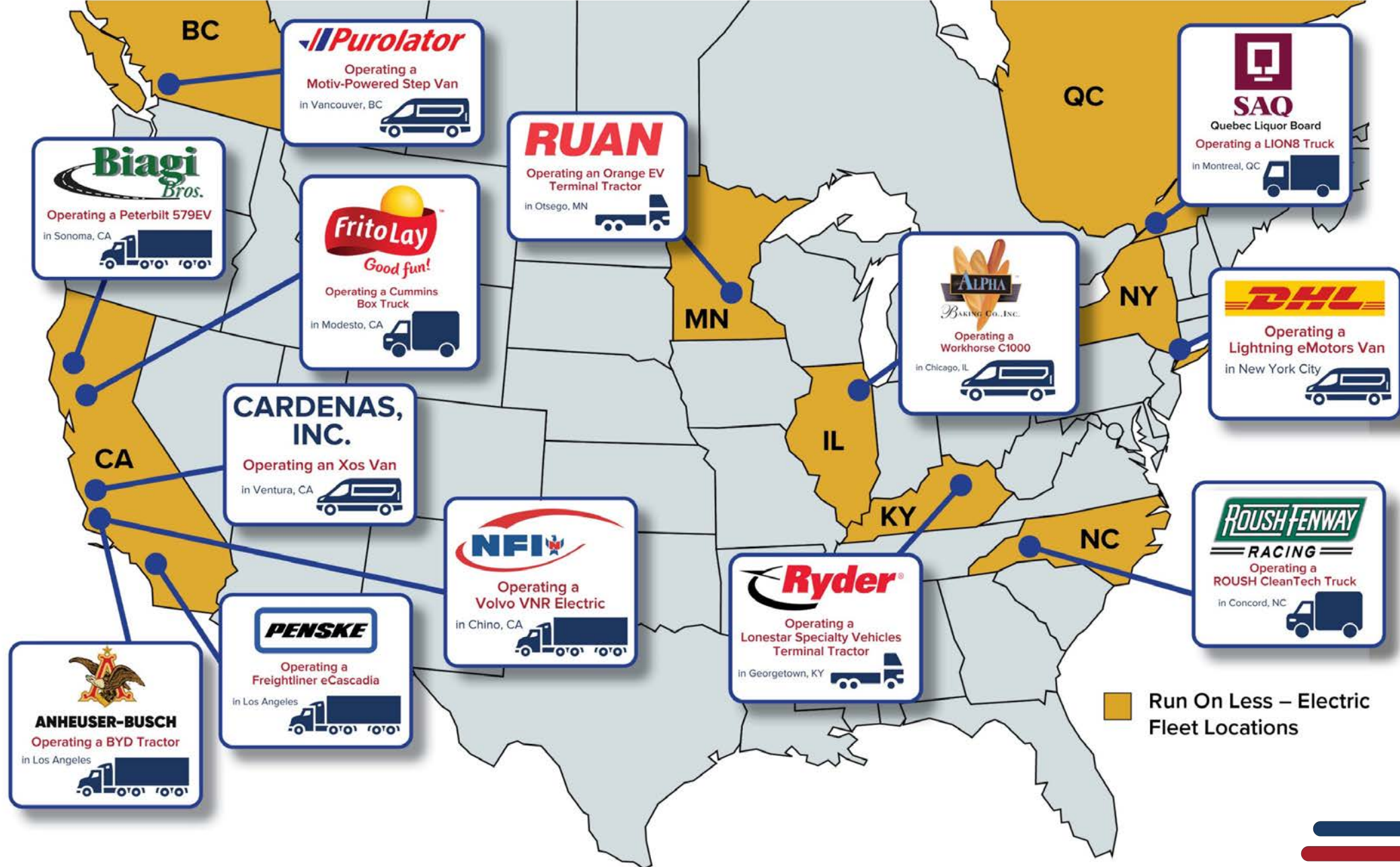


# Working with Your Utility

June 1, 2021





More info at [www.runonless.com](http://www.runonless.com)







Join us for the 10<sup>th</sup> anniversary of the leading clean transportation event!

**August 30 to September 2, 2021**

Bootcamp Attendees Discount Code: **BOOTCAMP50**

Register at [www.actexpo.com/register](http://www.actexpo.com/register)

# Electric Truck Bootcamp

- 4/20 – What's Driving e-Trucks
- 5/5 – Charging Planning & Buildout
- 5/18 – Charging Power Management
- **6/1 – Working with Your Utility** 
- 6/15 – Incentives for Electrification
- 6/29 – Maintenance, Training, Safety
- 7/13 – Financing the Transition
- 7/27 – Sustainable Value Chains
- 8/10 – Global Perspectives
- 8/24 – Driver Behavior & Experience



**Thank you to today's sponsor!**



**NRECA**

**America's Electric Cooperatives**

# Before we get started:

## Q&A

Submit your questions to the host using the Q&A box in the upper right-hand corner.

## Survey

There will be a 30-second survey shown at the end. We appreciate your feedback!

## Presentations

A recording of today's webinar will be available on the ACT News website, and you will be emailed a link by early next week.


## Technical Issues

Contact Benjamin Chan at:  
**[benjamin.chan@gladstein.org](mailto:benjamin.chan@gladstein.org)**  
or call 310-573-8545 for assistance.





# Utilities and fleets - get to know one another



## A TRUCKING FLEET PRIMER FOR COMMERCIAL TRUCK ELECTRIFICATION

Freight electrification is opening new opportunities and challenges for the freight industry and utilities alike.

The [North American Council for Freight Efficiency \(NACFE\)](#) and our partner organization, [Rocky Mountain Institute \(RMI\)](#) are uniquely positioned to help facilitate the conversation and help get North America on the road to truck electrification.

### WHY UTILITIES?

Utilities are key partners for fleets considering deploying electric vehicles, as their policies regarding physical infrastructure build-out and electricity rate design will be vital to the success of vehicle charging.

Utilities come in many shapes and sizes, ranging from investor-owned to owned by members as part of a cooperative and from service areas covering relatively small, rural areas to multi-state territories. They are generally highly regulated when it comes to resource planning and tariff structures, and many are eager to see increased electricity demand from charging electric vehicles.

While many utilities have experience supporting light-duty electric vehicles, medium- and heavy-duty trucks have [unique charging requirements](#) that require innovative solutions. Fleets will need to begin the electrification conversation with utilities very early, understanding the substantial timelines required for planning, construction, and interconnection of new charging infrastructure. While there is no one-size-fits-all solution to charging, there is a roadmap that fleets considering deploying electric vehicles can follow to ensure a cost-effective charging strategy.

**Fleets should be prepared to discuss with utilities:**

- Long-term electrification plans, anticipated power needs, and draft site infrastructure design.
- Costs and timelines for building out "make-ready" infrastructure to support charging.
- How the location of the electric service on-site may impact site design.

- What fees fleets can expect for electricity, including any time-of-use and/or demand charges.

### KNOW YOUR PARTNERS

There are over 3,000 power utilities in North America, so understanding which ones to work with and how to connect is key.

- Trucking fleets may need to work with multiple utilities with different coverage areas, each of which may have its own transportation electrification policies and plans, infrastructure and funding programs, as well as rate structures.
- Many utilities are members of trade organizations such as [NRECA](#), [EPRI](#), [EEI](#), [APPA](#), and [SEPA](#), all of whom are thinking about advancing transportation electrification at a high-level. NACFE can help connect trucking fleets to these partners.

### FLEET MANAGERS MEET FACILITY MANAGERS

Fleet managers will likely need to partner with facility managers, who already interact with the local utility that provides power to the depot, distribution center, or warehouse. Each fleet will have an account manager at their local utility, who can help connect them with appropriate programs and funding sources for electric truck charging infrastructure. NACFE and RMI are able to [provide guidance on how best to work with utilities to advance electrification objectives](#).

Some utilities offer guidance of their own for fleets, such as the [EV Charging Guidebook for Medium- and Heavy-Duty Fleets](#), sponsored by Southern California Edison and Pacific Gas and Electric.

### PROFITS, EFFICIENCY & ENVIRONMENT

Improved Efficiency	Less Fuel	Less Emissions	Less Costs	More Profit
---------------------	-----------	----------------	------------	-------------



## A UTILITY COMPANY PRIMER ON COMMERCIAL TRUCK ELECTRIFICATION

Freight electrification is opening new opportunities and challenges for both the freight industry and utilities. Both groups need to show flexibility to innovate business solutions that allow both to be successful in this evolving market. Utilities, freight companies, truck manufacturers, charging infrastructure companies, and governments will need close collaboration to realize potential of electrification.

However, these industries have not partnered closely in the past. The [North American Council for Freight Efficiency \(NACFE\)](#) and our partner organization, [Rocky Mountain Institute \(RMI\)](#) are uniquely positioned to help facilitate the conversation and help you get started down the road to truck electrification.

### UNDERSTAND THE BASICS

Commercial trucks are dramatically different from passenger cars and light trucks. They are capital investments, just like factory machines, and are tools used to move freight for profit. Return on investment is closely monitored, and reliability is critical. These trucks are custom machines built to complete a specific task as efficiently as possible and are uniquely built with thousands of options to perform their specific roles.

The transportation industry, like the utility industry, is highly regulated and constantly faces significant challenges. An annual report from the American Transportation Research Institute outlines what fleets feel are their top challenges, and electrification is not in that list, yet NACFE has identified it as one of the primary fleet concerns for future trucks. Starting the communication process is key.

Within heavy-duty applications there are several specialized segments:

- Long-haul trucks (with sleepers for multiple days or weeks on the road)
- Regional haul trucks (return home nearly every day)
- Vocational trucks that serve construction sites and other on/off road applications

Just as utility companies vary in their service territories and energy mixes, fleets vary widely in their operations, equipment and practices. Some fleets will have a three-year trade cycle for trucks while others will run them until end of life, often after 10 to 15 years.

NACFE publishes an annual report on fleet [adoption of new technologies](#). Think of these [MPG technologies](#) as range extenders; more efficiency, more range, less anxiety!

### KNOW YOUR PARTNERS

There are over 700,000 truck fleets in North America and over 3,000 utilities, so how do you meet the fleets in your service area?

- **Join your state trucking associations.** They are made up of leaders from these fleets and are a great way to meet many smaller public and private fleets, some with as few as one truck.
- **For a more national list of the major fleets,** start with the Commercial Carrier Journal [Top 250 Trucking Companies](#) and Transport Topics annual [Top 100 Fleets](#) with a variety of categories such as For-Hire, Private, Less-than truckload (LTL), among others.
- Keep in mind that **large national fleets may have terminals and distribution centers in many states,** not just at their headquarters.

Primers  
available at  
[www.nacfe.org!](http://www.nacfe.org!)



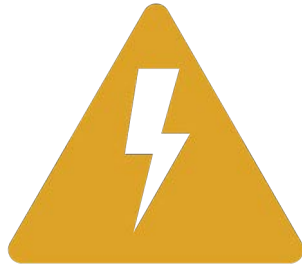
IN  
PARTNERSHIP  
WITH



# Utilities have a crucial role to play in supporting truck electrification



Assist with  
**Fleet Planning &  
Site Assessments**



**Interconnection &  
Capacity Upgrades**  
(if needed)

**“Make-Ready”**



(Potentially)  
Incentivize  
Customer-side  
**Charger Costs**



**Rate Design**

Can include time-of-  
use (TOU) rates,  
demand charges,  
subscription charges,  
etc.



# Today's Speakers:



**Brian Sloboda**

*Director, Consumer Solutions*  
National Rural Electric  
Cooperative Association  
(NRECA)



**Andrew Papson**

*eMobility Advisor*  
Southern California Edison (SCE)



**Ryan Wheeler**

*Fleet Electrification Product*  
Owner  
National Grid



**David Visneau**

*Executive Vice President,  
Strategy & Operations*  
MP2 Energy



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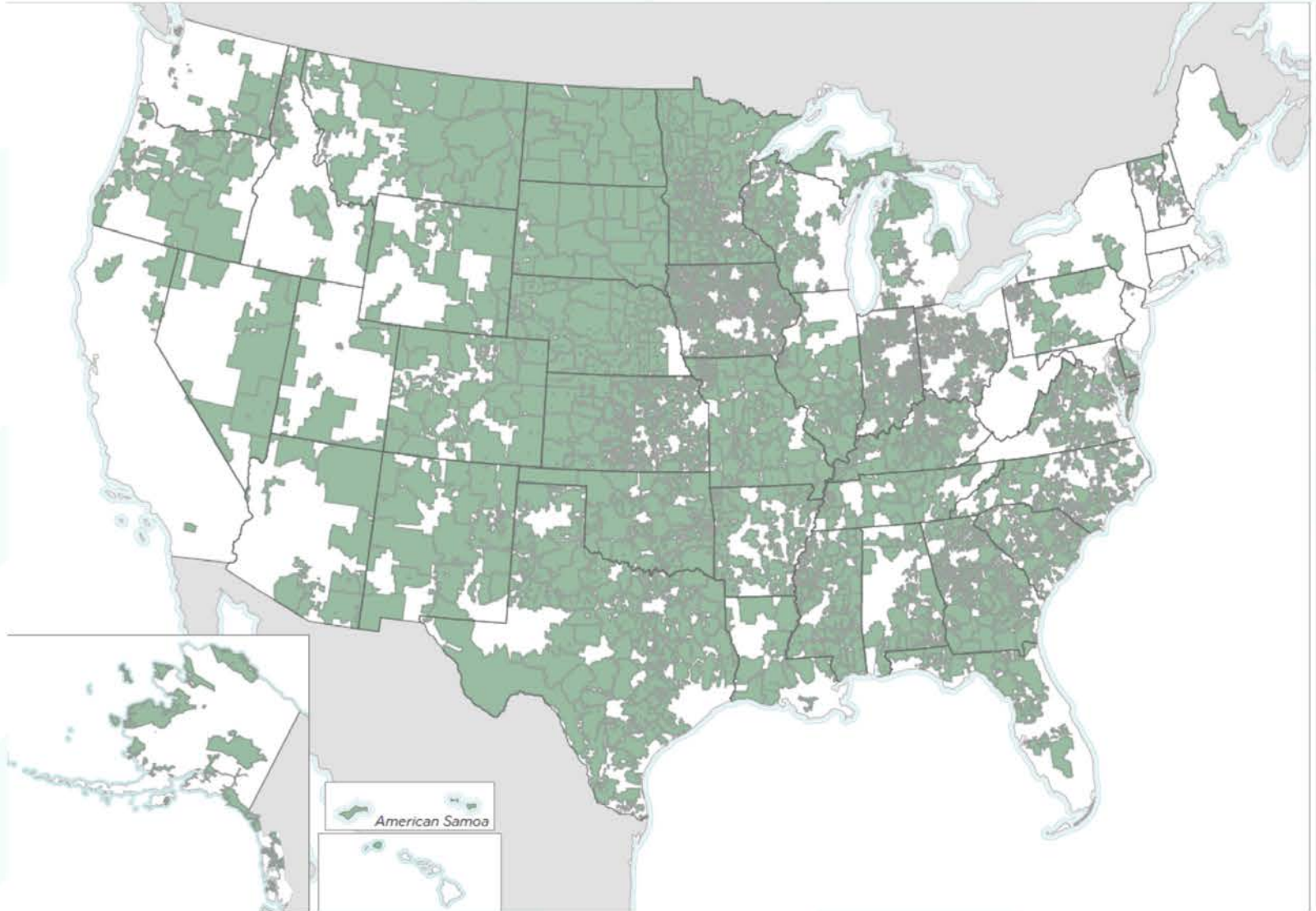
# Working With Your Utility

Brian Sloboda  
Director, Consumer Solutions  
[brian.sloboda@nreca.coop](mailto:brian.sloboda@nreca.coop)



# America's Electric Cooperatives

- Power 56% of the US
- Own 42% of electric distribution lines
- Serve 42 million people
- Serve 88% of US counties
- 831 distribution co-ops
- 62 Generation & Transmission co-ops



# Electric Utility and Regulatory Structure

- 831 distribution cooperatives
- 2,000 municipal utilities
- 168 Investor Owned Utilities
- Retail energy providers
- State regulatory bodies
- America is a tapestry of service territories and programs designed to meet the unique needs of the local area



# Preparing to Plug in Your Fleet - 10 Things to Consider



**Operating profiles of vehicles planned to charge at this location.** Please complete a row for each of the unique daily operating profiles for the vehicles that will charge at this location.

	Vehicle Make and Model	Battery capacity (kWh)	Quantity	Est. Driving Start and End Time(s) (e.g., 9 a.m. to 5 p.m.)	Est. Parking Start and End Time(s) (e.g., 5 p.m. to 9 a.m.)	Est. Charge Duration (hrs.)	Est. Daily Mileage (mi.)
1							
2							
3							
4							
Total vehicles charging at this location							

**Procurement plan.** For each of the vehicles that will charge at this location, please specify the anticipated timing of delivery.

Vehicle Make and Model	Quantity	Order placed? (YES or NO)	Anticipated delivery date (mm/dd/yyyy)

**Procurement plans within the next 5 years.** If you are planning to procure additional vehicles to charge at this location over the next 5 years, please describe the type, quantity, and anticipated timing for delivery of these vehicles below.

Vehicle Make and Model	Quantity	Estimated timing for delivery (month or year)

**Sustainability goals.** Does your organization have any longer-term sustainability or environmental goals that may lead to procuring more electric vehicles in the future? If so, please describe below.

--



# Thank you!

Brian Sloboda

NRECA

[brian.sloboda@nreca.coop](mailto:brian.sloboda@nreca.coop)

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MP2 Energy



# Lessons for working with your utility on EV infrastructure

Andrew Papson  
eMobility Advisor  
Southern California Edison





# About Southern California Edison

## *An Edison International Company*

### Who We Are

- One of the nation's largest electric utilities
- Headquarters in Rosemead, California
- More than 130 years of history

### Who We Serve

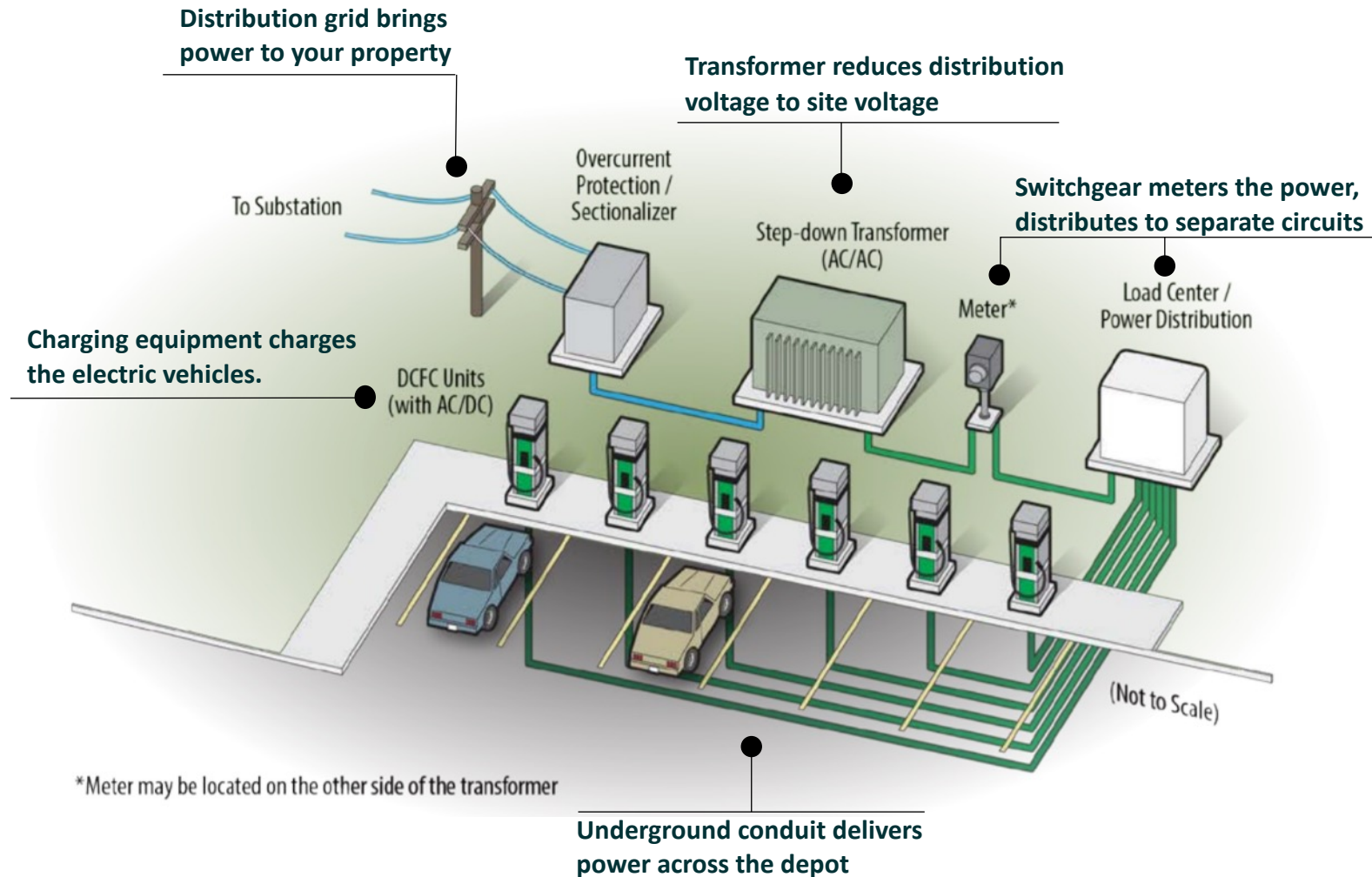
- 50,000 square miles of SCE service area across Central, Coastal and Southern California
- 15 million residents in service territory
- 5 million customer accounts

### Clean Energy

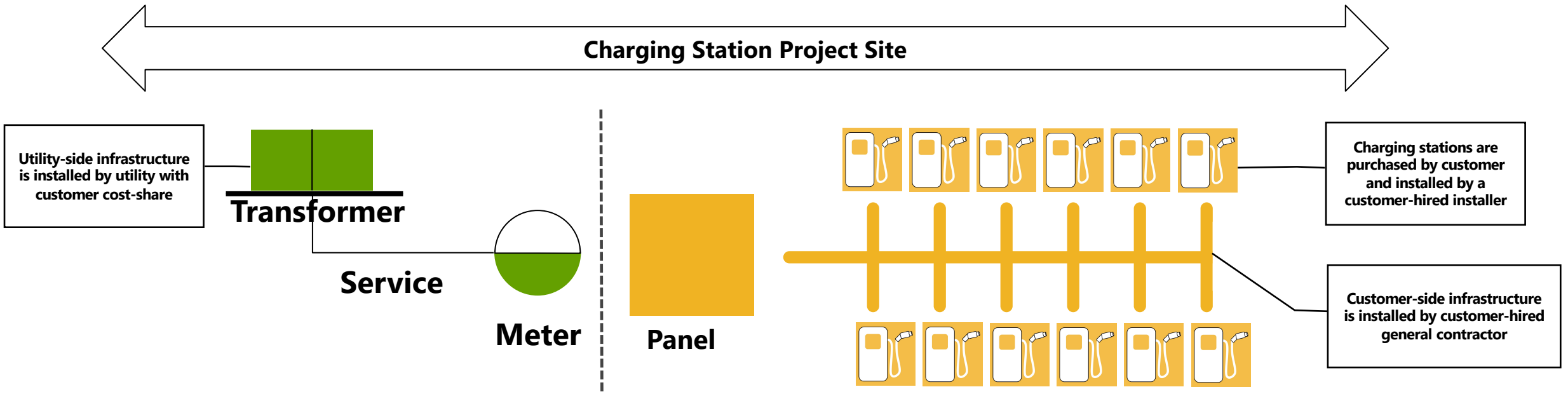
- About 48 percent of the electricity that SCE delivers to customers comes from carbon-free resources, including solar and wind. (2019)
- More than 3,600 rooftop solar installations connected on average per month (2018)
- No. 1 utility for energy storage nationally, according to the Smart Electric Power Alliance (2018)






# Components of depot charging infrastructure



# Electric Infrastructure roles & responsibilities



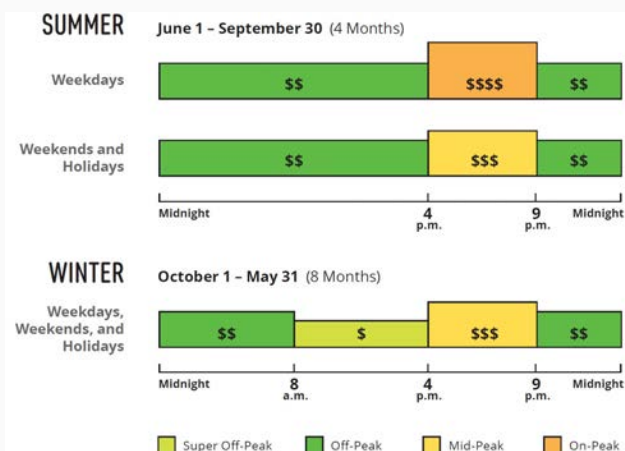
-  Infrastructure deployed by utility
-  On-property (Behind the Meter) built by customer
-  EV chargers are customer-owned and installed



# Electricity Rate considerations

## Why are there demand charges and time-of-use pricing?

- Consider: time of use pricing, demand charges. Every utility rate structure will differ.
- Electricity is more expensive (wholesale) at peak times. High power spikes require more-expensive infrastructure.
- TOU and demand charges align incentives and make sure everybody pays their fair share.



## Save money by managing your electricity use:

- Right-size your charging infrastructure to meet your operational needs without over-building.
- Avoid peak charging hours, especially during summer
- Avoid infrequent spikes in power, which drive up demand costs.
- Consider distributed resources (solar, battery, V2G), if it makes dollars and sense.

You can estimate your electricity costs using SCE's Fleet Fuel Calculator, [fleetfuelcalculator.sce.com](https://fleetfuelcalculator.sce.com).

# Things to “think” about when developing your EV truck or bus project

## *Steps to plan a utility project*

1. Plan your EV fleet today and future deployments
2. Determine the chargers you need to meet your operational needs.
3. Work with your utility to build the electrical infrastructure.

### *Fleet planning*

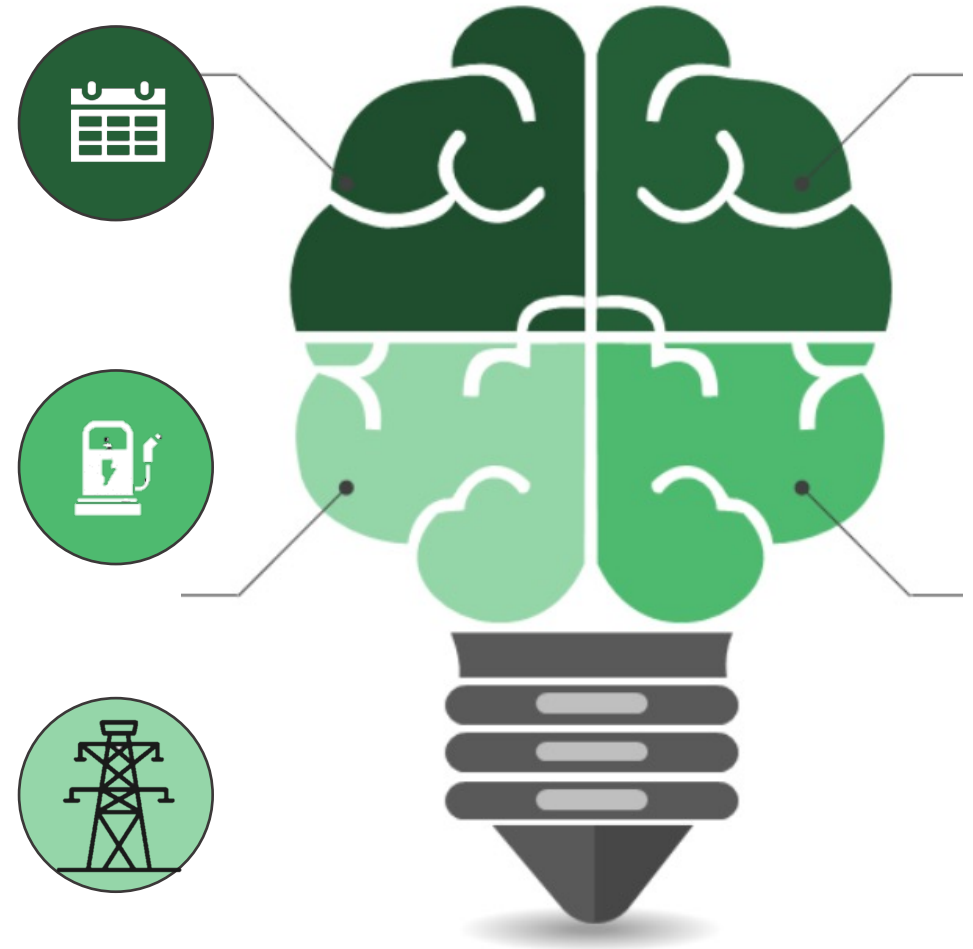
- Fleet deployment schedule
- Vehicle usage
  - Operating hours
  - Miles per day
- Dwell time in depot

### *EV charger planning*

- Charging strategy – overnight, opportunity charge
- Number of chargers, power level

### *Utility engagement*

- Connected load
- Forecasted demand
- Site plan
- Single-line diagram



# Charge Ready Transport

More Information:

[www.sce.com/crt](http://www.sce.com/crt)

[chargereadytransport@sce.com](mailto:chargereadytransport@sce.com)



SOUTHERN CALIFORNIA  
**EDISON**

Energy for What's Ahead®





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Strategy & Operations*  
MP2 Energy



# Run on Less Bootcamp:

## Working with your utility to electrify your fleet

*Ryan Wheeler  
Fleet Electrification Product Owner  
National Grid  
June 1, 2021*

**nationalgrid**

*Disclaimer: All statements are made are on behalf of the speaker and do not represent the official position of National Grid.*





# It Comes Down to Clean Air and Climate Change

## Our Vision

A future where **clean transportation is universal** and the environmental and public health benefits are shared by all our customers and communities.

## Our Guiding Principles

- Our programs support a **cleaner environment** and **reduce GHG emissions**
- Our customers and communities have **equitable and affordable access** to clean transportation
- **Smart integration** for grid optimization, customer savings, and a clean energy future



Transportation is  
>45% of GHG  
emissions in the  
Northeast and a  
leading cause of air  
pollution.



# Fleet Electrification: A Path to Cleaner Air, Equitable Access, & Future Load Insight

## Why Fleets?

- MHDV ZEV MOU Goal: **30% of new sales by 2030**
- Decarbonization: MHDV **8-30x CO<sub>2</sub> savings** / vehicle\*
- Health: MHDV **30-150x PM<sub>2.5</sub> savings** / vehicle\*
- Equity: Efficient path to **support LMI / EJC** communities

## MA Fleet Assessment Results (so far)

**100** fleets eligible for no-cost assessments

**>\$40M** Lifetime cost savings identified in 1<sup>st</sup> 10 fleets assessed

## Key Customer Sub-segments





# Fleet Electrification: *Utilities Can Help Solve Customer Challenges*

## Top Customer Challenges

**Charger cost:** Upfront cost to install charger is >\$10k/plug for operators

**Massive infrastructure:** Fleets create MW-scale loads, often concentrated

**Lack of expertise:** New tech & fuel for fleet operators; ops considerations

**Confusion:** EV availability, charging options, and true cost unclear

**Ongoing support:** Reduce charging costs and find O&M savings

## Utility Program Benefits

**Equitable Access to Clean Transportation**

**Lower Upfront Cost**  
(Infrastructure and EV Charger Rebates)

**Fleet Advisory Services**

**Fleet Support**  
(Faster Projects, Greater Utilization, Funding Opportunities, Lower Bills)



# Fleet Customer Support: *Utilities Can Support the Electrification Journey*



NAVIGATING THE UTILITY	PLANNING EV ADOPTION	UTILITY INFRA.	CUSTOMER INFRA.	EV CHARGER (EVSE)	VEHICLE COSTS	OTHER SOFT COSTS	BILL IMPACT
<ul style="list-style-type: none"> <li>Finding POC</li> <li>New tech. for fleet managers</li> </ul>	<ul style="list-style-type: none"> <li>Site analysis</li> <li>Bill impact</li> <li>Business operations impact</li> </ul>	<ul style="list-style-type: none"> <li>Distribution Network</li> <li>Transformer</li> <li>Meter</li> <li>Conductor</li> </ul>	<ul style="list-style-type: none"> <li>Panel</li> <li>Conductor</li> <li>Boring</li> <li>Trenching</li> <li>Conduit</li> </ul>	<ul style="list-style-type: none"> <li>Charging station</li> </ul>	<ul style="list-style-type: none"> <li>EV option can be &gt;2x more than ICE option</li> </ul>	<ul style="list-style-type: none"> <li>Signs</li> <li>Landscaping</li> <li>Maintenance</li> <li>Networking</li> </ul>	<ul style="list-style-type: none"> <li>Uncertain costs</li> <li>Managed charging</li> </ul>
Single Points of Contact (SPOC)	Fleet Assessment Services	Infrastructure Make-Ready Programs		State, Federal, and Utility Rebates	State, Federal, and Utility Funding Available	Fleet Operator Responsible	Fleet Operator Responsible, Utility Designs Rates and Advises

Utility can directly support with planning, infrastructure, and funding

Utility can support journey with Single Point of Contact (SPOC)



# Case Studies: *Fleet Operators Are Experimenting and Learning Quickly*

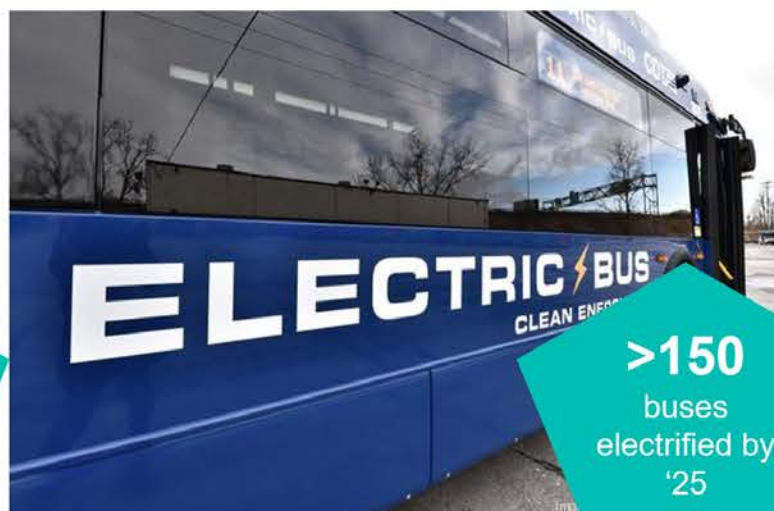


## MA: Electric School Buses

Highland Electric, Proterra and National Grid partnering to bring electric school buses to Beverly, MA

### Goals:

Showcasing bus capabilities in 1<sup>st</sup> year, V2G testing in 2<sup>nd</sup> year



## NY: Transit Buses & MHDV

Make-ready infrastructure and fleet assessments for heavy-duty public transit and fleets in upstate NY

### Goals:

Electrify 25% of transit fleets by '25, and 30% of MHDV sales by '30



## Fleet Assessments

12 study pilot in RI and 100 fleet program in MA to provide customers with an electric transition plan

### Goals:

Accelerate transition to electric for all fleets (muni, private, non-profits)

# Lessons Learned: Coordination Throughout Project Lifecycle Is Crucial

## Awareness & Consideration



- Vehicle availability
- Vehicle rebate funding
- Infrastructure funding
- **Site feasibility assessments**
- TCO analysis
- Environmental impact

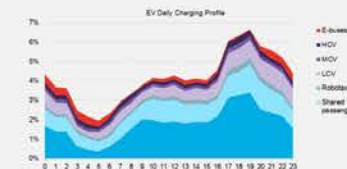
## Vehicle Procurement



### NY TVIP Process\*:

- 1 Select your vehicle
- 2 Find your vehicle dealer
- 3 **Contact your utility**
- 4 Apply for voucher & infra.
- 5 Prepare for vehicle delivery
- 6 Share your experience

## Operations Planning



**Partnerships:** Other fleet operators, regional utilities, and site hosts

**Load management:** Bill impact, charging optimization & scheduling

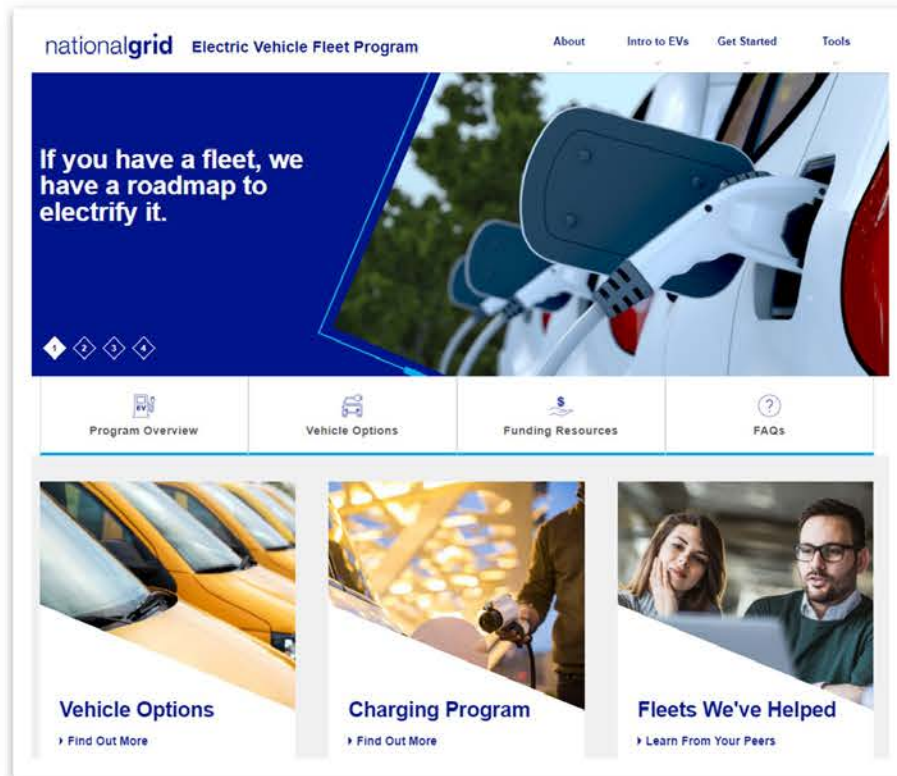
**Operations:** Resiliency, route optimization, driver training, services

**Renewable energy:** Reduce electricity and tailpipe CO<sub>2</sub>



## *Thank you!*

### EV Fleet Hub



**Fleet Hub:** <https://www.nationalgridus.com/ev-fleet-hub/>

- Fleet EV 101
- Vehicle Options
- Funding Resources
- Case Studies
- Fleet Assessment Interest Form
- Email: [NGFleetProgram@nationalgrid.com](mailto:NGFleetProgram@nationalgrid.com)



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Owner  
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**David Visneau**

*Executive Vice President,  
Strategy & Operations*  
MP2 Energy







---

## Retail Energy Providers, an option for fleets to consider

David Visneau, MP2 Energy, a Shell Energy subsidiary





# ELECTRIC POWER FROM CREATION TO CONSUMPTION

MP2 Energy, a Shell Energy subsidiary, provides the fully integrated systems businesses need – from production through to delivery.



## C&I Retail Energy Provider

2900 MW load, serving ERCOT, PJM, MISO, ISONE and NYISO with full product suite offering



## 24/7 Asset Management

Real-time power plant management measuring, monitoring and adjusting every 4 seconds



## Leaders in Renewable Energy

Suite of offering including solar, wind, and storage

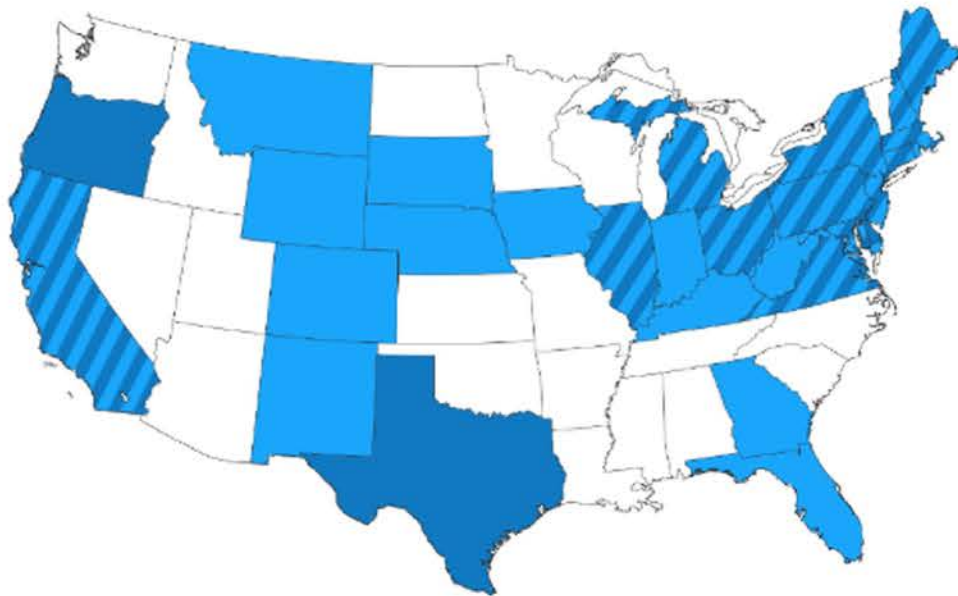


## Demand Response

Seamless execution of demand response dispatch instructions and Largest DR provider in ERCOT with over 25% of market share



## What is a retail energy provider and how do they differ from utilities?

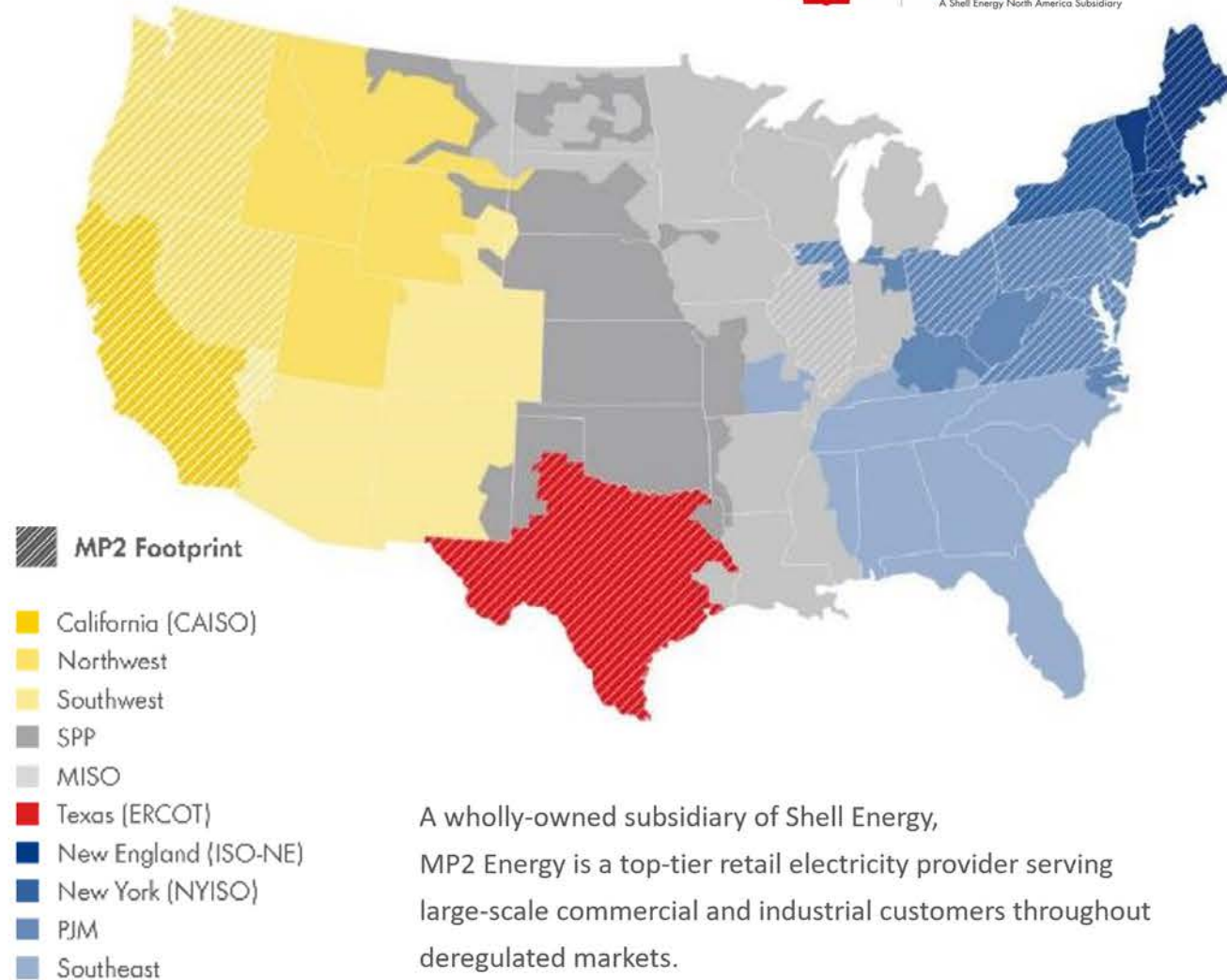


Source: [electricchoice.com](http://electricchoice.com)

**Shell**  
**ENERGY**



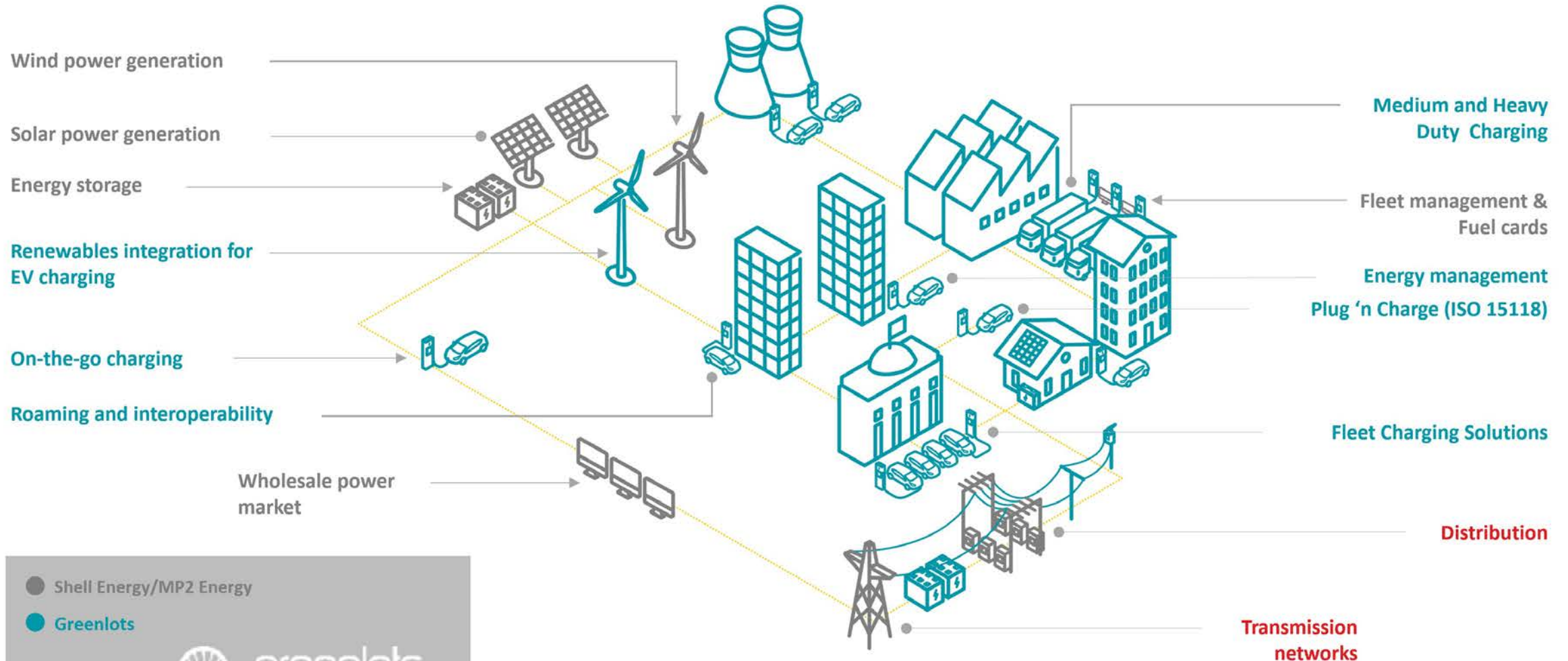
**MP2**  
**ENERGY**  
A Shell Energy North America Subsidiary



A wholly-owned subsidiary of Shell Energy, MP2 Energy is a top-tier retail electricity provider serving large-scale commercial and industrial customers throughout deregulated markets.



# Integrated Solutions to Support Fleets Pursuing the Energy Transition



Transmission  
networks



# COMMERCIAL & INDUSTRIAL PRODUCTS DESIGNED WITH YOUR BUSINESS IN MIND

- Off the Shelf Products:
  - Fixed Price to Index
  - Everything in Between
- Fully Customizable Solutions
  - Based on Your Unique Business Needs
  - Short to Long Term Cost & Risk Management
  - Wholesale Market Access
- Comprehensive Renewable Solutions
  - REC's to Renewable Power
  - Carbon Credits & Offsets
- Asset Monetization
  - Demand Response
  - Ancillary Services
  - Economic Arbitrage





# Q&A:



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# Thank you!

Please complete the survey at  
<https://subscribe.act-news.com/NACFE-RoL-E-Survey>

For more information & to earn your  
Electric Truck Expert badge, please  
visit: [www.RunOnLess.com](http://www.RunOnLess.com)



Our next training is **June 15** on Incentives for Electrification



IN  
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