



POWERING THE ELECTRIC REVOLUTION





ENERGY OPTIMIZATION ⚡ ULTRAFAST ELECTRIC VEHICLE CHARGING



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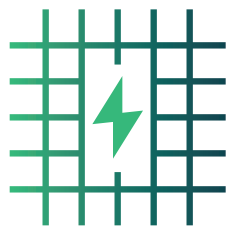
OUR MISSION

POWERING THE ELECTRIC REVOLUTION

Battery-Integrated Ultrafast Electric Vehicle Charging and Energy Optimization

FreeWire Technologies is transforming how energy is distributed and accelerating the global transition to electrified transportation through ultrafast charging technology paired with integrated energy storage and advanced software solutions. We provide seamless and efficient installation and charging operation for site hosts to meet the growing demand for electric vehicles (EVs) and a premium experience for drivers that contribute to a cleaner and more efficient future.

FreeWire's advanced technology allows for the efficient and sustainable deployment of EV charging equipment by overcoming the limitations of the electrical grid and modernizing infrastructure for future generations.

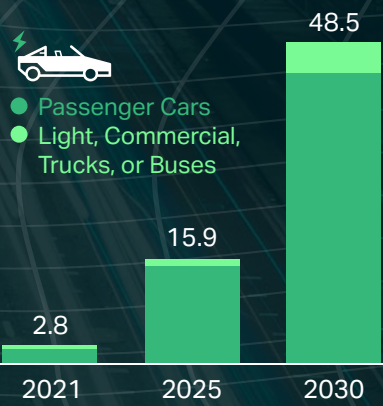


ELECTRIC VEHICLES ARE HERE

EV adoption is on the rise due to a combination of technological advancements, economic incentives, and a growing awareness of the environmental and health benefits of electrified transportation.

Automakers are investing heavily in the development of new electric passenger vehicles, with an estimated \$515 billion spent on this effort and the release of more than 180 new models by 2025. It's predicted that EVs will make up 53% of new car sales in the U.S. and that there will be nearly 48 million EVs on American roads by 2030, representing around 20% of all vehicles in the United States.

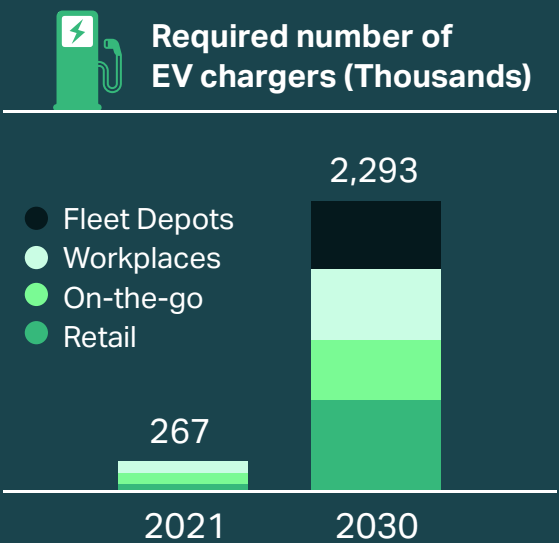
Projected number of
EVs on the road (Millions)



CHARGING INFRASTRUCTURE IS NEEDED ACROSS INDUSTRIES

New charging infrastructure is required to meet the growing demand for EVs and further encourage their adoption. Public fast charging stations will be a key component of this infrastructure, providing a convenient and reliable way for EV drivers to charge their vehicles on the go.

In the United States alone, it is estimated that at least 180,000 fast-charging stations will be needed within the next seven years in order to support the transition to an electrified transportation system. The availability of fast charging stations anywhere and everywhere will be crucial in encouraging the widespread adoption of EVs and supporting the transition to a more sustainable transportation system.



INDUSTRIES ARE ELECTRIFYING, FROM FLEETS TO RETAILERS



FUELING STATIONS



SHIPPING



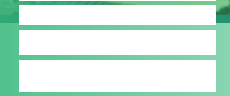
RETAIL



QUICK SERVICE



FLEETS



AGRICULTURE



TRANSPORTATION



AUTO OEMS + DEALERSHIPS

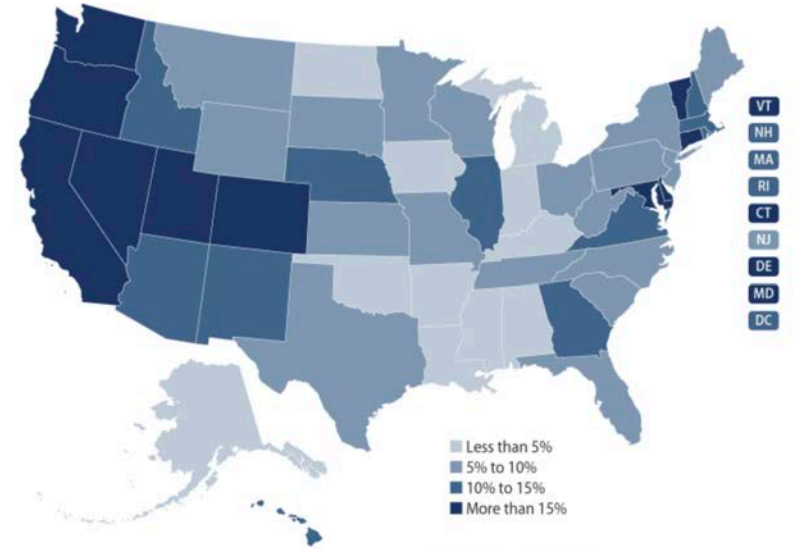


UTILITIES



MORE ULTRAFAST EV CHARGING IS REQUIRED, FAST

State Progress toward Public DCFC Infrastructure Needed by 2025



Source: Center for American Progress



GRID INFRASTRUCTURE IS LIMITING THE TRANSITION TO ELECTRIFIED TRANSPORTATION

The electric grid is facing a number of challenges, including its aging infrastructure and increasing vulnerability to disasters. The electric grid's vulnerability is exacerbated by the high power needed to support traditional methods of EV charging. Traditional fast charging infrastructure requires high power directly from the grid, and **most areas cannot handle the additional power needed without building upstream grid infrastructure.** The mass expansion of fast charging using traditional infrastructure is not practical or sustainable and will slow progress toward transportation decarbonization and negatively impact the power grid.

The electrical grid was designed with power generated in central locations and then distributed through increasingly lower voltage lines to its endpoint. Traditional EV charging requires higher voltage input power which is not readily available in many locations where EVs will need to charge. Bringing high voltage power to these locations requires coordination between site hosts, utilities, and local permitting agencies, and can involve construction, rights of way, electrical interconnection and other activities that increase cost and cause a significant delay in deployment.

The cost of building out the necessary grid infrastructure to power traditional fast chargers is also a major barrier to widespread charger deployment. It is estimated that the infrastructure improvements needed to meet growing EV demand could cost \$14 trillion globally between now and 2050.

These barriers will ultimately slow our progress toward decarbonization, and a new approach is needed to ensure that energy can be delivered wherever and whenever it is needed.



GRID RESILIENCE vs. CLIMATE VOLATILITY

The power grid in the United States is facing unprecedented stress due to the increasing volatility of weather patterns caused by climate change. This has led to grid reliability issues in many parts of the country, and we see examples of grid strain that have affected millions of Americans in recent years. The aging power grid is particularly vulnerable to these disruptions, making it more important than ever to address these challenges and modernize the grid to better withstand extreme weather events.





BATTERY-INTEGRATED TECHNOLOGY IS THE SOLUTION

Battery-integrated charging and power technology offer a solution to the barriers presented by the grid and allows for the rapid and widespread deployment of public fast charging stations. The integrated system unlocks an array of potential power applications for owners that traditional charging solutions cannot provide and haven't contemplated.

FreeWire can be deployed faster and in more locations, thanks to its onboard energy storage, which makes it a valuable distributed energy asset. By building a network of FreeWire power solutions, it is possible to move from a centralized electrical grid to a resilient, decentralized power infrastructure model. This approach would benefit not only EV drivers, but also anyone who relies on electricity by reducing costs and increasing resilience.

EV CHARGING + ENERGY STORAGE A Powerful Combination



SHORTER INSTALLATION TIMELINE

FreeWire's chargers enable ultrafast charging deployment 6X faster than traditional charging systems. FreeWire chargers are designed and manufactured in the US, with quick delivery and installation.



FEWER INFRASTRUCTURE UPGRADE REQUIREMENTS

FreeWire chargers are infrastructure-light, requiring no additional electrical upgrades, meaning site hosts invest in the charger, not the infrastructure. Investing in the charger allows for rapid deployment and can easily be moved between sites.



LOWER INSTALLATION COSTS

Each traditional fast charger can require \$100K+ in infrastructure costs alone. Battery-integrated energy storage reduces installation costs by up to 75% by avoiding costly and time-consuming electrical upgrades.



LOWER OPERATING COSTS

FreeWire reduces operating costs by 70% because the technology can manage the charger's energy usage. The chargers integrated storage systems charge EVs directly from the battery, not the electrical grid. As a result, customers can avoid energy price hikes during peak usage using FreeWire's proprietary management software, AMP™.



FASTER ROI

FreeWire's chargers allow owners to capture charging revenue and increase retail sales, with lower ongoing energy costs, for greater ROI. Unlike traditional fast charging infrastructure, FreeWire charger's power input is low and predictable at 20 kW, while delivering up to 200 kW output. Traditional chargers must pull high power from the grid to output high power to the vehicle, which can trigger high power rates from utilities.



ADDED RESILIENCY

Ensure continuous EV charging to maintain revenue during grid outages. The integrated battery provides reliable site power automatically, with an Automatic Transfer Switch for smooth transitions to backup, enhancing site resiliency and providing a critical service during emergencies.



HOW BATTERY-INTEGRATED EV CHARGING WORKS

EV chargers are classified by “levels,” which refer to the speed at which they can charge an EV’s battery. These levels are indicated in kilowatts (kW), and a higher output from the charger means a faster recharge time. One kilowatt-hour (kWh) of charging is equivalent to approximately four miles of driving range for a standard passenger EV.

Traditional Level 3 DC fast charging requires a high power input and places a significant demand on the electrical grid, and requires on-site infrastructure upgrades to handle the additional power requirements. These factors contribute to the time and cost of installation, making it an unsustainable approach to meet the growing demand for EV charging.



KNOW YOUR EV CHARGING STATION LEVELS

Level 1 Charging



Power Input Required
120V 1-ph

Charging Speed
3 to 5 Miles Per Hour

Connector Compatibility
J1772, NACS

Charging Locations
Home

Level 2 Charging



Power Input Required
240V 1-ph or 208V 3-ph

Charging Speed
12 to 80 Miles Per Hour

Connector Compatibility
J1772, NACS

Charging Locations
Home, Workplace, Fleet, Public

Level 3 DC Fast Charging



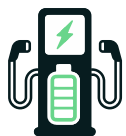
Power Input Required
480V 3-ph

Charging Speed
180 to 1,200 Miles Per Hour

Connector Compatibility
CCS, CHAdeMO, NACS

Charging Locations
Fleet, Public

Battery-Integrated DC Fast Charging

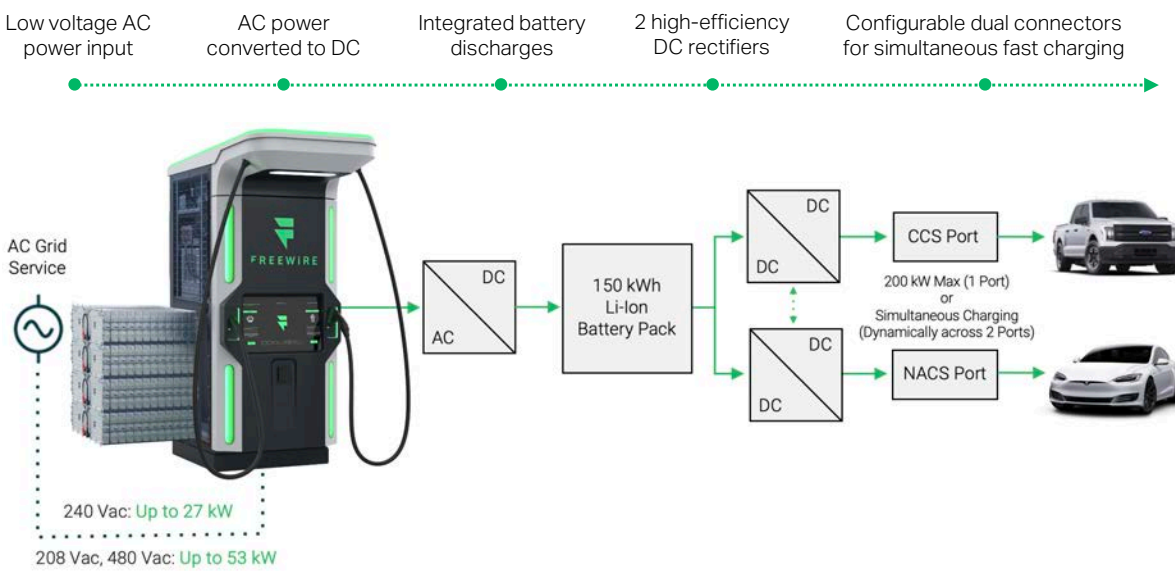


Power Input Required
240V 1-ph, 208V 3-ph, or 480V 3-ph

Charging Speed
600 Miles Per Hour

Connector Compatibility
CCS, NACS

Charging Locations
Fleet, Public



FreeWire’s flagship products, Boost Charger Pro and Boost Power Pro, connect to a low-voltage alternating current (AC) power source, similar to the power requirements of a water heater, which is converted to direct current (DC) and stored in an internal battery pack. When an vehicle connects to the charger, the stored DC power is delivered directly to the vehicle’s battery through a CCS or NACS port. The internal battery pack provides charging services even when the AC power source is unavailable, such as during a power outage – which is key for EV drivers in evacuation scenarios.








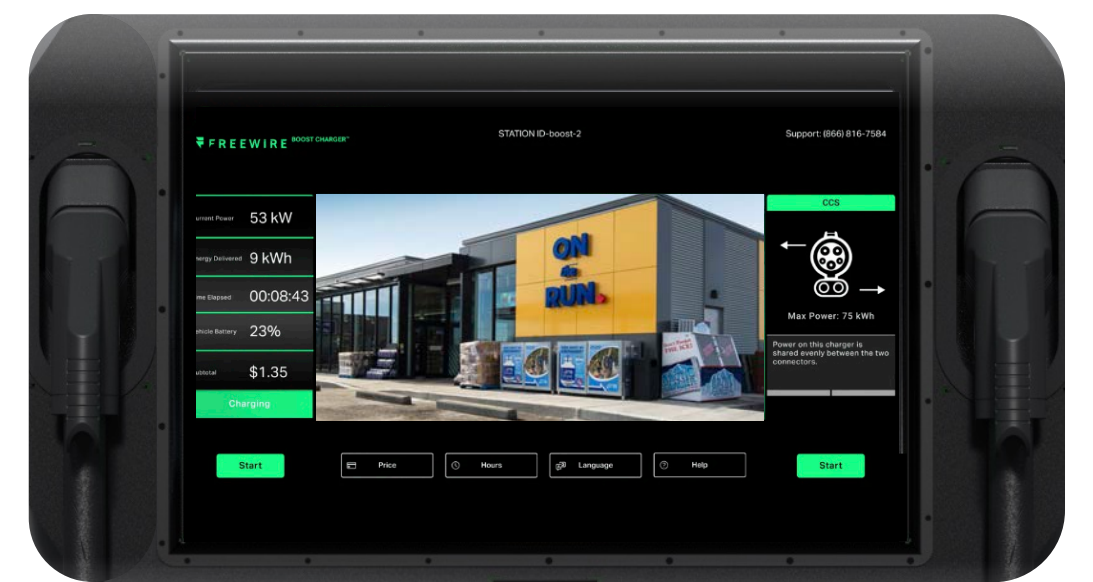
DELIVERING A PREMIUM CHARGING EXPERIENCE

FreeWire's charging stations are designed to provide a premium charging experience for all EV drivers. These stations are built to the highest standards, with sturdy construction and advanced technology that helps to ensure consistent and reliable charging.

Drivers will receive a top-quality experience when using a FreeWire station.

FREEWIRE CHARGER BENEFITS FOR EV DRIVERS

-  **ULTRAFAST CHARGING**
With 200 kW maximum power output, drivers receive 200 miles of range in a 15-minute charging session.
-  **COMPREHENSIVE**
Simultaneously charge two electric vehicles at once and is compatible with all EV models, ensuring that anyone can easily access charging services.
-  **EASY PAYMENT: PAY, PLUG, GO**
FreeWire chargers offer a straightforward charging process – just pay, plug, and go. Chargers are compatible with multiple charging networks and offer various card reader options to make charging convenient and accessible.
-  **UBIQUITOUS**
Chargers can be deployed almost anywhere to eliminate range anxiety due to their ability to connect to existing infrastructure.
-  **LARGE TOUCHSCREEN**
The charging process is made easy and user-friendly with the help of a large, 24-inch color touchscreen, which guides drivers through the process and includes a built-in help center and advertising capabilities.



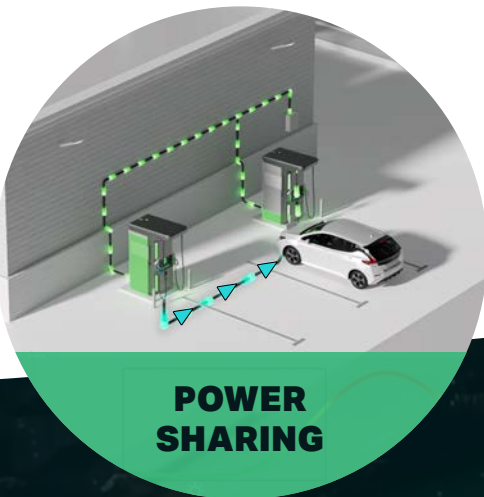


ENERGY OPTIMIZATION

Unlock the Future of Distributed Energy & Charging Platforms

FreeWire's Pro Series, including Boost Charger Pro and Boost Power Pro, revolutionize the way EVs are charged and how energy is supplied to charging stations and the electrical grid. A distributed network of energy assets with standalone power and bidirectional capabilities provides numerous benefits, including reduced energy costs and increased resilience and reliability for all energy users. In emergency situations, such as power outages, the charger network can distribute power to buildings or EVs that need it, helping to keep the lights on and ensuring that essential services remain operational.

Ultimately, this next-generation network of chargers will augment existing grid infrastructure to make it more reliable and cost-effective while ensuring a smart, sustainable transition to electrified transportation electrification.

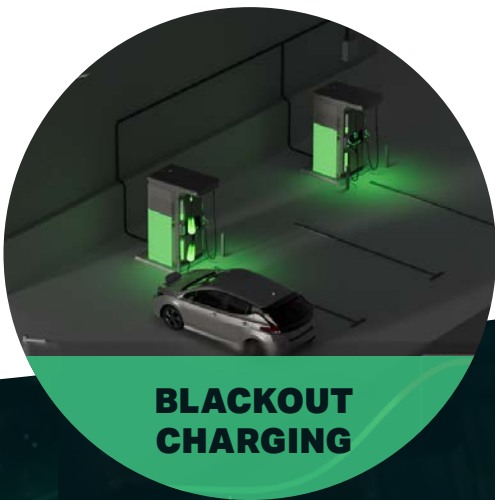


POWER SHARING

Power sharing allows customers to remain parked while multiple chargers share energy by forming a large-scale storage system.

BENEFITS

- Increased EV charging throughput

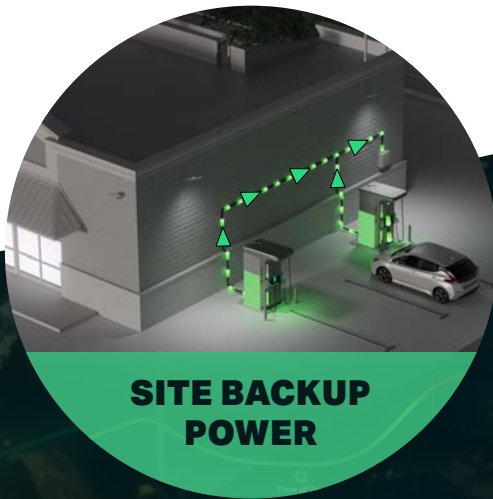


BLACKOUT CHARGING

Blackout Charging ensures continuous EV charging during grid outages by using the energy stored in the integrated battery.

BENEFITS

- Consistent charging through outages
- Enhance customer trust and dependency

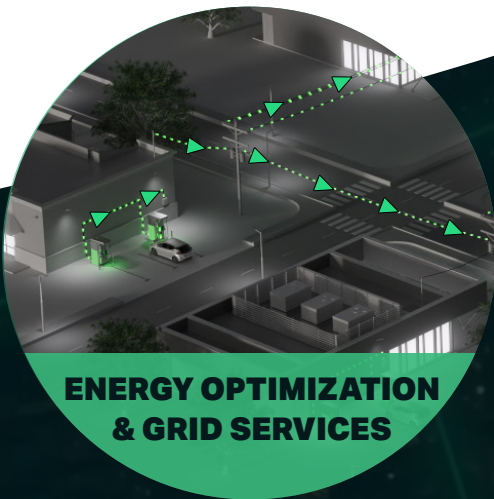


SITE BACKUP POWER

Provide reliable site power automatically for smooth transitions to backup, enhancing site resiliency

BENEFITS

- Provide critical service during emergencies
- Maintain business operations and revenue



ENERGY OPTIMIZATION & GRID SERVICES

Reduce energy bills by avoiding demand charges and minimizing costs during peak TOU rate periods by optimizing the recharge schedule.

BENEFITS

- Operational cost savings up to \$33k per charger
- Ease of operation with FreeWire management
- Sell energy back to the grid during peak times, up to \$10k per charger

RESULTS



INCREASED RESILIENCE

When power from the grid is interrupted, FreeWire chargers can continue to deliver ultrafast charging to EVs using energy stored in the 150 kWh capacity battery in each individual charger.



IMPROVED OPERATIONAL EFFICIENCY

Chargers can extend their charging capabilities when connected as a network by leveraging energy from other chargers to ensure ultrafast charging is available across the network.



POWER OPTIMIZATION

FreeWire's energy requirements are nearly 10x lower than traditional chargers, reducing peak energy demand, saving grid strain, and providing lower-cost power.



ENHANCED GRID STABILITY

FreeWire will be able to provide power back to the site or the grid when demand is high, reducing the strain on the grid and providing economic benefits for site hosts.



ADVANCED EV CHARGING & ENERGY MANAGEMENT SOFTWARE



FreeWire's Asset Management Platform (AMP™) is an advanced software platform designed to enable owners to manage the energy and operation of FreeWire chargers. The platform offers a range of features that give site hosts real-time control of their EV charger networks.

These features include active monitoring of charging station availability and usage, remote management of charging station settings and pricing, and comprehensive reporting that provides insights into station performance and usage patterns.

UNLOCK THE FULL POWER OF FREEWIRE CHARGING WITH AMP CLOUD-BASED SOFTWARE



NETWORK MANAGEMENT

The integration of the AMP software platform with EV charger hardware enables flexible management of charging network assets, through which owners can customize the operations of their sites and groups of chargers according to their specific needs.



IMPROVED EFFICIENCY

AMP enables owners to optimize the energy utilization of their assets by managing the input or output power across a network of chargers, saving energy and reducing costs.



IMPROVED RELIABILITY

AMP provides real-time status tracking for charging stations, enabling users to monitor the availability and capabilities of their stations at all times to quickly identify and resolve any issues with their stations.



ENHANCED CONTROL

AMP unlocks unique features for FreeWire's charger owners including advertising and on-screen content customization, energy management to control and reduce operating expenses, and configurations for advanced energy management and resilience.



INSIGHTS & ANALYTICS

AMP empowers owners to make informed decisions to optimize the performance of their charging networks by providing real-time data from and synthesized performance insights for each of their charging stations.



MOBILYZE PRO + ADVISORY SERVICES

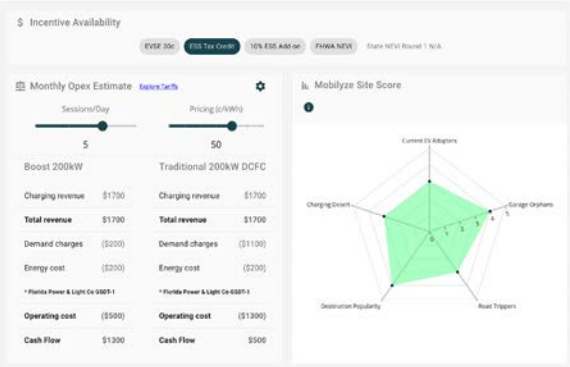
Charger Utilization Forecasting and Site Optimization

Deciding where to place EV chargers can be a daunting task, especially when it comes to maximizing utilization and achieving a necessary return on investment. FreeWire's Mobilyze Pro uses proprietary datasets combined with machine learning to analyze site characteristics, predict utilization, model IRR, develop deployment strategies, and track performance over time.

Through detailed analysis of EV drivers' travel habits, demographic insights, and EV adoption, the Mobilyze platform forecasts the number of charging sessions per day at any location. With the profitability calculator, Mobilyze provides a complete picture of the business case behind deploying both battery-integrated and traditional DCFC while also identifying available incentives.



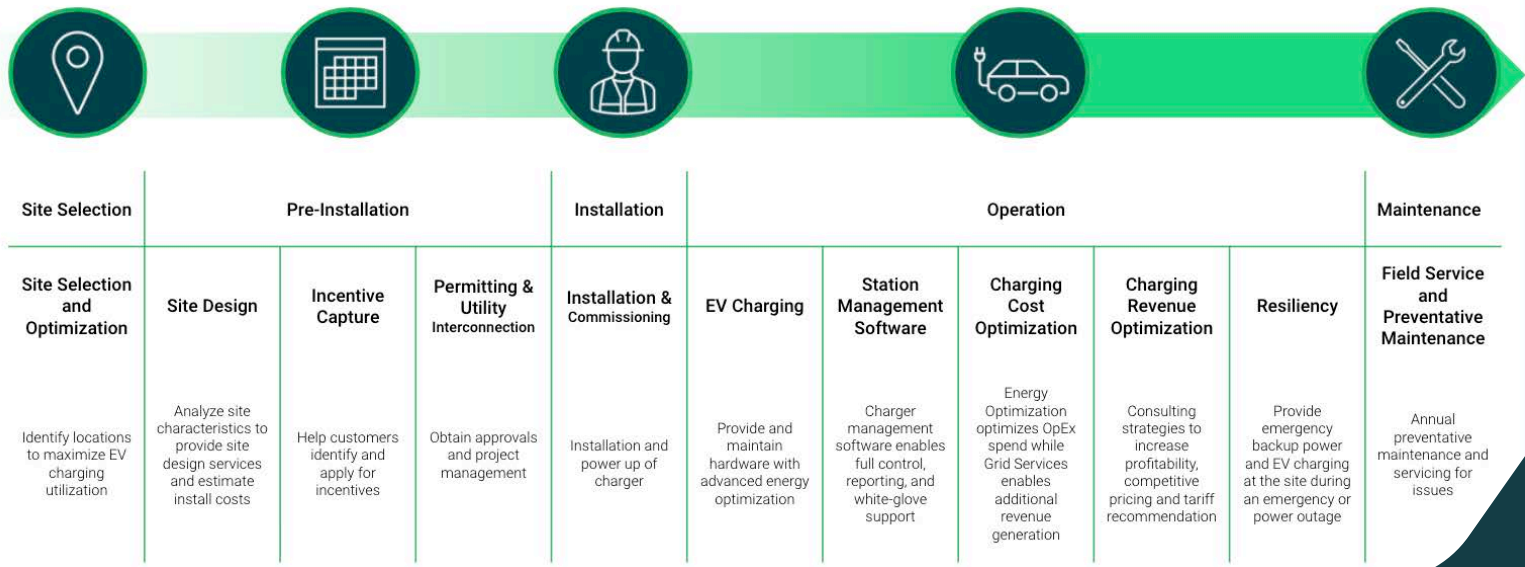
Mobilyze Pro: Predict Charger Utilization



ROI Calculator: Compare Site Profitability

ADVISORY SERVICES

Solutions to Simplify Deployments from Site Selection to Maintenance



FreeWire's charger offers consumers the fast-charging experience they're looking for, and Phillips 66's branded network of fueling locations places the chargers at existing, strategically located sites.



ABOUT FREEWIRE TECHNOLOGIES

For over a decade, FreeWire Technologies has been at the forefront of energy management solutions and ultrafast EV charging, solving grid infrastructure constraints and supporting the global transition to electric vehicles. FreeWire’s battery-integrated power solutions and AI-driven software platforms transform the way energy is distributed for commercial customers and bridge the gap from legacy infrastructure to future technology.

FreeWire products are used by Fortune 100 companies, commercial and utility customers, fleets, retail locations, and gas stations across North America.

POWERED BY FREEWIRE

Retail and Convenience



Fleets



Utilities



| BOOST CHARGER PRO Unidirectional | | BOOST POWER PRO Bidirectional | |
|--|--|---|--|
| ENERGY STORAGE | | | |
| Energy Chemistry | | Lithium-ion (NMC) | |
| Energy Storage Capacity | | 150 kWh | |
| ELECTRICAL SPECIFICATIONS (DC OUTPUT TO VEHICLE) | | | |
| Supported Connector Types | | CCS1 / CCS2; SAE J3400 (NACS) | |
| Charge Ports | | 2 | |
| Max Output Power (DC) | | 200 kW | |
| | | Simultaneous Charging: dynamic power sharing between connectors up to 200kW | |
| Voltage | | 200-950 Vdc | |
| Off-Grid Charging | | Yes | |
| ELECTRICAL SPECIFICATIONS (AC INPUT) | | | |
| Power (AC) | | 240 Vac ≤ 27 kW 208 Vac, 400 Vac, 480 Vac ≤ 52.5 kW | |
| Voltage (AC) | | U.S./Canada: 208/480 Vac 3-phase four wire (L1/L2/L3/N), 240 Vac single-phase three wire (L1/L2/N) U.K./E.U./AUS/NZ: 400 Vac 3-phase four wire (L1/L2/L3/N) | |
| Current | | U.S./Canada: 208 Vac: 150 amps, 480 Vac: 65 amps, or 240 Vac: 105 amps U.K./E.U./AUS/NZ: 400 Vac: 80 amps | |
| Frequency | | 50 / 60 Hz ± 1% | |
| ELECTRICAL SPECIFICATIONS (AC OUTPUT TO GRID) | | | |
| Rated Power (AC) | | | 208/400/480 Vac 3-phase: 50 kW 240 Vac single-phase: 25kW |
| Grid Forming Capable | | | Yes |
| MECHANICAL SPECIFICATIONS | | | |
| Dimensions (Depth x Width x Height) | | 112 cm x 104 cm x 239 cm (44 in x 41 in x 94 in) | |
| Cable Length | | Standard: 340 cm (134") Extended: 550 cm (216") | |
| Weight (Estimated) | | 1,450 kg (3,200 lbs) | |
| ENVIRONMENTAL SPECIFICATIONS | | | |
| Installation Location | | Outdoor | |
| Enclosure Protection Rating | | IP 54, Type 3R | |
| Operating & Storage Temperature | | -30° C (-22° F) to +50° C (122° F) | |
| Operational Altitude | | <3,000 m (9,843 ft); not for marine locations | |
| NETWORK & USER INTERACTION | | | |
| Network Connection | | 4G LTE, Ethernet | |
| Communications | | OCPP 1.6-J or 2.0.1 | |
| User Interface Screen | | 61 cm (24") ruggedized LCD touchscreen | |
| Credit Card Reader | | Standard | |
| Payment Methods Accepted | | Credit cards, NFC, MIFARE, FeliCa | |
| Access Control & Authentication | | RFID: ISO 15693, ISO 14443, NFC | |
| Safety & Compliance | | | |



FREEWIRE

Learn how FreeWire has the best solutions to quickly deploy and scale ultrafast EV charging.

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