Introduction to Mobile Charging Solutions: Meet the Mobile Charging Manufacturers Part 2

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Program Manager

October 8, 2025

Agenda

- Introduction to MassCEC
- Introduction to the Medium and Heavy-Duty Mobile Charging Solutions Program
- What is mobile charging?
- Mobile charging use cases
- Mobile Charging Panel
  - ElectricFish
  - Nuvera
  - SparkCharge
- Question & Answer

MASSCEC'S WORK BY FOCUS AREA

ACCELERATING DECARBONIZATION

We contribute to meeting our state's ambitious climate goals by tackling barriers to widespread use of clean energy and climate technology in buildings, transportation, and the grid.

EMERGING CLIMATETECH

We help new climate-focused businesses grow faster by backing a vibrant community of researchers, startups, and established industry players - creating an ecosystem where they connect and thrive.

LARGE SCALE DEPLOYMENT: OFFSHORE ENERGY

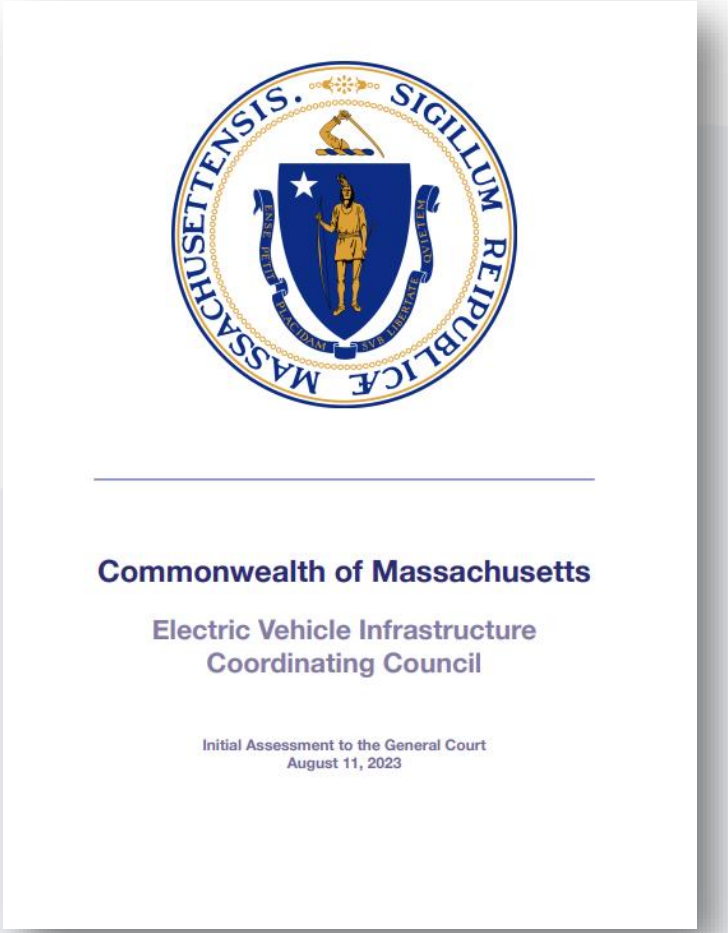
We're building a cutting-edge offshore energy industry, marshaling world-class ports while addressing supply chain and workforce development challenges.

CLEAN ENERGY & CLIMATE WORKFORCE DEVELOPMENT

We're growing a diverse and talented clean energy workforce by supporting a dynamic network of community-based organizations, labor, training providers, schools and employers committed to a sustainable future for all.

Electric Vehicle Infrastructure Coordinating Council (EVICC)

- In 2024, the EVICC awarded MassCEC $38M to increase access to charging infrastructure for various sectors
- EVICC identified **mobile charging** as a promising technology that can help fleet owners electrify without the need for immediate large-scale investment in charging infrastructure



Medium and Heavy-Duty (MHD) Mobile Charging Solutions Program

PROGRAM OVERVIEW

- The Program will accelerate the electrification of four MHD fleets (class 3-8) through the deployment of mobile charging stations

PROGRAM GOALS

- Increase access to Mobile Charging and reduce barriers to EV adoption for MHD fleet owners and operators in MA;
- Pilot innovative Mobile Charging stations that can be scaled across the Commonwealth; and
- Publish resources for MHD fleet owners and operators in MA to implement Mobile Charging solutions independently
  - Mobile Charging Technology Inventory

PROGRAM SERVICES

- **Mobile Charger Deployment**
  - Fund the deployment mobile charging stations for four participating fleets
- **Supplemental Funding**
  - Participating fleets are eligible for supplemental funds to procure MHD Zero Emission Vehicles (ZEVs)
- Charging stations and MHD ZEVs will be deployed on a rolling basis no later than February 2026
- The Program is fully enrolled

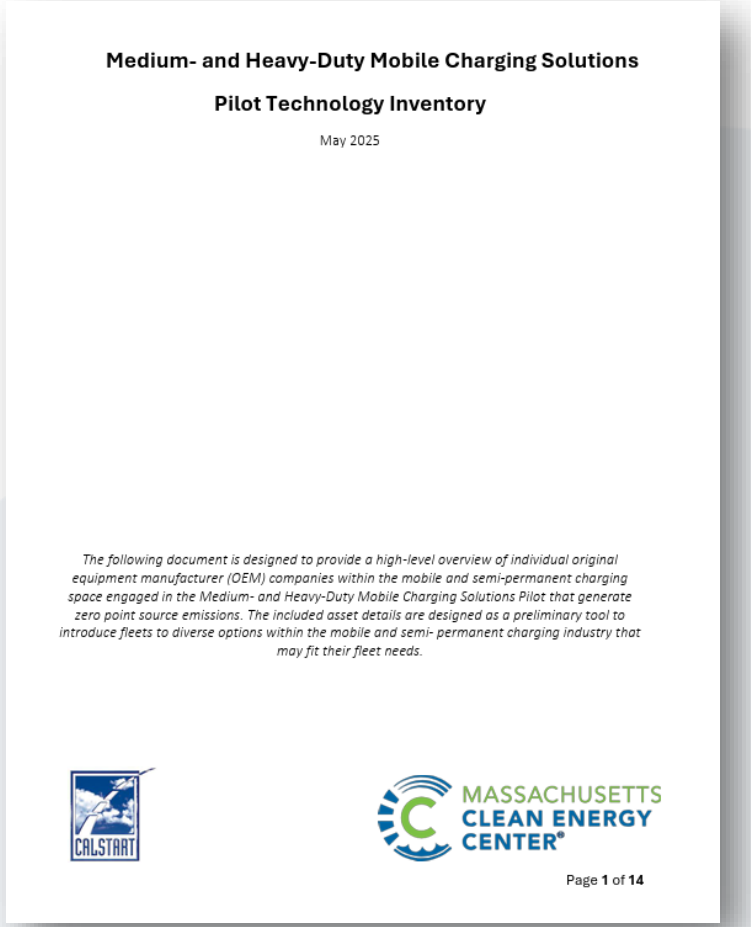
What is Mobile Charging?

- Mobile Charging refers to any type of semi-permanent, off-grid, and grid-flexible charging solution that can be disconnected and transported between locations

  - **Mobile Charging:** Charging units with smaller footprints – typically occupying a parking space - and can be disconnected and transported between EV charging locations

  - **Semi-Permanent Charging**: Charging solutions that require direct grid/generator connection. These units are not readily relocatable

  - **Charging-as-a-Service (CaaS)**: Delivers on-demand and scheduled charging solutions for fleets with the supply, installation, and management of mobile charging units operated by the Service company


Medium- and Heavy-Duty Mobile Charging Solutions

Pilot Technology Inventory

May 2025

The following document is designed to provide a high-level overview of individual original equipment manufacturer (OEM) companies within the mobile and semi-permanent charging space engaged in the Medium- and Heavy-Duty Mobile Charging Solutions Pilot that generate zero point source emissions. The included asset details are designed as a preliminary tool to introduce fleets to diverse options within the mobile and semi- permanent charging industry that may fit their fleet needs.

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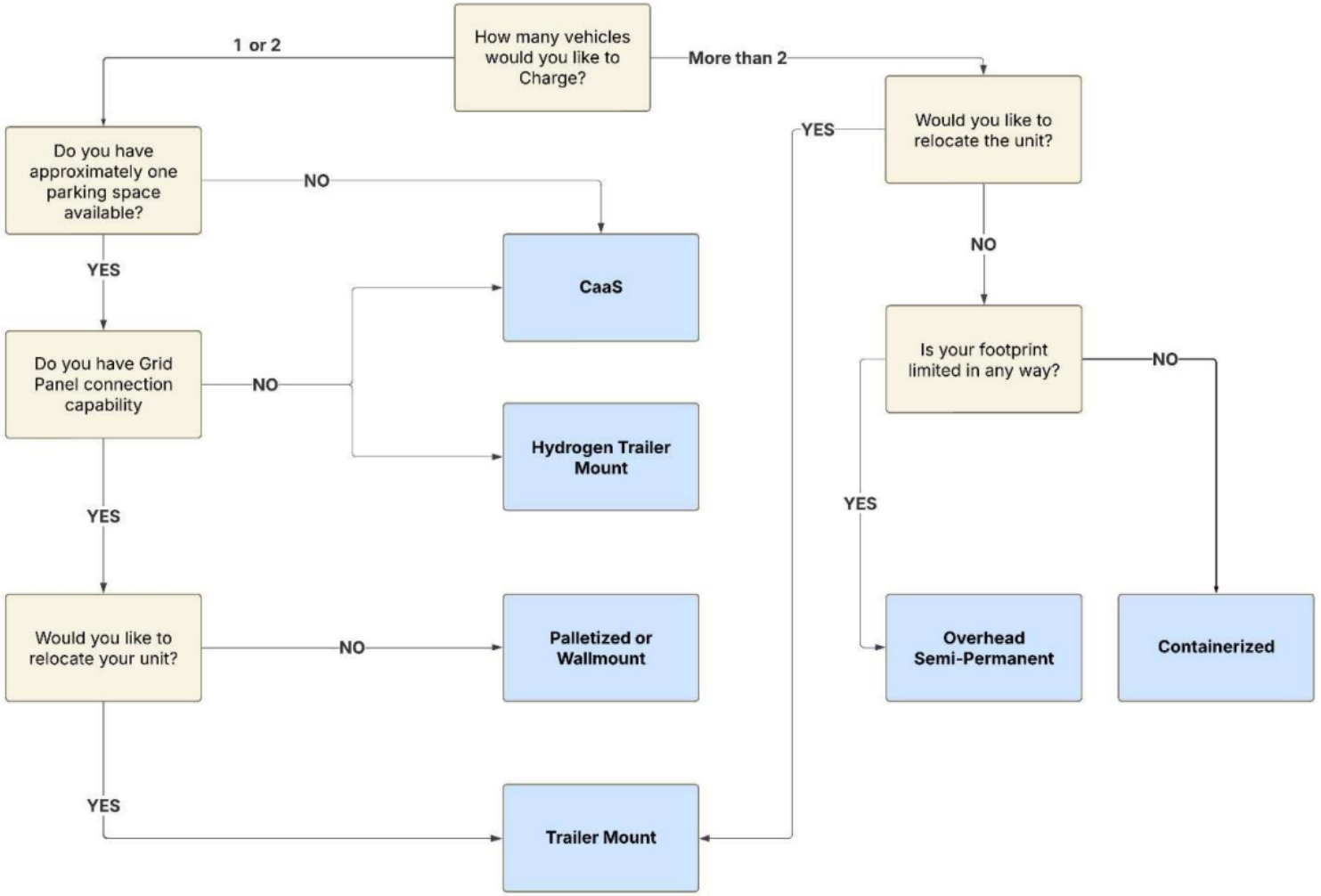
Mobile Charging Technology Inventory

What Barriers Does Mobile Charging Address?

- Based on previous EV and charging station deployment programs, MassCEC has identified specific problem areas that can be addressed by mobile charging
  - **Charging Station Right-Sizing** – Mobile and temporary charging can inform fleet owners about appropriate charging needs prior to permanent charging station installation
  - **Facility Upgrade and Infrastructure Installation Delays** – Mobile charging can provide a temporary solution to ensure that vehicles remain operational until charging stations are energized
  - **Facility Ownership Structures** – Mobile charging stations can provide temporary or longer-term solutions for fleets unable to install permanent infrastructure due to lease agreements
  - **Grid and/or Space Constraints** – Mobile charging units that don't require connection to the grid and have smaller footprints are preferable for fleets with grid and/or space constraints

Mobile Charging Solutions – Decision Making Support



The Mobile Charging Decision Tree is designed to support thinking through which charging formats may align with fleet needs.

Panelists

Vince Wong
Co-Founder and COO
ElectricFish

Cameron Kasper
Nuvera

Josh Aviv
Founder and CEO
SparkCharge

ElectricFish

ElectricFish 350Squared

Fast, Flexible, Resilient EV Charging for Grid-Constrained Fleets

ElectricFish **at a glance**

Founded in **2019,**
based in California and Michigan

Backed by **5 issued US patents**

Proven with leading OEMs and government agencies

Built to endure the toughest environments

Select customers & partners

The energy we deserve

Retrofit into existing grid
Hyperfast EV charging, emergency power, grid services
infrastructure

Containerized, trailer-mountable
Avoid trenching and grid upgrades; easily re-deployable
solution

Extremely Fast Charging sessions
Achieving up to 350 kW, or 20 miles/min

Our key enabling technologies

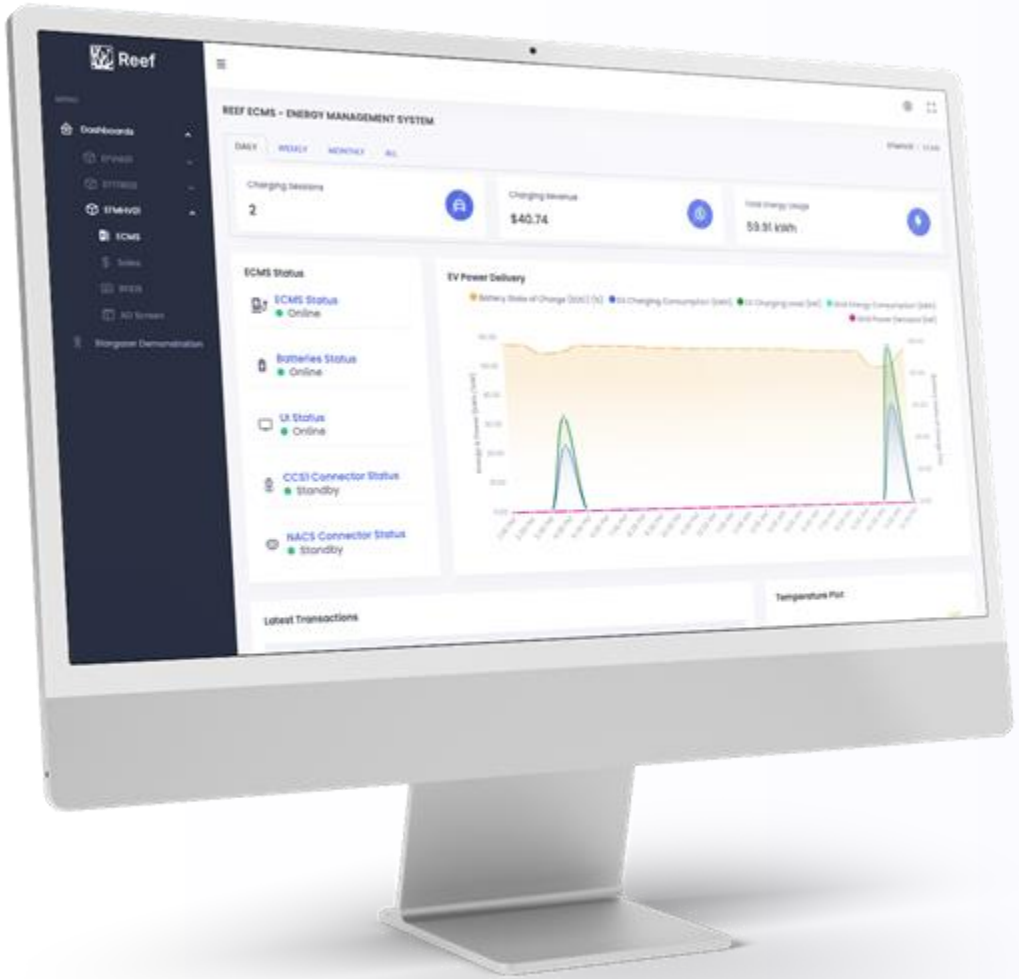
AI-powered battery storage that does it all:
400 kWh for fleet charging, backup power, and grid services

Flexible grid inputs:
Integrates with 208V / 240V / 480V without transformer upgrades; able to support 30 kVa generator

Best-in-class power electronics:
High throughput (200 kW for 2-port simultaneous use; 350 kW with 1 port use)

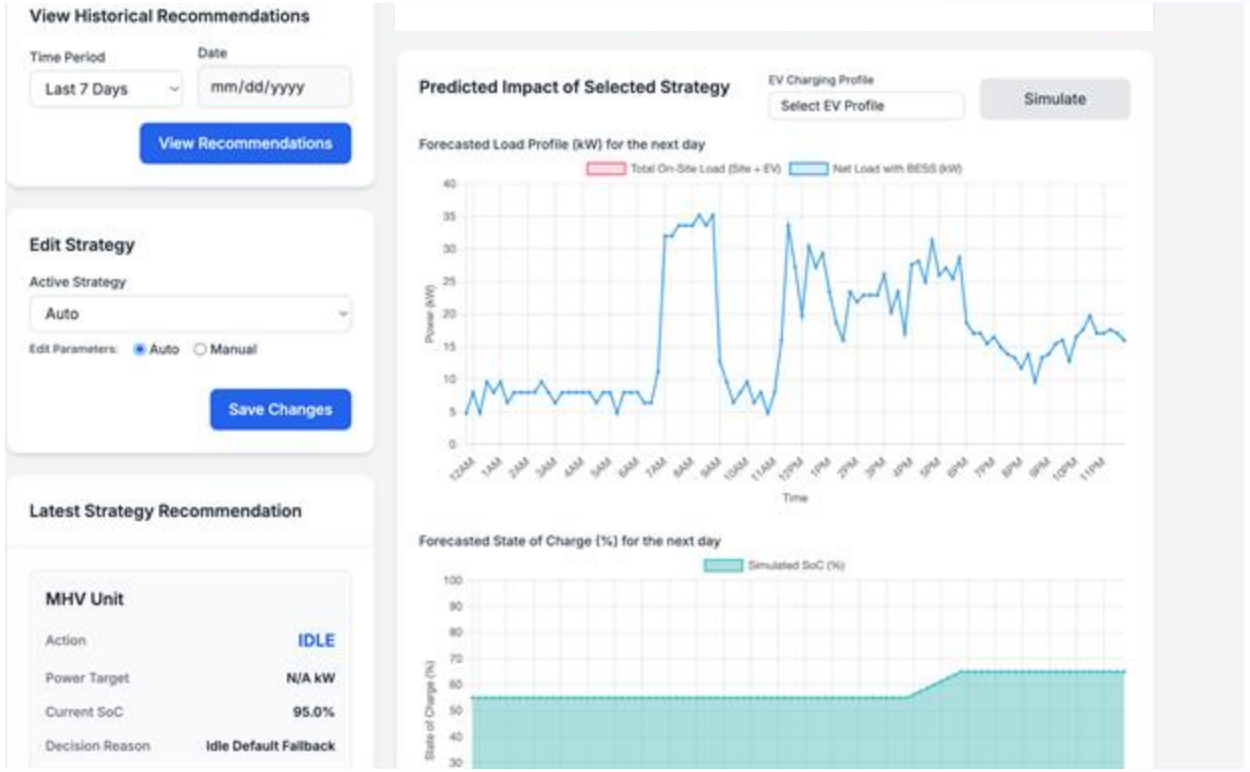
Easy to deploy and re-deploy:
Elegant container design for easy forklift and flatbed or towable trailer transport

EF Asset Management



Reef

- **Live System Telemetry**
- **Charging Sessions Data Visualization**
- **Revenue and Energy traded with grid and sold to vehicles**
- **Control Prices, power limits, and ports**
- **Secure and Compliant Data Handling – SOC 2 Type II Certified**



Stargazer AI

- Control EV charging loads based on profiles
- Preserve battery health
- Bid into lucrative grid services
- Automate your energy management strategy

What Makes Us Unique

‘Goldilocks’ capacity
400 kWh right-sized blend for optimal footprint and capacity

AI-powered grid asset
Fully integrated for DER/VPP grid services

Semi-permanent flexibility
Can operate as permanent or semi-permanent unit with optional towability

Blazing fast
Achieving up to 350 kW, or 20 miles/min

Digital billboard
Optional ad screen for promo and PSA content

Sample Fleet Cases

Distribution Centers

Last-Mile Delivery

First Responders

Overcoming Grid Constraints with Resilient Fast Charging

ElectricFish’s innovative approach: From order to revenue in just 2 months

Order

1 day

ElectricFish accepts purchase order

Build & Ship

6 weeks

Execute build in San Carlos, secure expedited permits, ship to customer site on flatbed

Install

Within 2 hours

Integrate with site’s existing panel capacity without trenching or grid upgrades, commission system

Operate

Ongoing

Earn revenue from charging and grid services, provide backup power during grid outages

Our 2 Offerings

Purchase

- Equipment ownership, shipping, and commissioning
- 1 Year complimentary O&M & SaaS, then recurring license
- 1 Year complimentary Warranty, then **5 year extended**
- Grid Services Revenue Share

Lease

- Equipment lease, shipping, commissioning
- Included Parts warranty, O&M, SaaS and Warranty
- Lease-to-ownership option available
- Grid Services Revenue Share

*Installation billed directly by electrician

ElectricFish

Proudly Built in America 

NUVERA®

Mobile Power Made Easy.

Nuvera® HydroCharge™

Mobile, Zero-Emission

EV Fast Charger & AC Genset

Global and Local Service and Support

Serving customers globally, regionally and locally using an industry- and customer-focused approach

HYSTER-YALE MATERIALS HANDLING, INC.

100+ YEARS IN OPERATION

GLOBAL INDUSTRY COVERAGE

- Industry application focus
- 8,600 global employees
- Focused on technologies to simplify operations & solve challenges
- Full-range of attachments and power options, including fuel cells

REGIONAL OPERATIONS

- Focused design centers
- Regional production and parts centers

LOCAL SALES & SERVICE*

- Entrepreneurial customer-focused dealers
  - **950+ global dealer locations**
  - ~3,200 sales professionals
  - **~10,200 technicians**

NUVERA®

Nuvera is a brand of Hyster-Yale Materials Handling, Inc. (NYSE: HY)

The Challenge

Electric Vehicle fleets require a **mobile**, **fast**, and **environmentally friendly** charging solution, capable of supporting high volumes of EVs **without relying on grid access** or frequent recharging—while remaining cost-effective compared to traditional fossil fuel options.

Option Gap

Charging Solutions Are Falling Behind

Level 1 & Level 2 stationary Charging

- **Slow, fixed & grid-dependent**
- Potential utility delays

Mobile Battery Energy Storage System

- **Long, grid-dependent recharge times**
- Inefficient: large battery charges small battery
- Heavy, bulky, and costly
- Short runtime, long recharge

Mobile Propane / Natural Gas

- **Emits a passenger car's annual CO_2 in under a month**
- Requires customer-provided fuel or utility connection
- Fossil fuel-based
- Leaks persist in the environment
- Aging systems may emit carbon monoxide

Diesel

- **Risks of OEM reputational damage or lost deals**
- Fossil fuel-based
- Misaligned with customer sustainability goals

Smarter Solution

Mobile

Grid-Independent

Zero-Emission

Cost-Competitive

Refuellable

Fast-Charging

Nuvera® HydroCharge™ Specifications

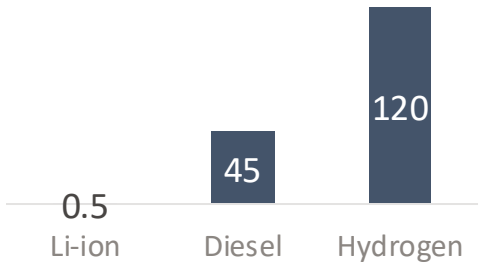
Three product options with customization available

PERFORMANCE	Mobile EV Charger	Mobile Genset	Mobile EV Charger & Genset
Net output power	50kW of EV fast charging 10kW of 120/240Vac power	50kW of 208 or 480Vac 3-phase Wye 10kW of 120/240Vac	50kW of EV fast charging 50kW of 208 or 480Vac 3-phase Wye10kW of 120/240Vac
Output connectors	5 meter long CCS1 cableCS6369 Receptacle	5 cam locks connectors, CS6369 receptacle, standard 110V outlet	5 meter long CCS1 cable & plug, 5 cam locks connectors, CS6369 receptacle, standard 110V outlet
PHYSICAL			
Dimensions (L x W x H)	198" long, 94" wide, 108" tall		
Mass	8950 lbs.		
Transport	Towable, 2-5/16" BALL		
OPERATION			
Hydrogen dispenser connection	WEH® receptacle TN1-H2		
Fuel supply pressure	35 - 350 bar		
Onboard storage	3 x 4.7 kg tanks or ~15 kg total		
Hydrogen consumption	~ 3.7 kg/h at max power		
Hydrogen spec	SAE J2719_202003, ISO14687:2019		
STANDARDS			
Regulatory conformance	NFPA 55, NFPA 853, NFPA 2, CSA FC1, CGA P1, ASME B31.3, ASME BPVC, TITLE 49 CFR		

Why Hydrogen: Energy Dense. Refuellable. Grid-Independent

Zero-Emission power production from energy dense fuel

High, dependable energy density



Unmatched Energy Density:

- 3x more than diesel
- 240x more than Li-Ion

More power. Less Size & Weight.

HYDROGEN IS PORTABLE ELECTRICITY

Hydrogen is electricity…

…with the **convenience** of fuel

Off-Grid Zero-Emission

H_2O

Zero-Emission
Exhaust has Air + Water. That's it.

Fast & Simple Refueling
Minutes to refuel vs. hours for batteries.

Grid-Independent
ZERO reliance on grid to produce power

NUVERA®

Fueling Your Business, Not Your To-Do List.

We Handle Hydrogen. You Drive the Business.

Nuvera’s nationwide hydrogen supply chain keeps HydroCharge customers powered—anywhere in the U.S.

Where is Hydrogen: Flexible Hydrogen Fuel Options

We Handle Hydrogen. You Drive the Business.

Tube Trailer

Trailer Rental

Liquid Hydrogen

Upfront Capex

On-Site Generation

Upfront Capex


Hydro Charge™
Hydrogen Powered Generator
POWERED BY
NUVERA®
HydroCharge®
EV Fast Charger
AC Generator
Emission-Free Portable Power
When and Where You Need It

NUVERA®


HydroCharge
Hydrogen Powered Generator
HydroCharge™
Hydrogen Powered Generator
CAUTION
OUTDOOR USE ONLY
Emission-Free Portable Power
When and Where You Need It

NUVERA®

HydroCharge™

Portable. Powerful. Practical.

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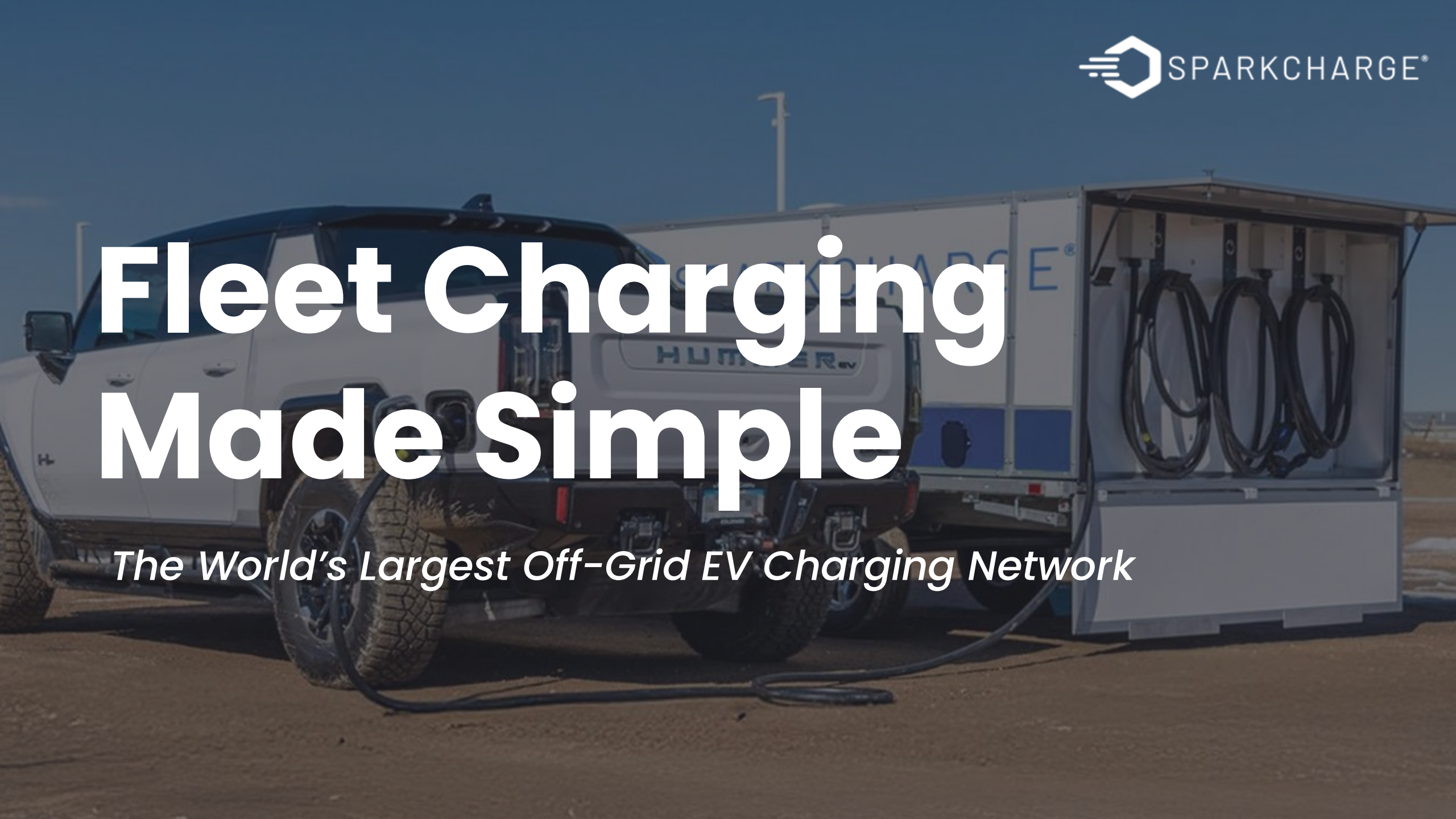
SPARKCHARGE®
Fleet Charging Made Simple
The World's Largest Off-Grid EV Charging Network

Full-Coverage Charging Across North America

4,200,000+
kWh delivered

120,000+
Charging sessions

500,000+
Gallons of gas removed

5,000+
Tons of CO_2 saved

Where Problems Meet Solutions

Long Lead Times

6 months to 2+ years between permitting delays, utility upgrades, & construction, leave fleets with a slow deployment path.

High Upfront Investments

$10,000-$200,000+ equipment, construction, utility upgrades, & permitting, making ROI distant & uncertain.

Operational Downtime

Traditional EV chargers experience an avg. **downtime of up to 35%**, with units offline for days/weeks due to maintenance, parts shortages, or software issues.

No Flexibility

Traditional stations are fixed in their location. This leads to **underutilized assets, stranded investments, & limited scalability.**

Expensive and Limited Energy Management

Without smart energy strategies, businesses risk **peak demand charges, grid strain, & inefficient power use**—driving up operational costs. Traditional fixed chargers often lack integrated energy controls, leaving operators without real-time visibility or flexibility.

Charging-as-a-Service

Make fleet EV charging simple, scalable, & fast

Mobile Battery Charger

Deliver high-speed, battery-powered EV charging anywhere you need it

Mobile Battery Charger | CaaS

What is Mobile Battery Charging?

Deployed in days, not months, Mobile Battery Charging the perfect solution for sites with limited infrastructure or fast-growing fleet operations. Choose from flexible service models—fully managed, self-service, or hybrid—and scale your power as your fleet expands.Wherever your fleet goes, the charge goes with it.

Fully Managed

Choose the level of support that fits your operations. From white-glove service, self-managed setup, or need a hybrid approach—we've got you covered.

No Construction Delays

Our mobile EV charging solution requires zero construction, no digging, and no permitting—so you can start charging vehicles without delays or red tape.

Zero Upfront Costs

No CapEx or OpEx. SparkCharge covers equipment, permits, installation, and maintenance.

99.9% Uptime

Ensures consistent, reliable charging with proactive monitoring, rapid response support, and 24/7 support.

Get Started | CaaS

Get Charging-as-a-Service in 3 Easy Steps

Step 1: Consultation

We start with a conversation to understand your fleet size, operational patterns, and charging goals. We discuss your current infrastructure (if any), **locations, number or vehicles, make & model, and timeline.**

Step 2: Mobilization

We prepare the selected charging solution to suit your fleet's operational requirements. Our operations team coordinates shipping or towing of the units to your site, ensuring everything arrives on schedule.

Step 3: Go Live

You officially begin charging your fleet under the SparkCharge CaaS model. Our support team remotely monitors uptime, energy usage, and refills/swaps. Get usage reports, charging stats, & cost breakdowns to optimize your operations.

Let’s Get Charging!

Talk to a member of our team by going to our website or emailing us at sales@SparkCharge.io to get started. Our team works quickly to get your business EV charging infrastructure when you need it.

Questions?

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Join us next month!

Mobile Charging Case Studies: November 6, 2025 1:00-2:00 PM ET | Register

Coming Soon

MassCEC MHD Mobile Charging Solutions Pilot: March 2026

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