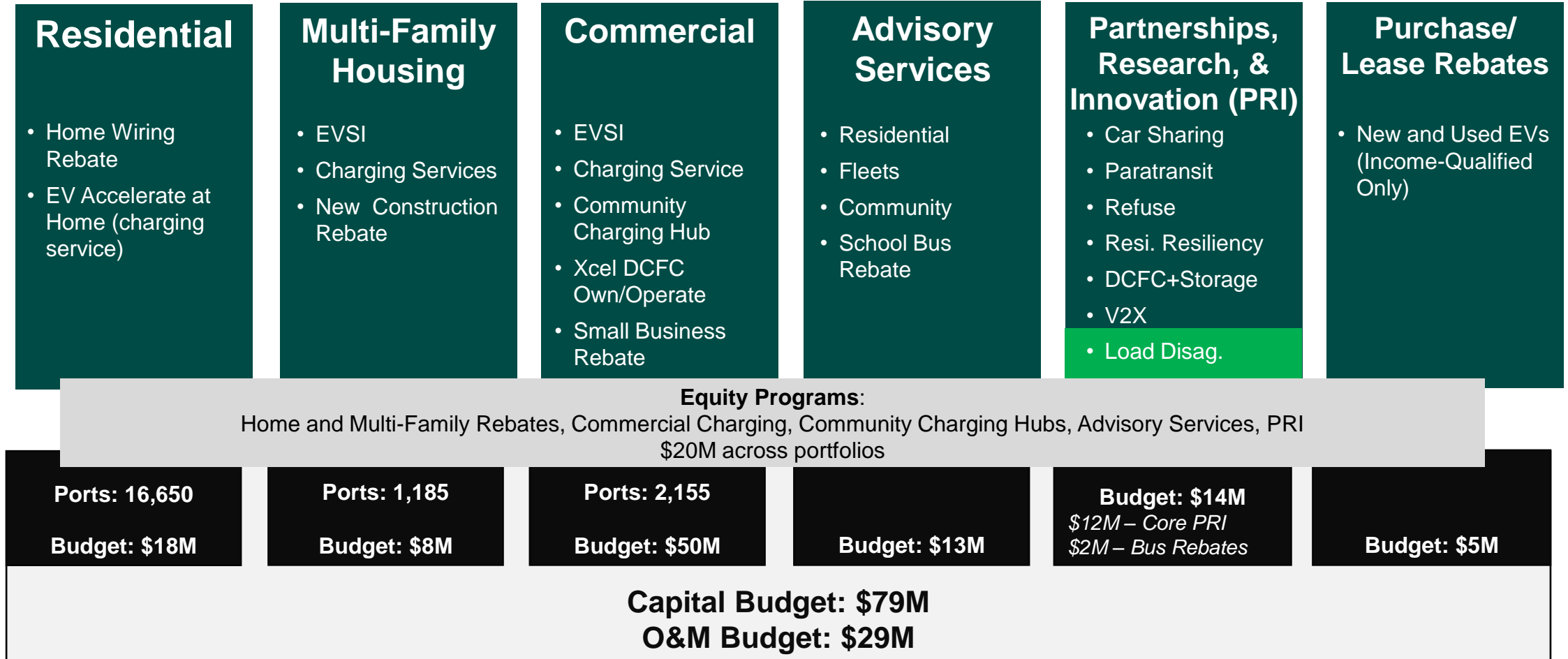


ACCESS

Holistic programs and infrastructure for all customers at home, work and on the go

Overview of Current CO TEP Programs

2021-2023 TEP Portfolios, Budgets + Launch Schedule



 = In market  = In process

Xcel Energy Transportation Electrification Plan: Updates

TEP Semi-Annual Report – Filing October 3, 2022.

- Updates on program participation, program/portfolio spending, EV adoption, other metrics (where available) as outlined in the Final TEP
- Top level program summary:
 - Supply chain issues have improved but inflation worsened. With that, participation continues to increase as programs as the TEP reaches its first full year of programs being in market
 - Strong Demand in Residential, MFH, Fleet, Workplace, and Public TEP Programs (EVSI)
 - Actively working to increase participation in equity rebate programs.

2021-2023 TEP PROGRAM UPDATES, 2024-2026 TEP PROGRAM ENHANCEMENT IDEAS

**Equity Programs, Residential Portfolio, MFH Portfolio, Commercial
Portfolio, Advisory Services, Partnerships/Research/Innovation (PRI)**



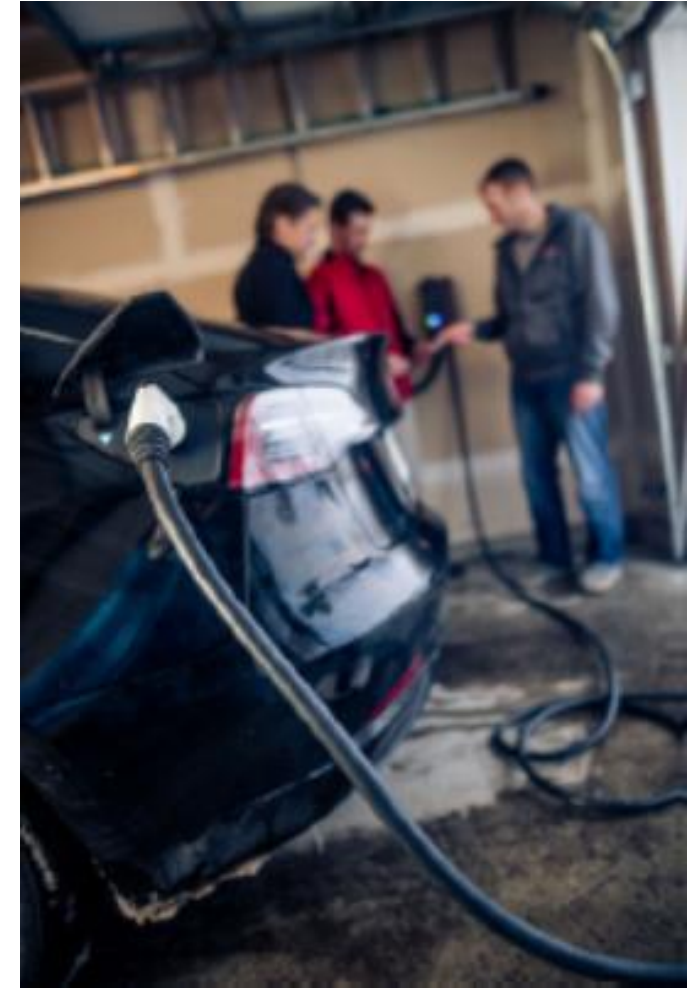
Residential Home Charging Programs

EV Accelerate At Home (EVAAH)

- Program Launched in Colorado on August 5, 2021
 - Provides hassle-free installation and maintenance of utility-owned level 2 charger for \$13.29 monthly fee
 - EV static optimization required for 1 year (opt-out for income-qualified customers)
 - As of 12/1/2022:
 - 1014 completed installations
 - 246 pending applications
- *Capital spend as of 12/1/2022: \$718,056

EV Charger/Wiring Rebate

- Up to \$500 market rate or \$1,300 for income-qualified customers
 - Offered to customers installing eligible charging stations or driving eligible vehicles
 - As of 12/1/2022:
 - 1,321 approved applicants (including rebates given through EVAAH; 56 income-qualified)
- *Capital spend as of 12/1/2022: \$691,735



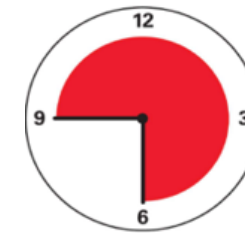
Residential Optimization

Optimize Your Charge Program (Static Optimization)

- Program live in CO Aug 2021
 - Customers get \$50 annual bill credit for charging at least 25% of the time during one of three off-peak charging schedules.
 - Current participation via eligible Level 2 chargers (Enel X & ChargePoint) and WeaveGrid evPulse for most Hyundai, Kia, Tesla, Lexus & Toyota EVs.
 - As of 12/1/2022, 2,200 participants in OYC (1010 via EVAAH, 1190 using their own charger or enrolling through the WeaveGrid API interface)

Charging Perks Pilot (Dynamic Optimization)

- Pilot launched: June 2021 for Tesla; Sept 2021 for GM, Ford, Honda & BMW. Pilot has been extended through 2023.
- Pilot details
 - Participants receive a \$100 incentive for enrolling, additional incentive at the end of 2021 and 2022 (\$50 for Level 1 charging, \$100 for Level 2 charging)
 - Xcel Energy, along with automakers and evPulse (for Tesla), work together to schedule EV charging when renewables are abundant, and costs are lowest
 - Participant cap increased from 600 to 1000 vehicles, minimum of 50 vehicles per manufacturer planned
- 624 active electric vehicles (participants) as of 12/1/2022



9:00 p.m. – 6:00 a.m.
21:00 - 06:00



12:30 a.m. – 9:30 a.m.
00:30 - 09:30



6:00 a.m. – 3:00 p.m.
06:00 - 15:00



EV Purchase/Lease Rebate for Income-Qualified Customers

- Income-qualified customers get \$3,000 off a pre-owned EV and \$5,500 off a new EV; maximum MSRP or sale price is \$50,000
- Program live in August of 2021; over 275 applications received to date
- As of 12/1/2022, 101 rebates issued (75 new, 26 pre-owned) and about 136 applications in process
- Customers can become pre-qualified and get an instant rebate at dealers in our network – or can apply for the rebate after they purchase the car from any dealer, whether in-network or out-of-network
- Continuing to work with partners like GRID Alternatives Colorado, Drive Electric Colorado, Women Who Charge, CLEER, and others on targeted outreach
- Upcoming events:
 - Planned events: final Levitt Pavilion concerts, East High School Energy Day STEM Event, Summit County Ride and Drive, community and neighborhood-focused EV events
 - Recent events: Cherry Creek Arts Festival, Colorado Black Arts Festival, Ohm on the Rocks, Levitt Pavilion Concert Series.

*Capital spend as of 12/1/2022: \$489,000



Residential Program Enhancements/Modifications

Customer problems:

- High upfront costs for new/used EVs
- Increased infrastructure costs

Evaluation updates:

- Residential TEP Participant Survey (in development)
 - Comprehensive survey of residential TEP participants

Potential enhancement ideas:

- *Rebate levels?*
- *Increasing access to managed charging?*



Multi-Family Housing (MFH) Programs

EV Supply Infrastructure (EVSI) as of 12/1/2022

- Multifamily Housing – Shared Parking EVSI has received 31 applications for customer sites that support 146 ports.
- Multifamily Housing – Assigned Parking EVSI has received 30 applications for customer sites that support 421 ports.

Rebates

- Helping EVSI applicants and others apply for the rebate
 - MFH New Construction Wiring Rebate (1 application as of 12/1/22)
 - MFH Income-Qualified and Higher Emissions Community Charger Rebates (working with Energy Outreach Colorado) (3 potential applicants as of 12/1/22)

Advisory Services

- As of 12/1/22, 742 leads (1207 to date)

*Capital spend as of 12/1/2022: \$1,670,886



MFH Program Enhancements/Modifications

Customer problems:

- Lack of awareness
- Incentives are too low
- Need advisory support for planning and future proofing
- Challenges when space for EVSI equipment is at a premium

Evaluation update:

- MFH Post-Install Survey (in development)

Potential enhancement ideas:

- *Rebate levels?*

Commercial TEP Programs

As of 12/1/2022:

Fleet EVSI

- Received 35 applications for customer sites that support 211 ports

Workplace EVSI

- Received 59 applications for customer sites that support 395 ports

Primary General EV Pilot

- Received 5 applications for customer sites that support 16 ports

Community Charging Hubs

- Received 10 applications for customer sites that support 197 ports

Public EVSI

- Received 48 applications for customer sites that support 452 ports

Small Business

- Received 14 applications and issued 2 rebates (1 IQ/HEC Charger Rebate and 1 Market Rate Wiring Rebate)



*Capital spend as of 12/1/2022: \$1,494,518

Commercial Program Enhancements/Modifications

Customer problems:

- Lack of awareness
- Increased infrastructure costs

Evaluation updates:

- Commercial Post-Install Survey (in development)
- Commercial Non-Participant Interviews (completed)

Potential enhancement ideas:

- *Rebate levels?*
- *New Construction support?*
- *Streamline project development processes*

Colorado Xcel Energy Owned DCFC



- 21 applications received – 6 selected
- Evaluated each site based on distance from existing DCFC, access to amenities, estimated costs, etc.
- Design complete on 2 sites, in process on 3 sites, pending 1 site.
- Severance construction started Dec. 1, striving to complete before Dec. 31.
- Equipment supply chain issues continue to be a challenge.
- 2nd application process underway to select 2 additional sites to fully utilize approved program budget in 2023.

Summary	Type	# chargers	# ports
Monte Vista	Connector	4	4
Central City	Connector	2	2
Severance	Connector	2	4
Eaton	Connector	2	4
Breckenridge	Market	2	2
Lakewood	Market	2	4

School Buses

School Bus Rebate Program

- Launched in October 2021
 - Held 4 webinars across the territory
 - Continuous account management outreach
- Intakes are occurring
- 3 customers have submitted intake forms for participation in School Bus Rebate program. There are currently 8 enrolled in FEAP vehicle suitability assessment (required)

Funds Available (\$2.2 M)	Fund up to 8 buses
Rebate per Bus	\$275,000 Max or 75% of Project
Buses Funded YTD	0



EV Dealer Network (Advisory Services)

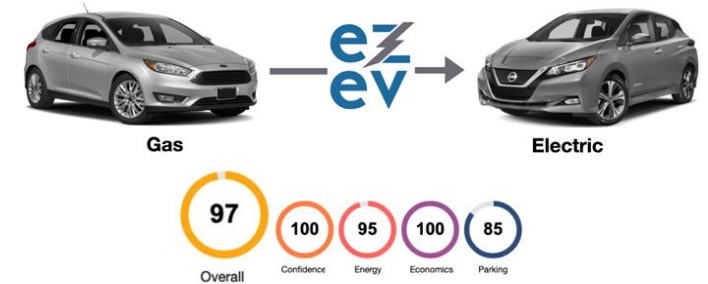
- Our voluntary network of local dealer partners was launched in March 2021
- We offer in-showroom tools and resources to help customers save and get set up to charge their EVs at home
- The network has grown!
 - 30 Dealers in Colorado, 64 dealers across Xcel Energy's footprint
 - 10+ more dealerships planned in Colorado by year-end 2023
- Our network has sold over 3,565 EVs since its 2021 launch, with 2,329 sold in CO as of December 1st, 2022
- Dealers in our network have been trained to offer our EV Rebate to our income-qualified customers
 - To date, 172 customers have received a code for the instant rebate, and 20 have redeemed it in-network for an EV purchase or lease.
 - An Instant Qualification process has been piloted at Boulder Nissan fall 2022 that shows encouraging signs that streamline the IQ rebate during the purchase process, greatly reducing lag time between qualifying for the program and receiving the rebate.



Advisory Services – Fleet Electrification

Fleet Electrification Advisory Program

- Update on Fleet Assessments:
 - 18 applicants currently participating
 - 8 have completed a full assessment
 - Expected another 4-6 to complete by year-end
 - Covers all fleet market segments
- Nearly 2,050 vehicles analyzed, Class 1-8 (including heavy-duty vehicles)
- Intakes continue on a rolling basis
- Plan to scope and pilot an advisory tool for Account Managers to help support rate suitability, suggestions on the timing/staggering of charging, and carbon impact estimates

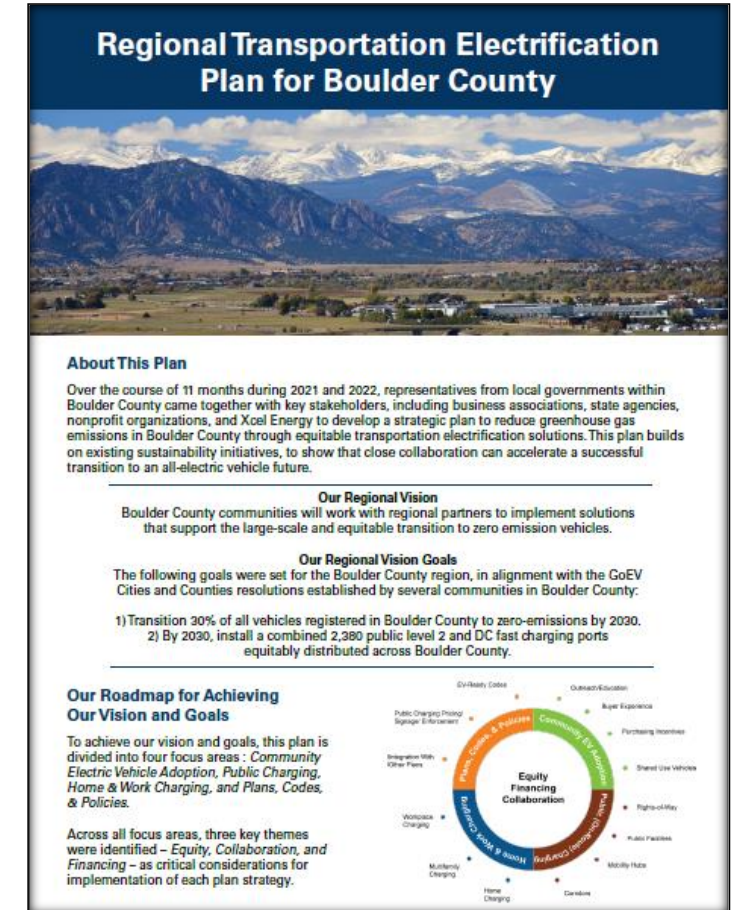


Advisory Services – Communities

Community EV Planning

Xcel Energy's Partners in Energy program activity to date:

- 11 communities are currently developing EV plans
 - 2 are regional county-wide plans
- 5 communities are in the implementation stage of the program. This includes:
 - Marketing support
 - Project management services
 - Education and outreach
 - Tracking of success metrics
- 1 community graduated
- Providing continued support for HEC and PRI applications.



Next round of applications are due January 15th.

Advisory Services Enhancements

Customer problems:

- Finding ways to support our customers in the early stages of their EV journey.
- Providing information on EVs, charging and rates.

Evaluation updates:

- Dealership Staff Interviews (in progress)
- Post Advisory Survey (in development)

Potential enhancement ideas:

- *Online tools*
- *Workforce training*
- *Community advisory*

Partnerships, Research, & Innovation (PRI)

Portfolio Update

1 of 2

	Next Steps	Goal & Applicants	Contingently Awarded*
EV Equitable Car Sharing <i>Launch: July 2022</i>	<ol style="list-style-type: none"> 1. CCS is actively procuring EVs with XE support 2. Site hosts sign contracts with XE 	<p>Goal:</p> <ul style="list-style-type: none"> • <u>17</u> site applications • <u>8</u> communities <p>Received:</p> <p><u>41</u> sites</p> <ul style="list-style-type: none"> • <u>10</u> comm. (240% of goal) 	<p><u>21</u> Sites</p> <p><u>8</u> Communities</p> <p>Deploying up to 25 EVs across up to 21 locations</p>
EV Paratransit Fleets <i>Launch: July 2022</i>	<ol style="list-style-type: none"> 1. Finalize rebate funding 2. Procure EV Busses 3. Q2/Q3 EV deliveries 	<p>Goal:</p> <ul style="list-style-type: none"> • <u>3</u> operators • <u>3</u> busses <p>Received:</p> <p><u>5</u> operators** (166% of goal)</p> <ul style="list-style-type: none"> • <u>5</u> busses 	<p><u>3</u> Operators</p> <p><u>5</u> EV Busses</p>
EV Refuse Fleets <i>Launch: July 2022</i>	<ol style="list-style-type: none"> 1. Finalize rebate funding 2. Procure EV Trucks 3. Q2/Q3 EV deliveries 	<p>Goal:</p> <ul style="list-style-type: none"> • <u>4</u> operators • <u>4</u> trucks <p>Received:</p> <p><u>7</u> operators** (175% of goal)</p> <ul style="list-style-type: none"> • <u>7</u> trucks 	<p><u>5</u> Operators</p> <p><u>5</u> EV Refuse Trucks</p>



Car Sharing



Paratransit



Refuse

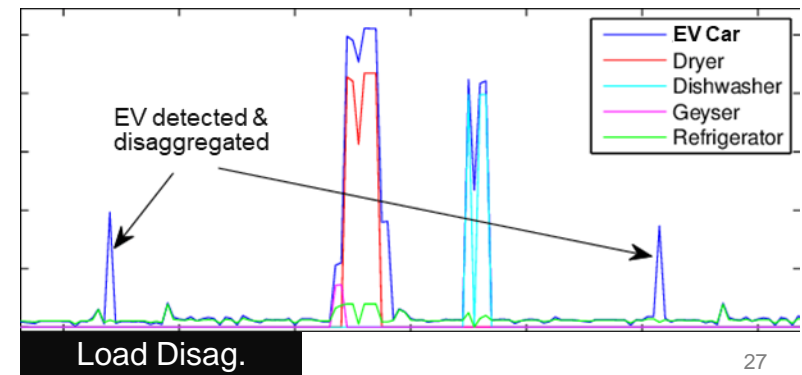
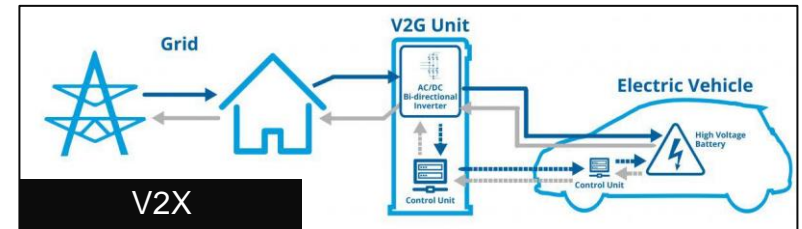
- * Contingently awarded based upon fully agreeing to and signing rebate contract funding terms and conditions for the PRI pilot. Rebate deployment planned Dec 2022 to Feb 2023
- ** Those operators not awarded did not meet necessary requirements to receive the rebate

Partnerships, Research, & Innovation (PRI)

Portfolio Update

2 of 2

	Status
Residential Resiliency	<ol style="list-style-type: none"> 1. Scope of work defined, and NREL contract signed 2. XE & NREL project teams formulated 3. Phases (1) Charging profile eval. & (2) Charging requirements underway
Vehicle to X ("X" = Grid, Home, Buildings, Grid, etc.) <i>Anticipated</i>	<ol style="list-style-type: none"> 1. Feasibility study draft report internal review by Jan 30, 2023 2. V2H/B – Vendor contracting, customer sites ID'd, installs in Q1, 2023 3. V2G – 2 school district partners ID'd, contracting underway, installs in Q1/2, 2023. System availability expected Q3, 2023
DC Fast Charging + Storage	<ol style="list-style-type: none"> 1. Battery Request for Proposal (RFP) released in Nov 2. Bid responses due by bid respondents by Dec 19 3. Prospective site negotiations underway in Poncha Springs, CO
EV Load Detection & Disaggregation	<ol style="list-style-type: none"> 1. Preferred vendor had to withdraw from negotiations 2. Re-negotiations with top 3-5 additional bid respondents 3. Active discussions underway, and bid respondent technical analysis and review by Q1 2023 4. Initial draft blueprinting beginning, including customer program design



60 Day Notices

The Company completed the 60 Day Notice process for the following notices and will be moving forward with implementation:

- PRI Refuse Pilot – Program Adjustments
- Globeville Higher Emissions Community Designation

In progress:

- MFH EV Charger Rebates – Program Adjustments

Evaluation Roadmap

- Commercial Non-Participant Interviews (completed)
- Dealership Staff Interviews (in progress)
- Residential Participant Surveys (in development)
- IQ Residential Participant Interviews (in development)
- Peak Demand Analysis (in development)
- Multifamily Site Host Survey (Planned for Q2 2023)
- Commercial Site Host Survey (Planned for Q2 2023)
- MFH/Commercial/Community/Fleet Advisory Survey (Q2 2023)
- PRI Innovation Project Implementer Interviews (TBD)
- Carbon and Air Quality Emissions Analysis (in development)

Stakeholder Feedback to Date: Key Themes

- Offer comprehensive equity offerings with community outreach to increase participation
- Streamline project development process and interconnection timelines
- Focus on M/HD vehicles, fleets and charging
- Support for growth in public charging access
- Build out charging infrastructure capable for rapid growth in EV adoption
- Ensure TEP programs are complementary, not repetitive
- Expand on successes of first TEP
- Interest in managed charging program growth, and V2X demonstrations

BREAK
Returning at 10:45am MT

3. BREAKOUT SESSIONS

CO TEP 2024-2026

Equity

How can we address lack of awareness, access and high upfront costs for affordable electric vehicles and convenient charging?

How can we best reach disproportionately-impacted communities through our TEP offerings?

Equity

Which definitions best identify these communities?

Name	Definition and Criteria
CO Disproportionately Impacted Community (DIC) Census Block Groups (HB 21-1266)	<ul style="list-style-type: none">• Greater than 40% of population are low-income; or• Greater than 40% of population identify as people of color; or• Greater than 40% of population are housing cost-burdened• HB21-1266 also references communities identified by an agency as one with a history of environmental racism or those where "Multiple factors... may act cumulatively to contribute to persistent disparities"
Xcel Energy Higher Emissions Communities (HEC)	<ul style="list-style-type: none">• Census block groups in the utility service area identified in analysis based upon HB 21-1266 definition• Data analysis conducted using inputs from CDPHE Climate Equity Data Viewer – Beta Version
Federal Justice40 Initiative	<ul style="list-style-type: none">• Goal that at least 40% of the benefits of federal investments in climate and clean energy infrastructure are distributed to disadvantaged communities• Mapping Tool identifies <i>justice communities</i> using a low-income criteria (% of census tract households where household income is at or below 200% of the Federal poverty level)• An additional burden threshold in the categories of: climate change, energy, health, legacy pollution, transportation, water and wastewater, and workforce development

Equity

Which definitions best identify these communities?

Name	Definition and Criteria
ChargeAhead Colorado Program DI Enhanced Incentive Eligibility	<ul style="list-style-type: none"> • SB21-260 Disproportionately Impacted Community (DIC) Definition • National Electric Vehicle Infrastructure (NEVI) DAC Definition • Enviroscreen DIC (90th percentile +) • Transportation Equity Community (75th percentile +)
National Electric Vehicle Infrastructure (NEVI) Program Guidance on Disadvantaged Communities (DAC)	State Plans should explain how the State will deliver projects under the NEVI Formula Program that, consistent with E.O. 14008 and the Interim Justice40 Guidance issued by the White House and USDOT, target at least 40 percent of the benefits towards disadvantaged communities
Federal Policy: Inflation Reduction Act (IRA) Alternative Fuel Refueling Infrastructure Credit	Starting in 2023, qualifying property will be limited to that placed in service within low-income or non-urban census tracts <i>(Additional guidance forthcoming)</i>
Federal Policy: IRA Clean Vehicle Credit <i>(Consumer income/MSRP thresholds only)</i>	<ul style="list-style-type: none"> • No credits are allowed if MSRP exceeds -- Vans: \$80,000; SUVs: \$80,000; Pick Ups: \$80,000; Any other: \$55,000 • There is a credit phase-out based on the taxpayer's modified adjusted gross income (AGI) as it exceeds \$300,000 for married filing jointly, \$225,000 for head of household, and \$150,000 in any other case.

Residential/Commercial Managed Charging

How can we expand our managed charging programs as EV adoption picks up?

What should our managed charging program goals be? (lower EV charging costs, grid operation benefits, reduced CO2 emissions and renewable curtailment, etc.)

How can we encourage managed charging for both residential customers and M/HD vehicles?

LUNCH BREAK
Returning at 12:15pm MT



Public Service Company's Colorado Transportation Electrification Plan

Public Charging Forecasting

December 16, 2022



Key Takeaways

Background



- Colorado state target for EV adoption: **940,000 light-duty vehicles by 2030**
- Guidehouse’s Vehicle Analytics & Simulation Tool (VAST) **forecasted vehicle adoption and charging needs** in the Company’s service area to meet the 2030 goal

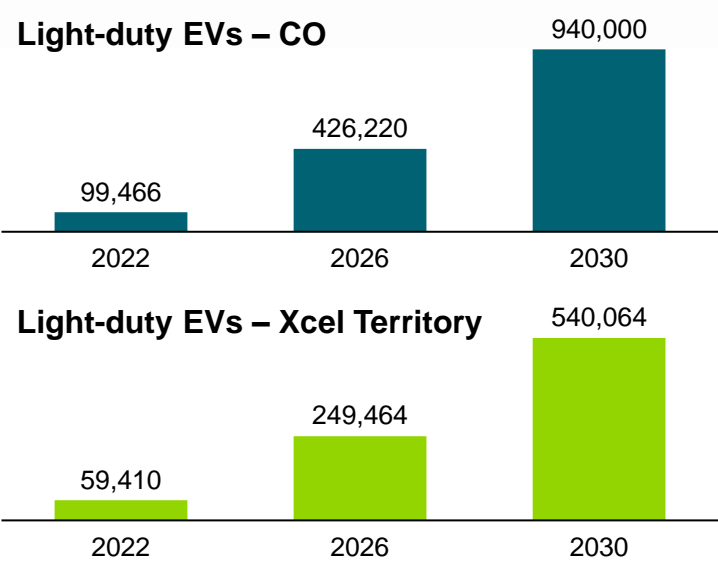
Bottom line:

Colorado will require rapid investment in EV charging infrastructure to ensure sufficient access and coverage is available for supporting state goal.

Vehicle Adoption



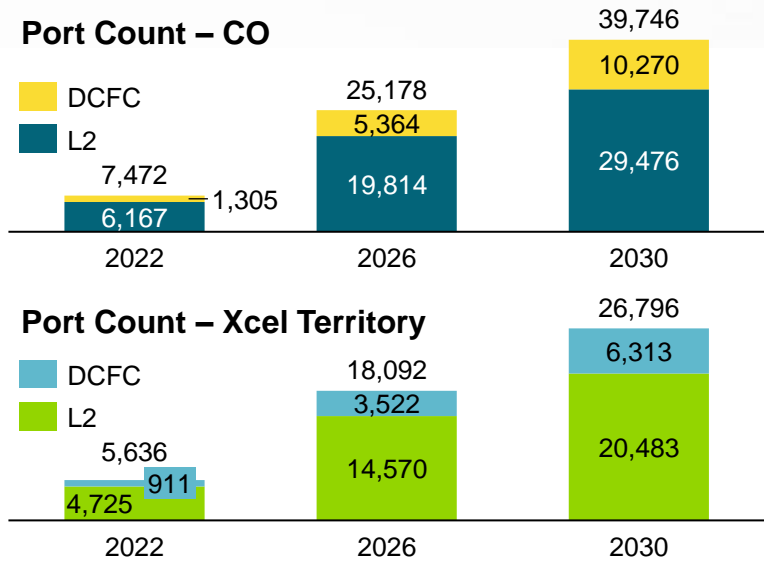
- VAST forecast indicates achieving this vehicle target in Colorado requires market conditions that **favor** EV adoption
- Achieving the 2030 goal requires a statewide **light-duty market share of 13.7%**



Charging Needs



- To support 940k light-duty EVs in 2030, VAST projected EV charging infrastructure requirements in Company’s service area of:
- ~ 6,300 public DCFC ports
- ~ 20,500 public Level 2 ports



Note: 2022 values forecasted through year end based on historical data through Q2 2022.

Public Charging and MD/HD Electrification

What does a public charging network that works for everyone look like?

In an ideal world, what would you like to see Xcel doing to rapidly scale up public charging?

What do MD/HD vehicle owners need to make electrification possible?

Partnerships, Research, and Innovation (PRI)

How can we develop pilots and demonstration projects that help deploy new technologies and transportation electrification approaches in Colorado?

How can we pilot new approaches that equitably distribute the benefits of transportation electrification to all customers and communities?

What other fleet and vehicle use scenarios should we target with pilots to promote widespread vehicle electrification?

4. WRAP UP

- Other clean transportation topics
- Next Quarterly Meeting March 2023

Additional Contact Information

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