



North Central Texas
Council of Governments



Dallas-Fort Worth
CLEAN CITIES

REGIONAL EV INFRASTRUCTURE WORKING GROUP

May 15, 2024

Agenda

- Introduction
- Charging Smart
- **EMPOWER Workplace Charging Program**
- **Member Presentations**
 - Allen Goetz, Electrada
 - Chris Jackson, Load-Point

Working Group Priorities:

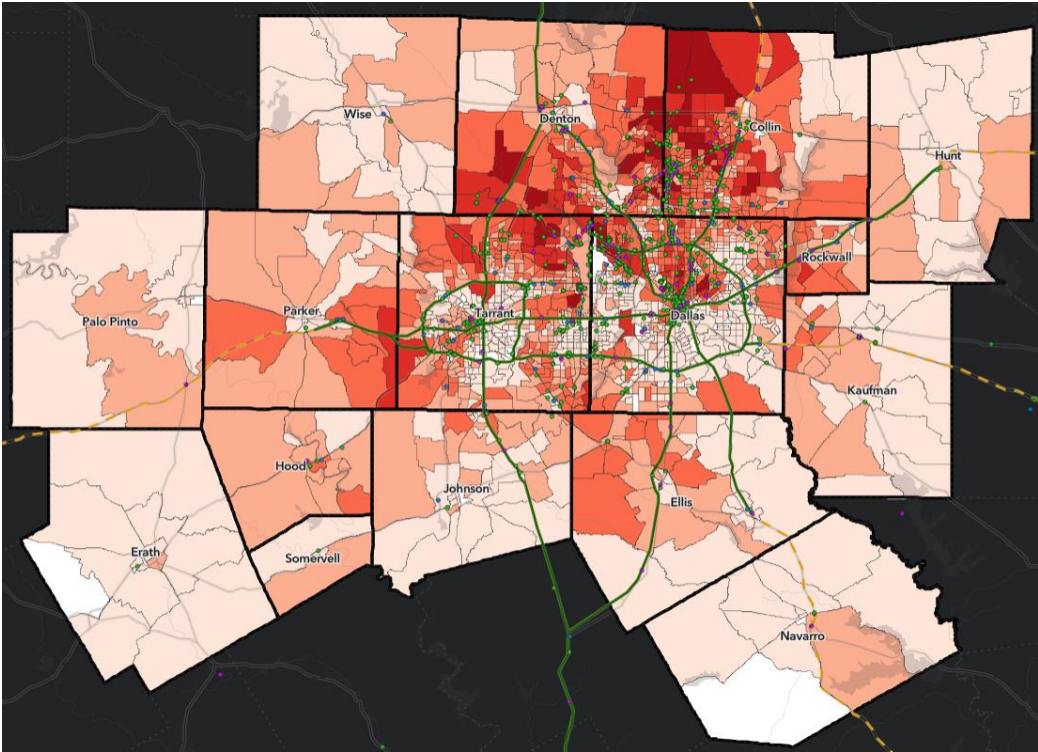
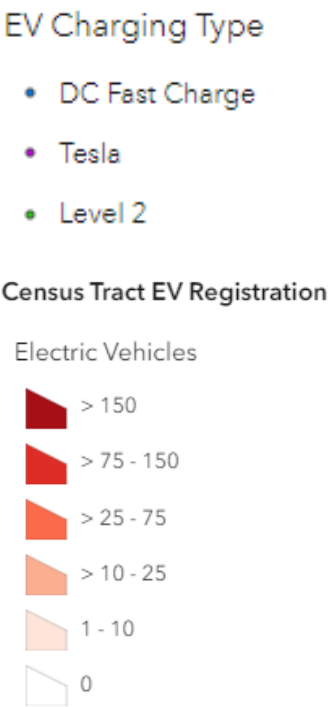
Coordinate EV Infrastructure efforts across North Texas

Provide guidance, resources, and collaboration opportunities to local governments and

Meetings are recorded and posted on dfwcleancities.org/events



Texas Data and Trends



Electric Vehicle (EV) Registration Data

www.dfwcleancities.org/evnt -> EVs and Texas

Region	May 2023	May 2024	Increase
Texas	191,690	275,717	44%
Dallas-Fort Worth (DFW)	69,996	101,640	45%
Austin	39,034	54,375	39%
San Antonio	18,634	25,293	36%
Houston	45,566	68,676	51%

Charging Sites Statewide (includes Tesla):

- 2,801 Level 2
- 500 DC Fast

afdc.energy.gov/stations



Invitation to Participate in Charging Smart

Carolyn Burns

Air Quality Planner

Regional EV Infrastructure Working Group Meeting

May 15, 2024



Charging Smart 101

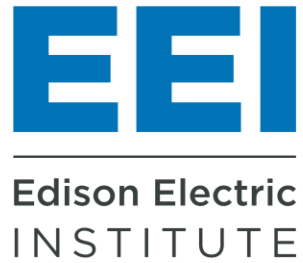
- IREC-led project, awarded by the DOE
- A structured technical assistance and designation program that supports local governments in setting and achieving equitable EV-readiness goals
- Dallas Fort-Worth Clean Cities (DFWCC) provides no-cost technical assistance for communities to streamline planning, permitting, and inspections to develop EV infrastructure
- Supports the Justice40 Initiative, targeting benefits towards disadvantaged and lower-income communities
- Implemented through Clean Cities Coalitions in participating states and regions
- Modeled after SolSmart, another IREC program

Partners

Technical
Leads:



Industry:



Recruiting Partners:



Invitation to Participate in Charging Smart

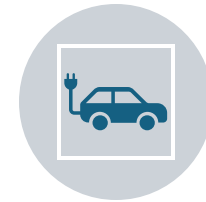
Program Benefits



Increases efficiency,
cutting costs and staff
time



Showcases
achievements via
media opportunities
and events



Spurs development of
public EV charging

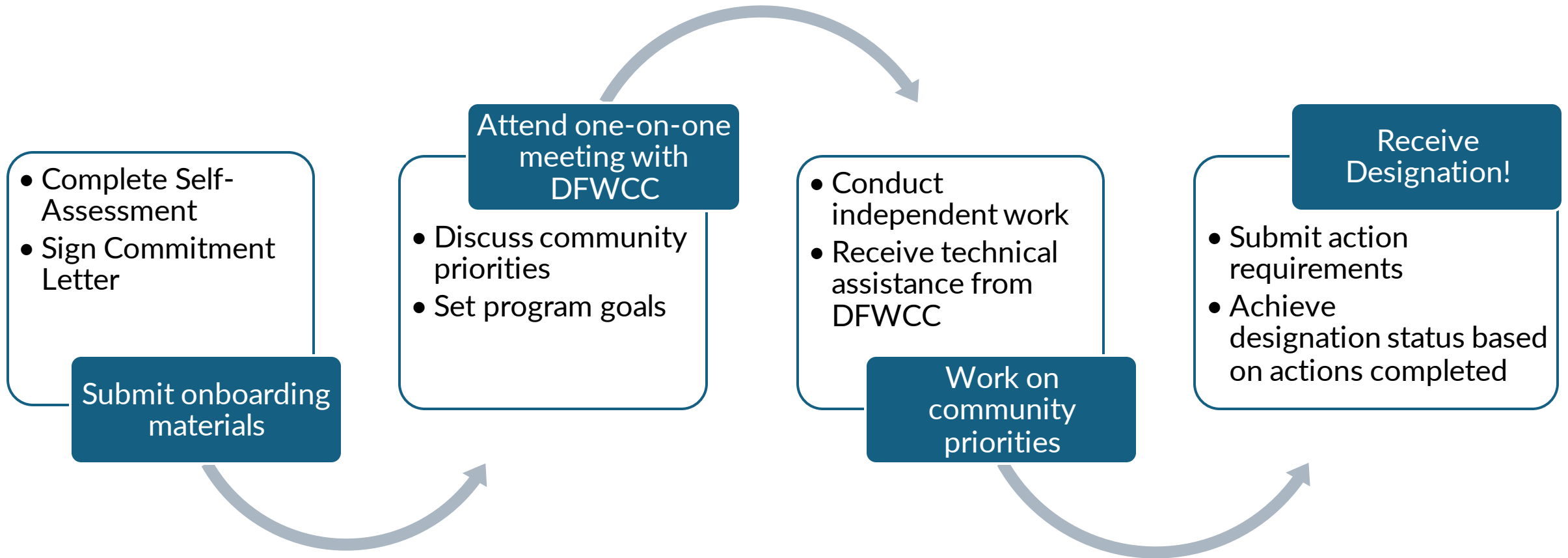


Ensures distribution
of equitable charging
portals



Leads to reduced costs
for the consumer

Steps toward Designation



Charging Smart Framework

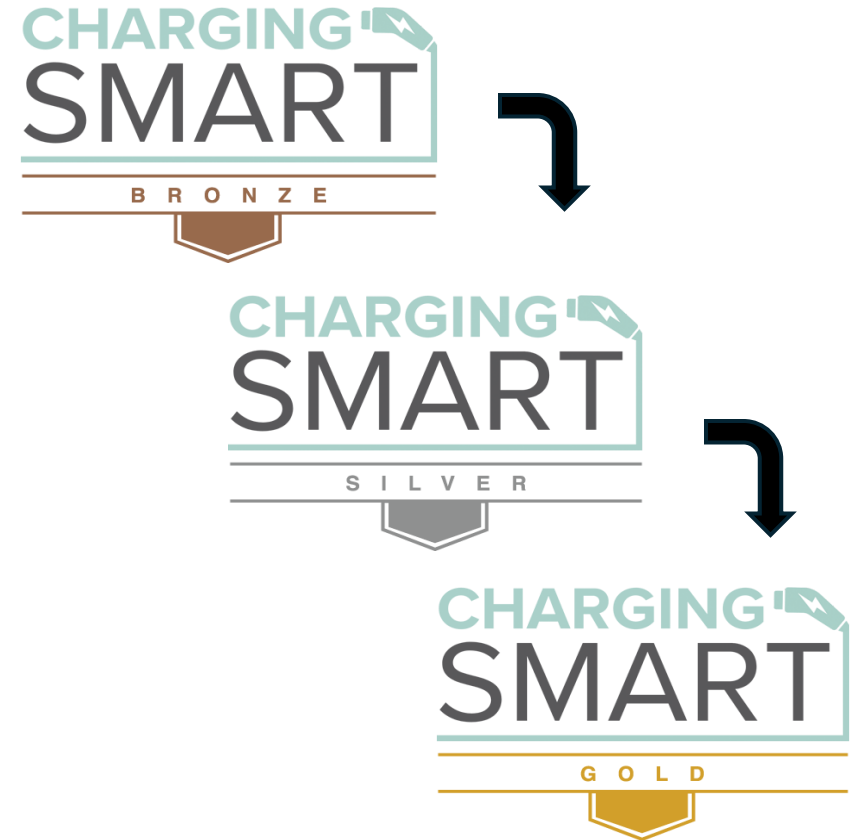
Action Categories

1. Planning
2. Regulation
3. Utility Engagement
4. Education and Incentives
5. Government Operations
6. Shared Mobility

EVs for All

Point System: Actions within each category have assigned points. As actions are completed, the points count towards the total amount of points needed for designation levels. An additional opportunity for points, "EVs for All", focuses on benefitting underserved communities.

Designation Levels



Examples of Criteria Actions

1. **Planning:** Support DCFCs in communities that could further expand travel corridors
2. **Regulation:** Ensure EVSE installation guidance and regulations are compliant with state-level accessibility guidelines
3. **Utility Engagement:** Meet with utilities to discuss EV collaboration opportunities
4. **Education and Incentives:** Create a specific page on the city's website that includes information about EVs
5. **Government Operations:** Purchase EVs for fleet use to meet adopted goals
6. **Shared Mobility:** Install infrastructure (like Shared Mobility Lanes) to support electric micro-mobility

Bronze Requirements

Sign Commitment Letter and Complete Self-Assessment

Regulation:

- Review zoning requirements and identify restrictions that intentionally or unintentionally prohibit EVSE deployment.
- Adopt a standard EV charging infrastructure permit application process
- Develop a charging infrastructure permitting checklist

Utility Engagement:

- Meet with utilities to discuss EV collaboration opportunities

Plus, complete other actions to reach a sufficient # of points



Silver Requirements

Complete Bronze criteria

Regulation:

- Permit chargers as an accessory use to parking lots in all zoning districts
- Allow all EVSE parking stalls to count toward minimum parking requirements, when applicable

Government Operations:

- Complete a fleet analysis (also consider plans for future EV purchases)

Plus, complete other actions to reach a sufficient # of points



Gold Requirements

Complete Silver criteria

Planning:

- Complete an action in the “Address EVs and charging infrastructure comprehensive plan” best practices

Regulation:

- Establish standard approval timelines for EVSE installations
- Adopt a technology-neutral, EV-ready ordinance or plan for new construction

Government Operations:

- Install a public charger
- Purchase EVs for fleet use to meet adopted goals

Plus, complete other actions to reach a sufficient # of points



How to Participate

Reach out to cleancities@nctcog.org with any questions

Learn more at <https://www.dfwcleancities.org/charging-smart>

Initial steps will include:

- Self-Assessment
- Commitment Letter



Attend an informational webinar on Wednesday, June 5 to learn about the program and an upcoming cohort to progress through the program with a peer group of local governments

Register at <https://www.dfwcleancities.org/events>

Guaranteeing Access to Underserved and Marginalized Populations by Building Employment Opportunities (GUMBO)

- Expands technician training at local colleges to include installation and maintenance of electric vehicle charging equipment
- Supports the Justice40 Initiative by targeting disadvantaged communities with this training and job opportunity
- Invitation for Community-Based Organizations (CBOs), colleges, and workforce development programs to spread awareness of the program
 - CBOs would conduct community outreach for enrollment in technician training



Contact Us



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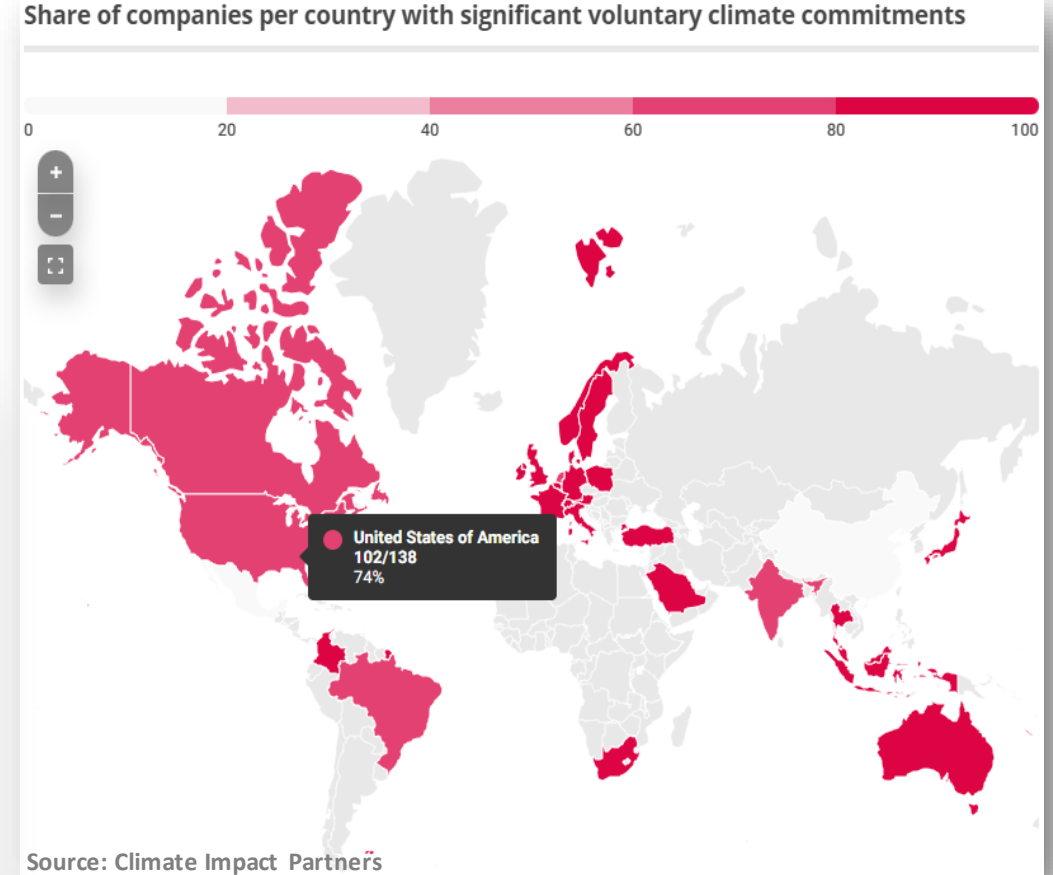
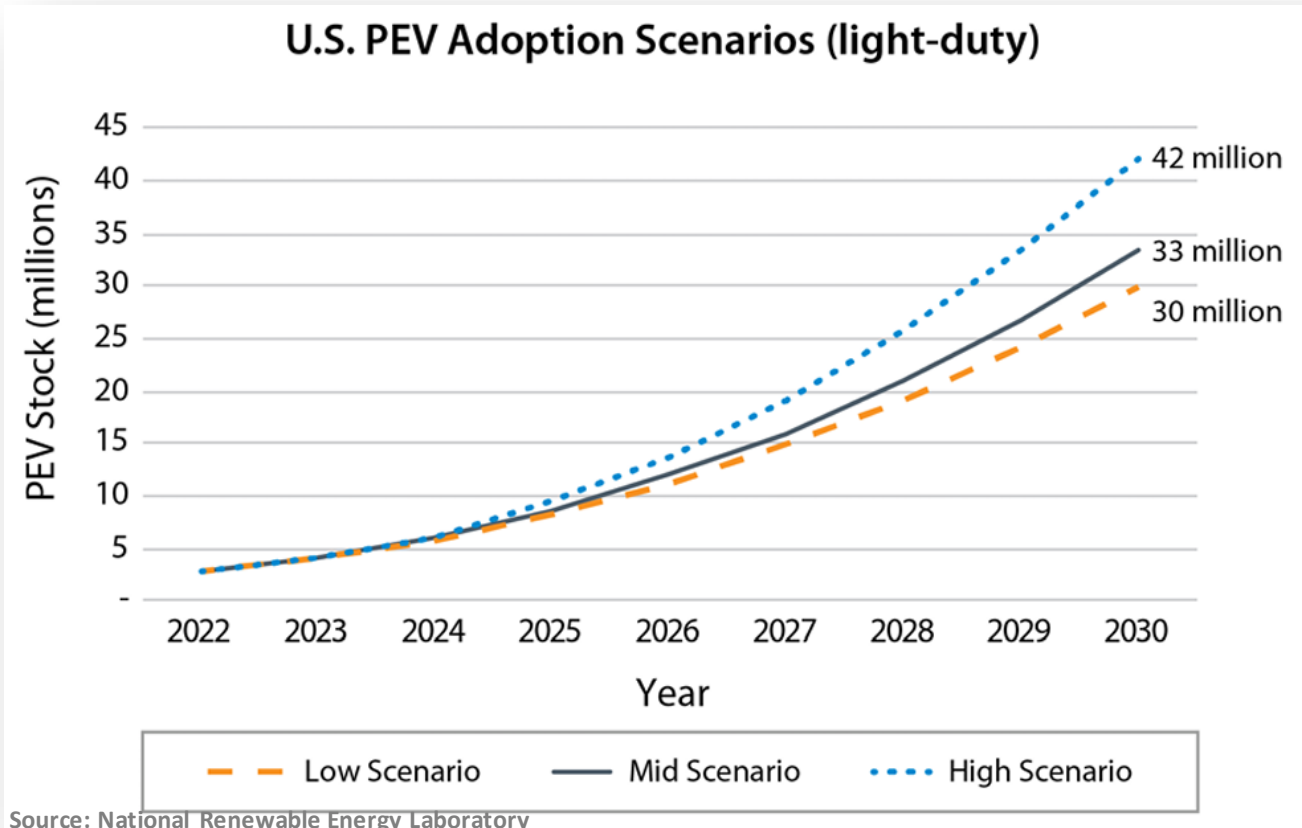
EMPOWER

EV FRIENDLY WORKPLACES



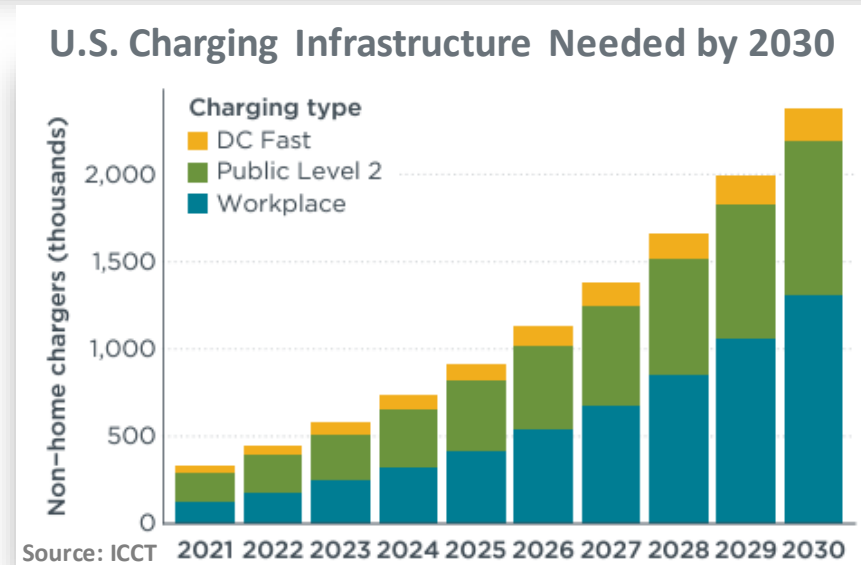
Why Workplace Charging?

- Electric vehicles are here to stay
- Help meet sustainability goals



Value of Workplace Charging

- Demonstrate climate leadership
- Attract and retain top talent
- Improve employee satisfaction
- Earn certification points for local and national programs (e.g., LEED)
- Offer employees coming back to the office a convenient and reliable place to charge their vehicle



What's the Holdup?

- What days and times will be most popular for charging?
- How many charging stations are needed to meet anticipated demand?
- Should employees pay a fee for workplace charging? How much?
- Should charging stations be accessible to the public?
- What will this cost?
- How long will a project take?
- What equipment should I consider purchasing?



Too many questions -
and no clear paths to find answers!
That's where EMPOWER comes in.

The EMPOWER Workplace Charging Project

- US Department of Energy-funded, nationwide project
- Equity-focused, aligning with White House Justice40 Initiative
- 30 regional Clean Cities Coalition partners participating nationwide
- Helping workplaces **realize benefits** and **tackle barriers** to installing workplace charging!



Access to Charging Where We Live, Where We Play, and Most Importantly, **Where We Work!**

EMPOWER:
Equitable Mobility Powering Opportunities
for Workplace Electrification Readiness

PROJECT GOALS:

- 2,000 Workplaces Engaged
- Over 40% of Workplace Charger Install Commitments from Workplaces of Diverse Backgrounds or Settings
- 3,500 EV Charger Ports Installed

www.workplacecharging.com



Project Progress

2,900+

Workplaces engaged to-date

280+

Workplaces have pledged to advance access to EVs for their employees

168+

EVSE Ports installed at workplaces nationwide

50+%

Of pledged workplaces meet project Energy & Environmental Justice Metrics

The EMPOWER WPC project aligns with Biden Administration's **Justice40 Initiative**, an all-government effort to increase environmental justice.



Why Join EMPOWER?

- Access to 1:1 workplace charging coaching from our Clean Cities Coaches
- Access to project resources and tools:
 - Workplace charging pocket guide
 - ROI cost and energy calculators
 - Equipment selection guides
- Access to workplace charging incentive information locally and nationwide
- Recognition locally and nationally for workplace EV success stories
 - Logo featured on EMPOWER website
 - A certificate for display
 - Get your story featured on social media or other media outlets



SIGN THE PLEDGE

www.workplacecharging.com



Get Involved

Upcoming Empower Webinar: Successful Workplace Charging Initiatives

Case studies where organizations have effectively encouraged the use of EV charging will be highlighted, offering insights and strategies to foster a supportive EV charging culture within your workplace

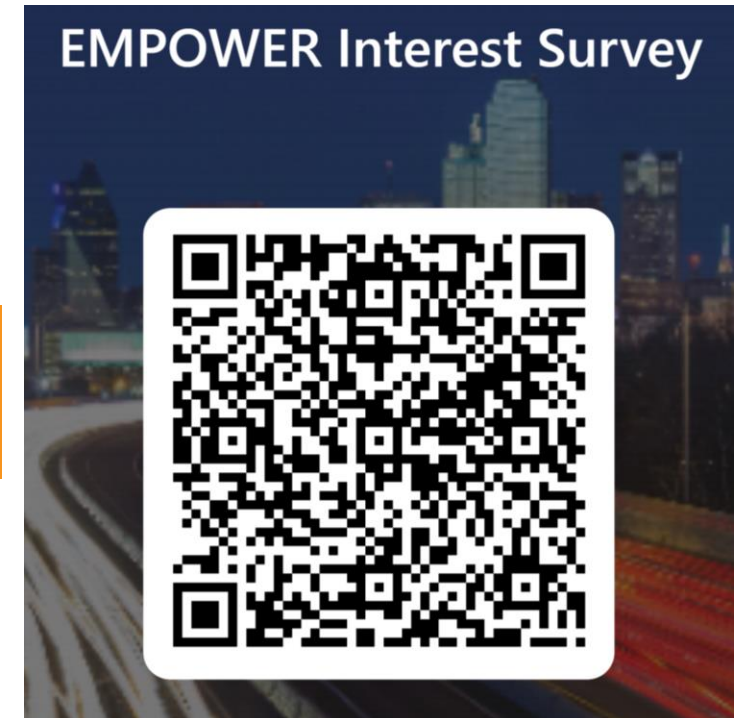
Wednesday, June 20

1:00pm CT

[Register here](#)

Complete the DFWCC EMPOWER Interest Survey

forms.microsoft.com/r/dBZyFer6Nv



Electrada: The Complete Electric Fuel Solution



The Electrada Story

Electrada was launched in 2020 with the mission to provide clean electric fuel for every fleet in North America. Through 360 Charging-as-a-Service (CaaS), we're achieving that goal. We now help fleets of all types and sizes and across all sectors power their electric vehicles reliably and affordably, with zero capital investment and maximum performance.

2019

Electrada launches with the mission to provide reliable EV charging across North America.

2021

Backed by **BlackRock**, one of the world's largest investors in clean energy infrastructure, to pivot entirely to fleet electrification via 360 Charging-as-a-Service (CaaS) model.

2023

- Deployed electric fuel programs at 11 fleet customer sites in CA and TN, including **Ferguson Enterprises**, **Comcast** and **Vanderbilt University**.
- Expanded Comcast electrification plans to electrify 100 more vehicles at 7 additional sites in CA.
- Partnered with **Daimler Truck Financial Services** to deliver 360 CaaS to their EV truck and bus customers in North America.

2020

Started operations in early 2020 to deliver over 300 EV charging ports to public and private customers over 3 years.

2022

Partnered with **Holman** fleet management company to launch groundbreaking EV programs for their key customers, including **Ferguson Enterprises**, **Comcast** and **Vanderbilt University**.

2024

- Partnered with **Duke Energy** to launch first-of-its-kind microgrid-integrated fleet electrification center in Mt. Holly, NC.
- Signed deals with **Salem Leasing** and **Red Bull** to deliver 360 CaaS for EV fleet electrification for 54 vehicles at 7 sites.



The Electrada Difference

Electrada has become the leading provider of 360 CaaS solutions for commercial fleets across North America thanks to its deep industry partnerships, long-term relationships with key customers, strong financial backing, veteran leadership team, and operational know-how.

Deep Industry Partnerships

Ongoing relationships with marquee partners such as:



DAIMLER

Holman

Hitachi Energy



And long-term agreements with key customers including:



Strong Financial Backing

With funding from the recognized leader in clean energy infrastructure investing:

BLACKROCK

Team Expertise

Unparalleled senior leadership experience across all core components of electrification infrastructure:



Expansive Operational Know-How

Broad operational capabilities resulting in:



500+ Chargers
Deployed by EOY 2024



5.6 MegaWatts Under
Contract



96 Sites Electrified



236 Commercial EVs
Deployed



212 MT of CO2
Emissions Reductions

Wide Geographic Footprint

North America-focused and currently operating across 6 states:

CA

NC

KY

TN

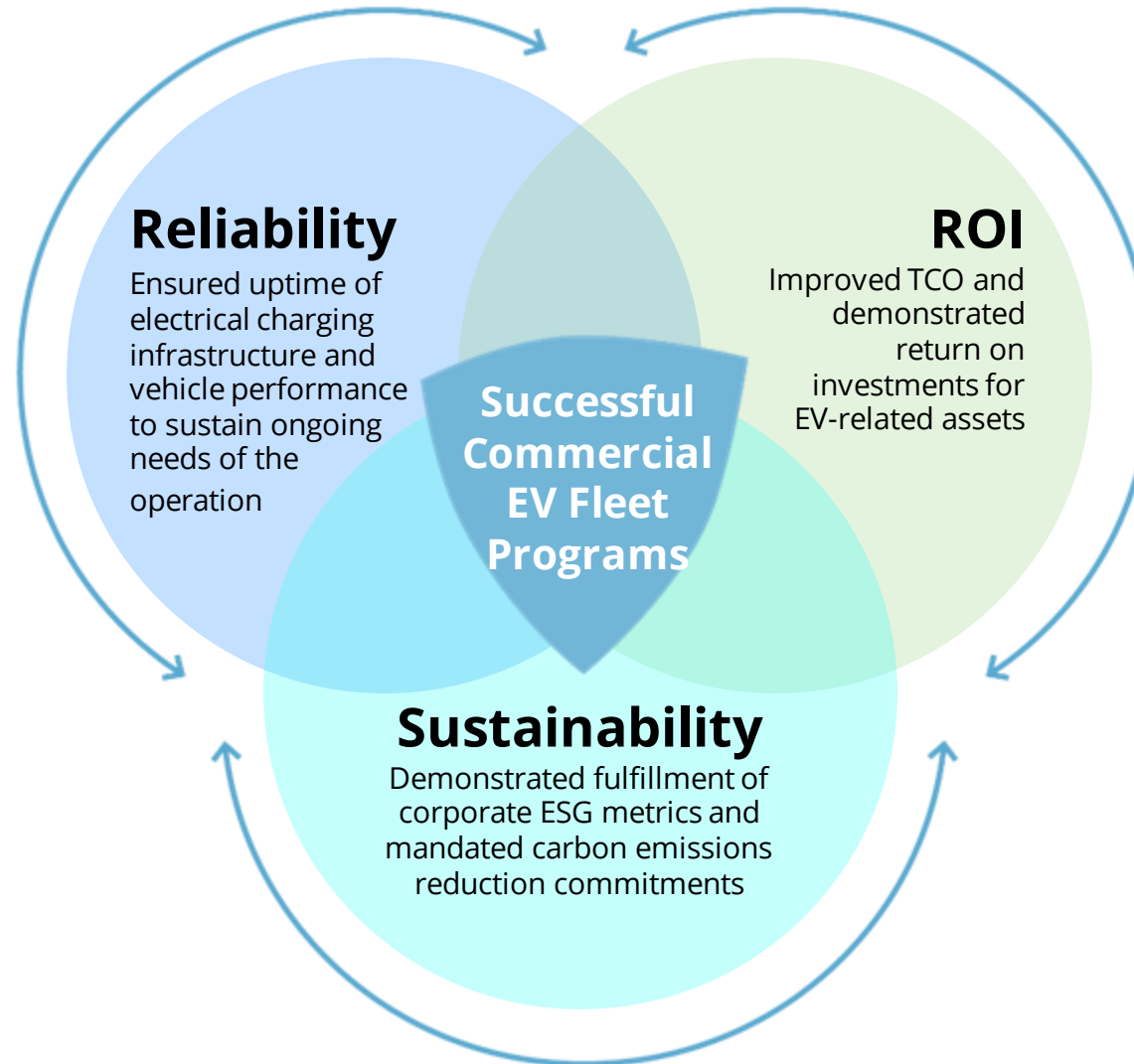
OH

PA



Why We're Here Today

Commercial EV fleets need to deliver on Reliability, ROI, and Sustainability metrics in order to ultimately be considered successful programs...






Critical Fleet Electrification Challenges

...Yet there are a multitude of challenges that fleets face to fulfill those obligations when electrifying their vehicles and supporting infrastructure.





PROCESS

-  Unfamiliar **processes and permitting cycles**
-  **Long lead times** & complexities **working with utilities** across multiple sites
-  Anxiety around **infrastructure uptime, maintenance**, and repair standards
-  Team **onboarding, training, and adaptation** to new technology & processes
-  Navigating local regulations and **dynamic policy environment**
-  Personnel **bandwidth & knowledge constraints**

TECHNOLOGY

-  **Interoperability of hardware / software** providers
-  **Rapidly evolving technology** and equipment reliability
-  Unreliable infrastructure options to **scale in tandem with fleet size**
-  Need for **dynamically optimized and load balanced charging**
-  Inadequate **fleet management & monitoring** capabilities
-  Each depot site is a **custom micro-utility**

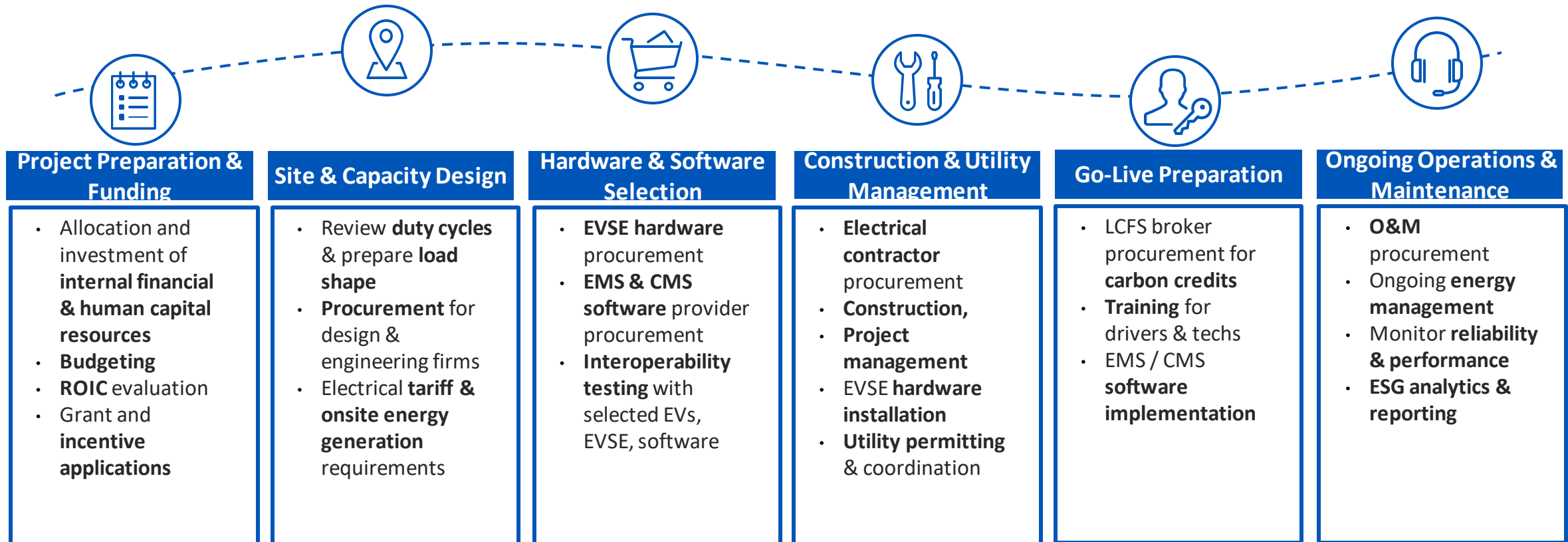
FINANCING

-  Lack of **parity** in electric vs liquid **fuel costs**
-  **Budget constraints** for upfront charging infrastructure CapEx
-  Lack of visibility around **fluctuations in electricity pricing**
-  Perceived **higher cost of capital for electrification projects** than what is typically available



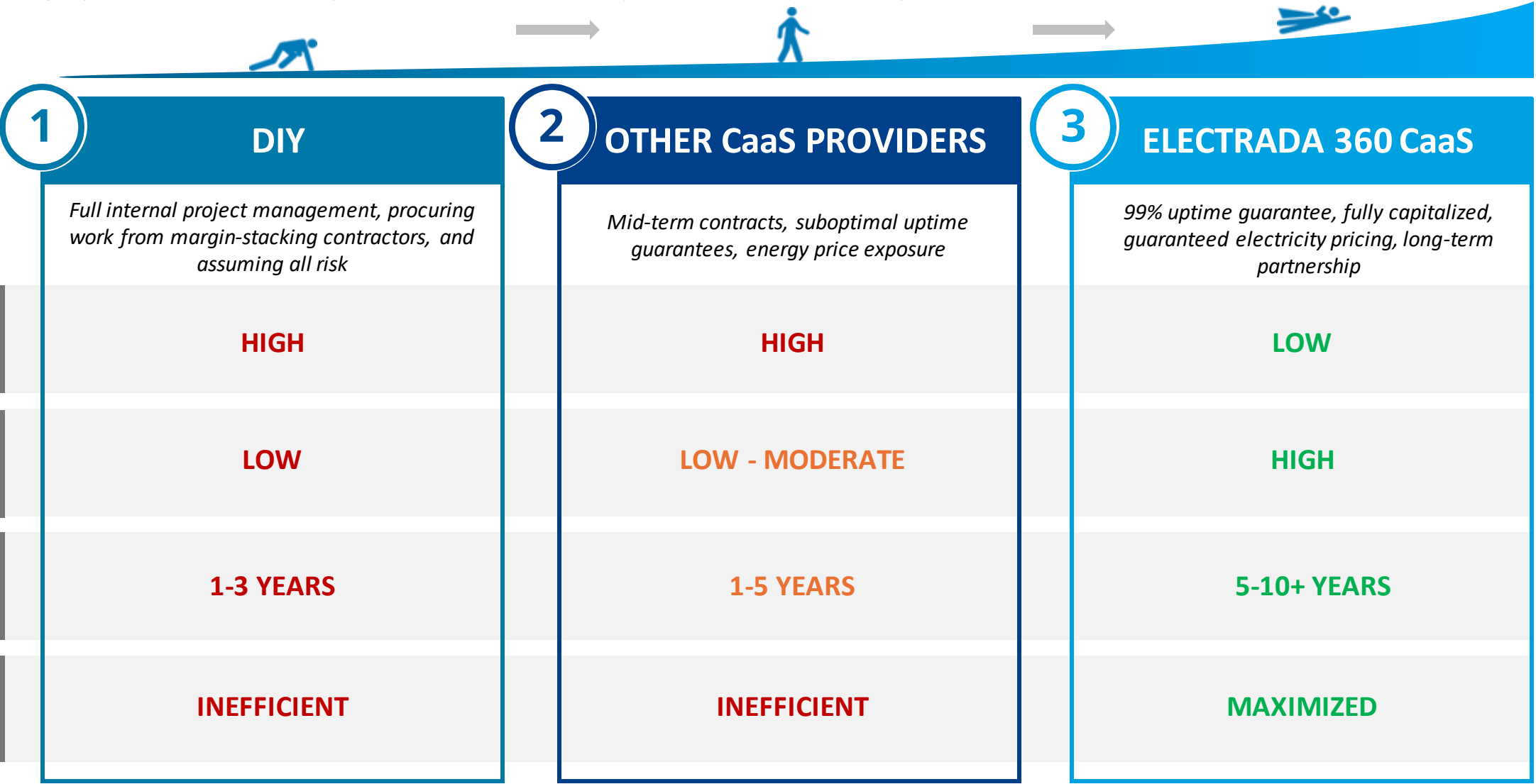
Key Capabilities Needed for Fleet Electrification

In order to ensure proper reliability, ROI, and sustainability, EV charging infrastructure requires significant human and financial capital, deep-seated industry expertise, comprehensive hardware and software solution vetting, and detailed project management capabilities.



Selecting a Path: Fleet Electrification Solutions

While commercial fleet owners and operators have several alternatives when considering EV charging infrastructure, Electrada's 360 CaaS offering represents the most comprehensive, de-risked, and performance-optimized option.



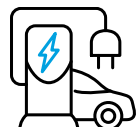
Additional Detail



Core Components of Electrada's 360 CaaS Offering

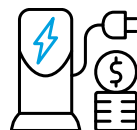


Electrada's CaaS offering offers the most reliable, de-risked, capital efficient solution on the market.



Reliability

We guarantee high levels of reliability with **99% uptime** through our SLA and have one partner through this collaboration



Fuel Certainty

Fuel **price certainty** through locked in electric fuel prices create reduced commodity volatility and increase in fuel savings



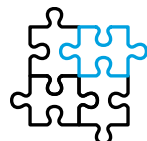
Risk Mitigation

We provide all the upfront **capital** and take on all the risks in managing the charging infrastructure and utility assets



Savings

We create and deliver both **maintenance and fuel savings** for the fleet customer



Long-term Partnership

We are aligned with the customer from the very beginning of this **long-term** transition to all electric vehicles



Fleet Charging Reliability: Electrada's 99% Uptime Standard (2/4)



Reliability is designed into Electrada's offering from the onset of any project, covering all needed aspects to ensure 99% uptime, including 24/7 support, complete preventative maintenance, accelerated response times, connectivity standards, and onsite charger / part replacements.

24/7/365

Support available via
phone/web

100%

Preventative maintenance
coverage

<1 Hour

Response time via customer
support portal

5:1

L2 charger to spare ratio
stored in lockboxes onsite

<4 Hours

Onsite tech response time
+ 24/7 emergency dispatch

100%

Remote connectivity (wired,
multiple carriers, Starlink)

DC (FC)

Critical spare replacement
parts held in stock onsite

AC (L2)

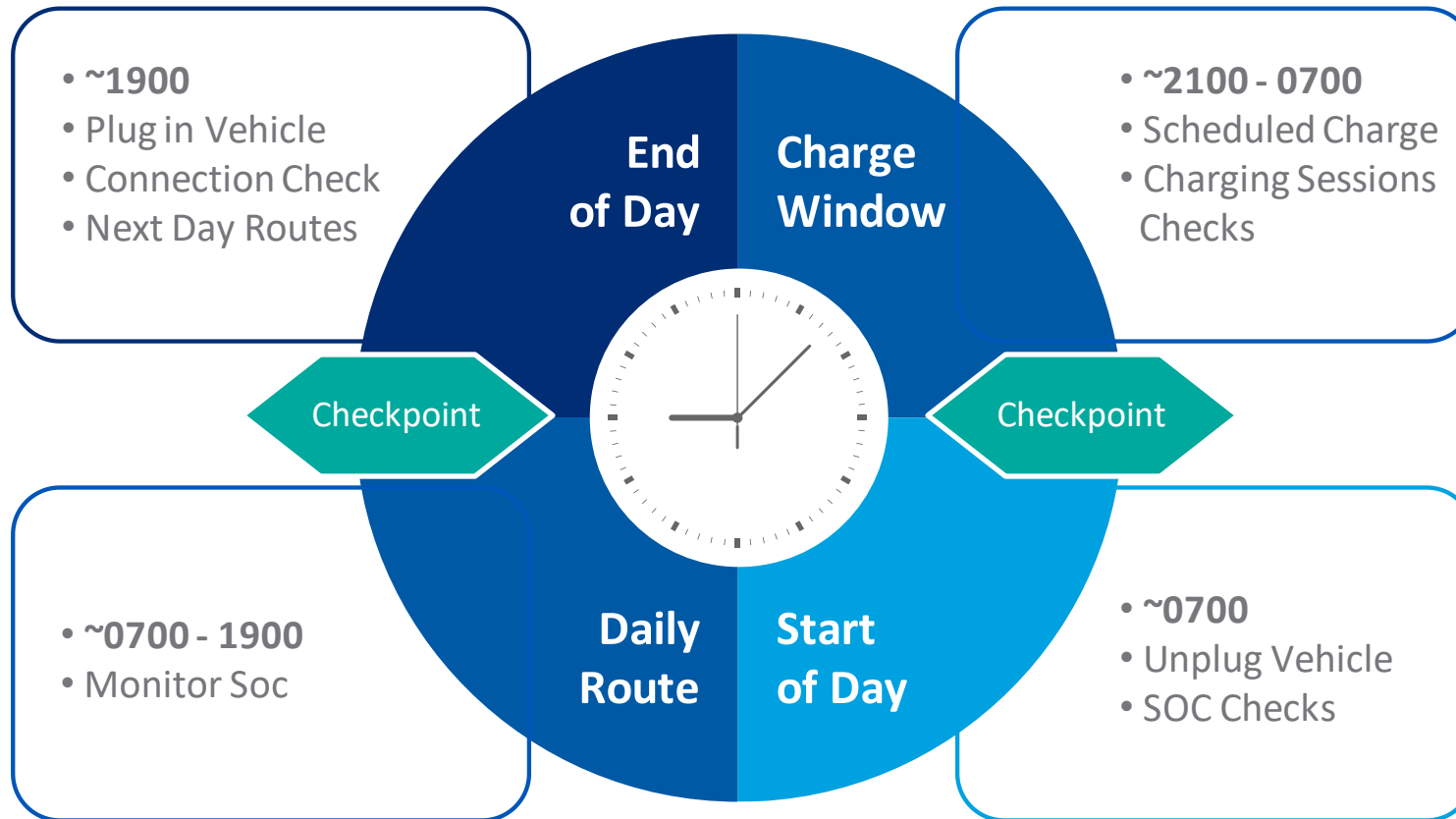
Rip & replace for immediate
resolution, spare L2s in-stock



Fleet Charging Reliability: Electrada's 99% Uptime Standard (3/4)



Electrada's operational blueprint ensures that we are monitoring and validating operational uptime from start to finish of each day.






- Daily Monitoring 24x7x365
- Alerts + Remote/Onsite Support
- Preventative Maintenance
- Corrective Maintenance
- SOD (Start of Day)
 - EV Readiness
 - Prior day metrics
- SOC (State of Charge) Route Management
- EOD (End of Day)
 - Next Day Route Load
 - EV Readiness
 - EVSE Readiness





Fleet Charging Reliability: Electrada's 99% Uptime Standard (4/4)

EVSE hardware warranties fall short of Electrada's uptime guarantees on all fronts, including connectivity standards, support and emergency response times, preventative maintenance, and part replacements.

	DIY UPTIME	OTHER CaaS UPTIME	ELECTRADA UPTIME
Guaranteed Uptime	 <ul style="list-style-type: none"> • Limited downtime responsibility • Many warranties explicitly state no responsibility for downtime 	 <ul style="list-style-type: none"> • No guarantees match 99% uptime • Most have no in-house lab testing 	 <ul style="list-style-type: none"> • Minimum 99% guaranteed • 100% remote connectivity • Guaranteed OCPP / interoperability
Support & Response Times	<ul style="list-style-type: none"> • Typical SLA response times are 5 business days after diagnostic 	<ul style="list-style-type: none"> • Highly variable 	<ul style="list-style-type: none"> • 24/7/365 Support available • <1 Hour response time • <4 Hours Onsite tech response time
Preventative Maintenance	<ul style="list-style-type: none"> • Typically requires additional price, usually out-of-scope of SLAs 	<ul style="list-style-type: none"> • O&M linked to selected hardware warranties 	<ul style="list-style-type: none"> • 100% of preventative maintenance covered
On-Site Parts Replacement	<ul style="list-style-type: none"> • Standard stocked parts usually shipped 7 days after diagnostics 	<ul style="list-style-type: none"> • Dependent on regional contractor support systems 	<ul style="list-style-type: none"> • Immediate replacement of parts • DCFC parts held in stock onsite; L2 "rip n' replace"



Electrada's Solution for Existing EV Depots

If needed, Electrada will purchase and incorporate any pre-existing commercial vehicle charge infrastructure as part of a new project.

If you...

- Have previously installed EVSE at one or more locations
- Are experiencing challenges with uptime
- No longer want to own & operate the charging assets
- Are interested in scaling to a single provider

Electrada will...

- Evaluate the location & existing equipment
- Review all design & installation documentation
- Calculate fair market value of the site's EVSE & associated infrastructure
- Generate an offer to buy out the existing site or replace existing EVSE with new hardware



This approach paves the way to a clear path for scaling from pilot sites to full-speed electrification while reducing headaches.



Our Customers & Partners

Our Partners and Customers

Electrada works with a wide variety of industry-leading automotive OEMs, fleet management companies, energy providers, fleet owners and operators, and government agencies in our mission to provide clean electric fuel for every fleet in North America.

SELECT PARTNERS

DAIMLER TRUCK



Holman



SELECT CUSTOMERS



Fleet Case Study: Ferguson Enterprises

In 2023, Electrada and Ferguson collaborated to complete the first phase of a multi-year contract covering 30 trucks across 5 Ferguson sites.



Ferguson Enterprises, a \$29B distributor of plumbing, HVAC and related building supplies to a network of 1M customers and suppliers, maintains a 5,300-unit vehicle fleet consuming 8M gallons of diesel annually.

The company approached Electrada through our partner, Holman FMC, to collaborate on a complete electric fuel solution for 30 Class 6 and 8 trucks across five locations in California.

SITE LOCATION	Five locations across California
VEHICLES	30 Peterbilt eM2s and Freightliners
EVSE	30 Level 2 and DCFC charging ports
UTILITIES	SMUD, SCE, PG&E



Summary

Electrada's Commitment to Your Electric Fleet

Electrada's fully capitalized 360 CaaS solution guarantees 99% uptime, predictable energy pricing, and the lowest cost per mile while covering all O&M with industry-leading SLAs for the course of the multiyear contract with customers.

Fully Capitalized

We cover 100% of EV charging infrastructure design, build, and operating costs



Reliability

99% uptime



Performance

Industry-leading SLA



Predictable Pricing

We absorb the energy market risk



Cost Reductions

Lower cost per mile
(vs. liquid fuel)



Long-term Success

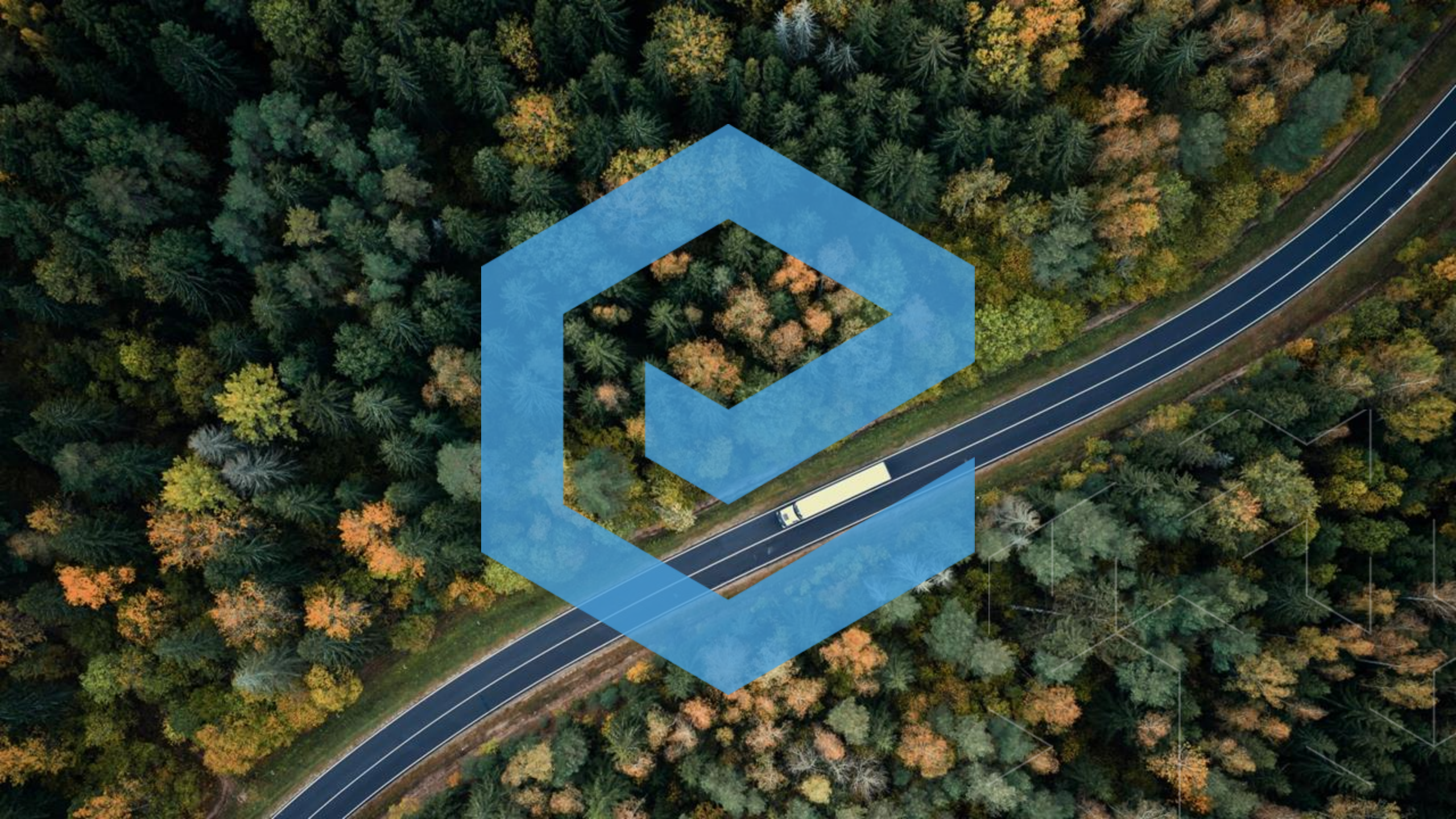
Multiyear contract with clear service guarantees for EV fleets at scale



Lower Operational Risk

We manage all maintenance and performance issues





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Regional EV Infrastructure Working Group