

## FreeWire Technologies

Overview

## Electrification Dilemma How to meet the demand for charging

**Electrical supply** Cost |Availability | Speed

> Charging demand Cars | Time | Behavior

Space Street | Home | Parking lot

Necessary to optimize charge infrastructure and reduce impact on public assets

## **About FreeWire**

# **MUBI** FREEWIR 1-

#### History

Est. 2014 with a mission to bridge the gap between EVs and the grid

#### Products

Rapidly scalable infrastructure-light solutions for the grid edge

#### Customers

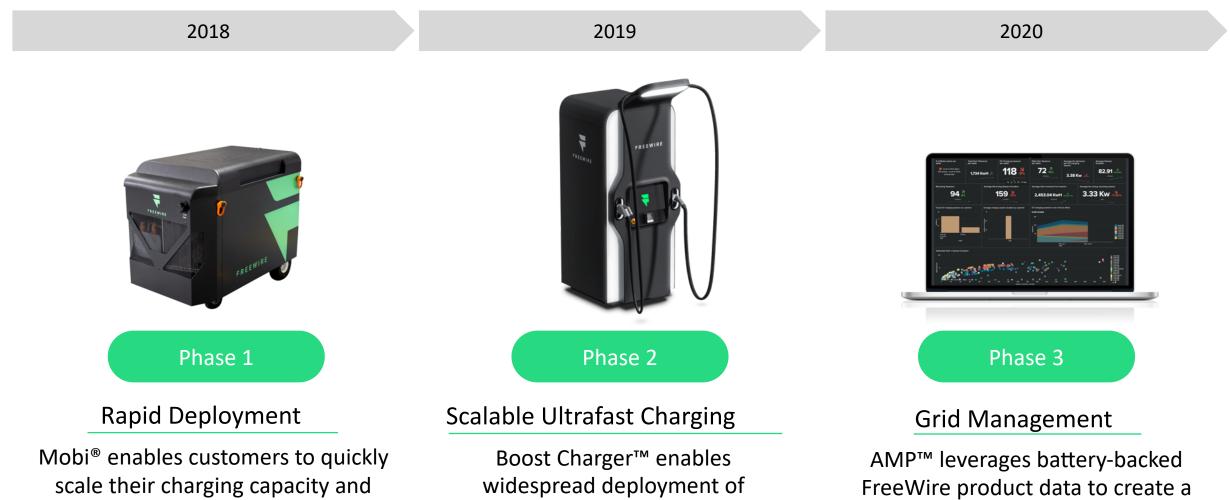
Fortune 500 companies and utilities across U.S. and internationally

#### Investors

Global market leaders including: BP, Volvo and Stanley Black and Decker

## **Strategy and Vision**

FRFFWIRF



flexibility to adapt to the changing ultrafast charging utilizing existing landscape of vehicle electrification infrastructure

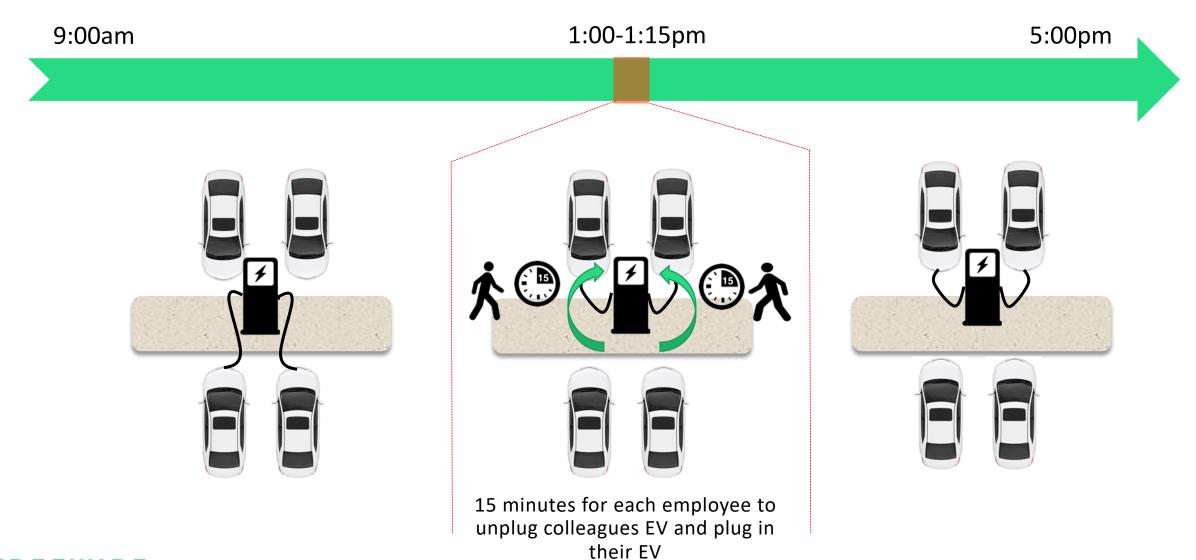
controllable network of distributed

energy resources

## **Electric Vehicle Charging**

- Minimize infrastructure upgrades & demand charges
- Flexibility for operations, ownership
- Better user experience for drivers & increased productivity

### Fixed Charging Productivity Loss



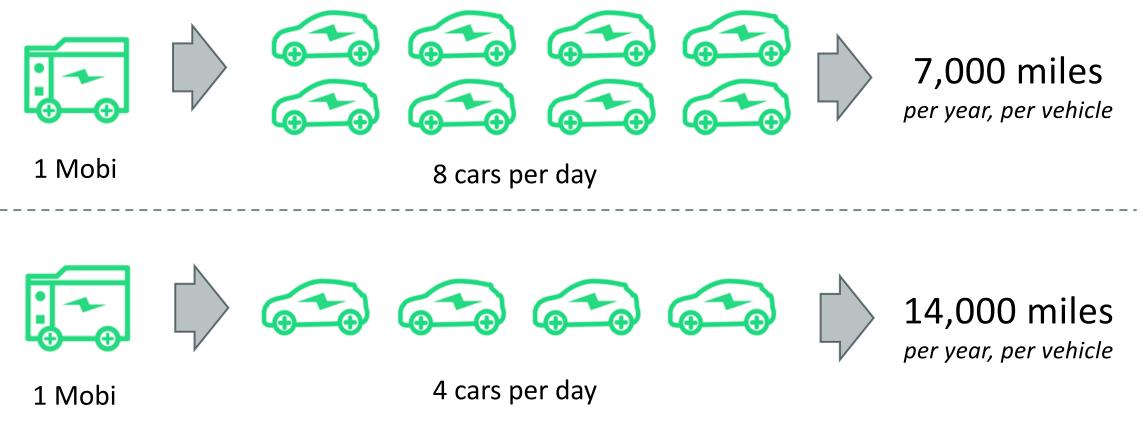
## Mobile to Fixed Comparison





	Mobi	2 Dual-Port Fixed Chargers
Vehicles Charged/Day	80	80
Unit Cost (Inc. Installation)	\$650,000	\$500,000
Energy Cost/month	\$2,503	\$13,325
Maintenance Cost/10yr	\$22,750	\$15,000
5yr Replacement	\$0	\$150,000
Productivity Loss/month	\$0	\$13,000
Valet Cost/month	\$4,300	0
10 Year TCO	\$1.48 M	\$3.82 M

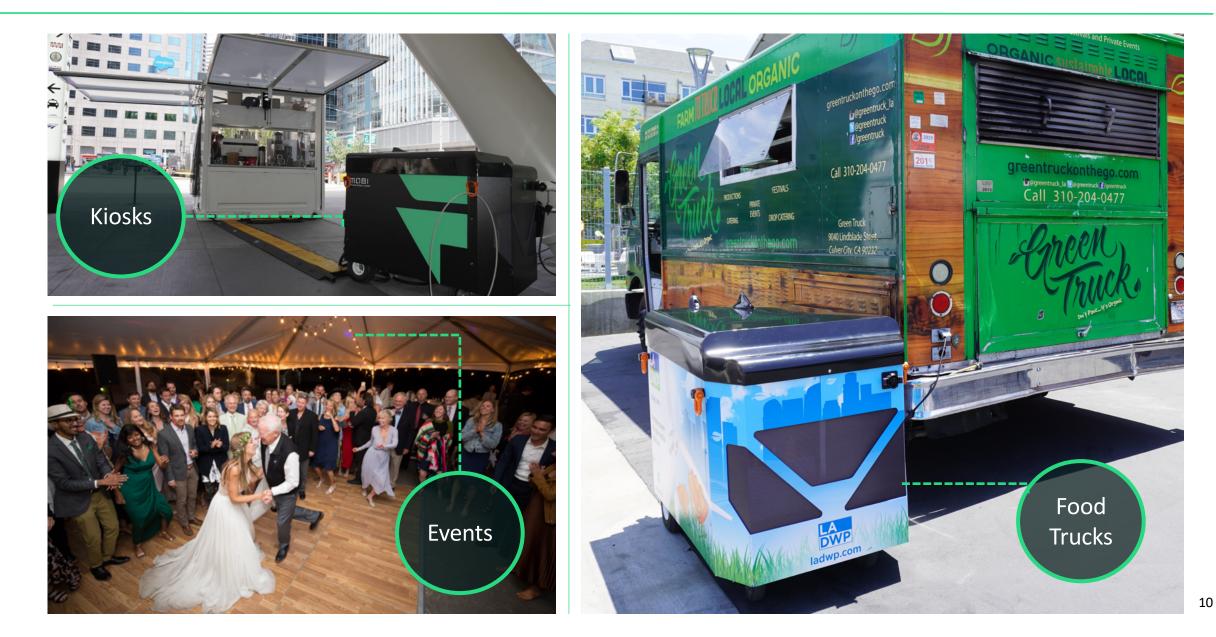
Lack of charging cited as cause for EV fleets driven only 2,500 miles per year -Center for Sustainable Energy Study



## **Construction and Backup Power**



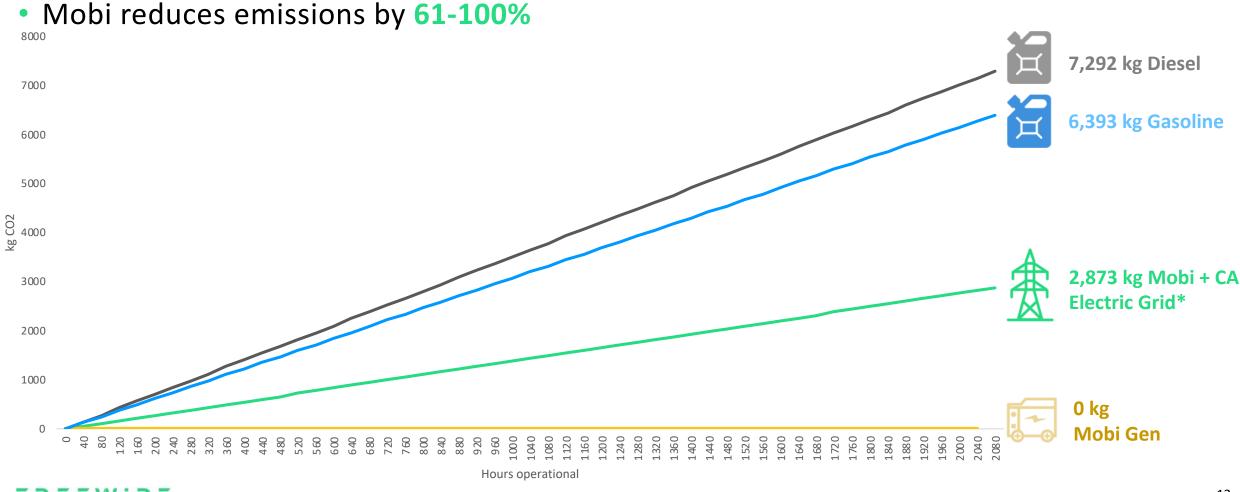
## Food Trucks, Concessions and Entertainment



Mobi vs. Diesel Generator		
	Mobi	Generator
<b>Continuous Power Output</b>	11 kW	11 kW
Portability	Self-propelled	No / Trailer mounted
Emissions	Zero	10.15 kg CO <sub>2</sub> /gallon
Noise	38 dB	75-85 dB
Noise Equivalent	Quiet conversation	Garbage disposal
Frequency	50 Hz / 60 Hz	60 Hz
Cloud Connected	Included	No / Optional
Upfront Cost	\$\$\$	\$
Maintenance Cost	\$	\$\$\$
Fuel Cost	\$	\$\$
Indoor Safe	Yes	No

## Carbon Emissions by Energy Source

 At 4 kW equivalent, diesel generators emit 7.2 metric tons of CO<sub>2</sub> per year when operating working hours (720 gallons of diesel)



Electric vehicle (EV) charging station site growth is slow as grid infrastructure cannot readily support the high power demand, resulting in less available sites and higher costs

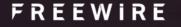


## **The Solution**

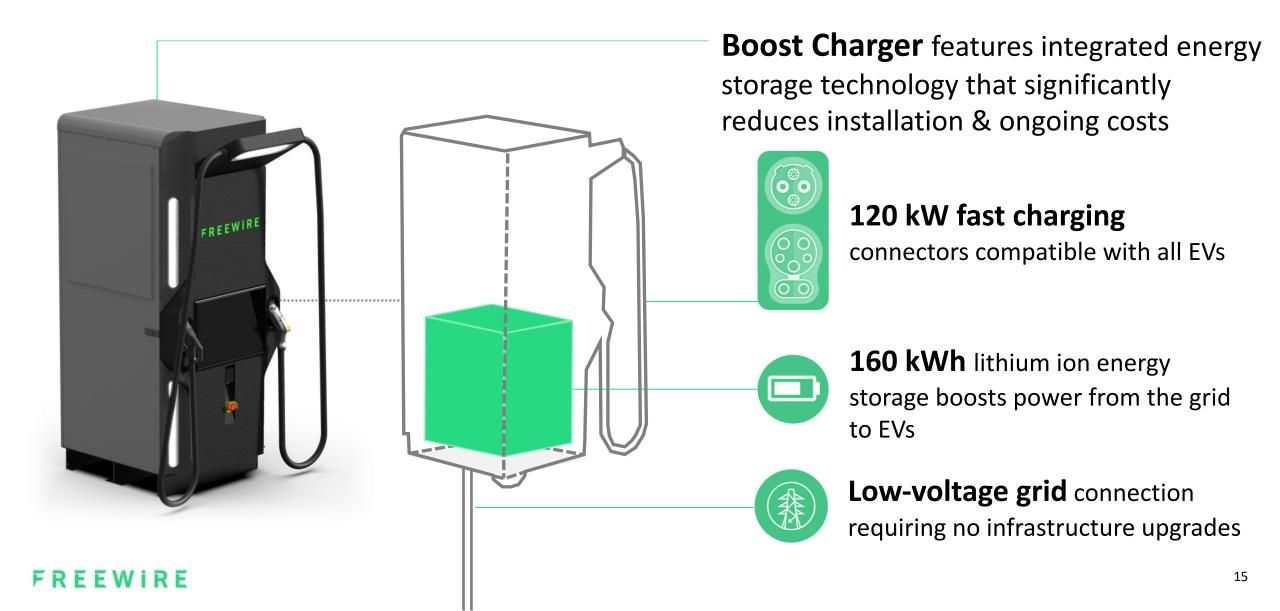
Imagine you could rapidly expand ultrafast EV charging stations to previously incompatible locations

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without significant investment or strain on the grid



## Fast Charging Made Simple

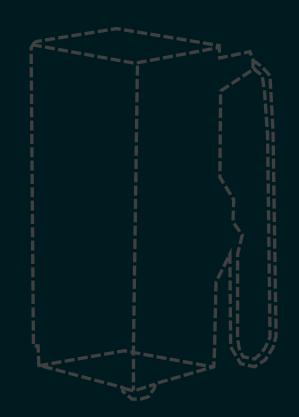


## The Boost Charger Advantage

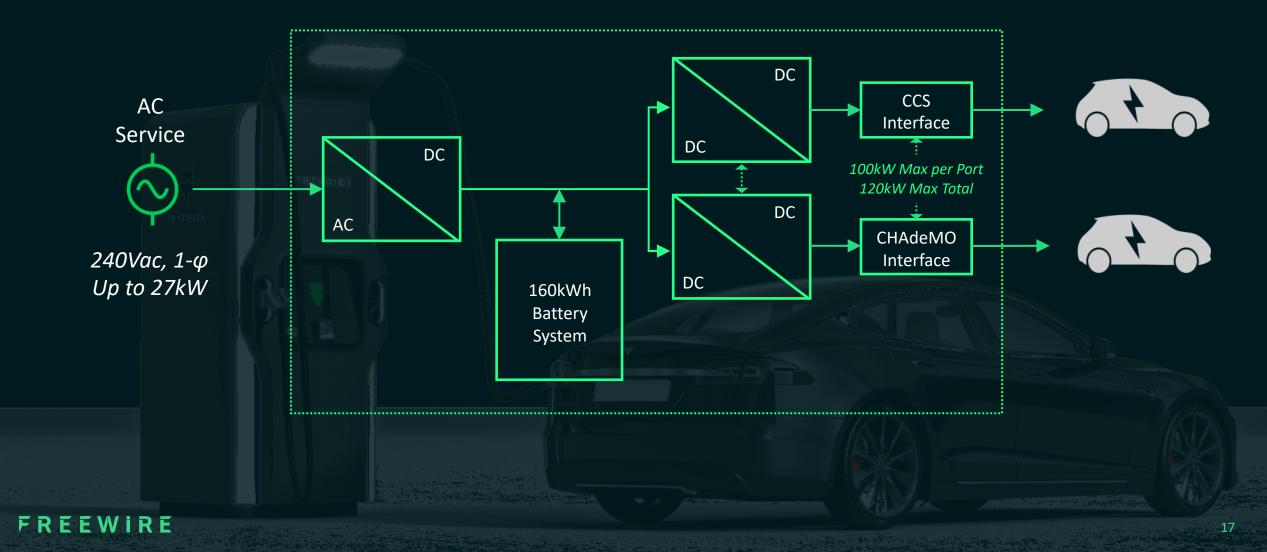
1. Low, Predictable Costs

2. Small Footprint

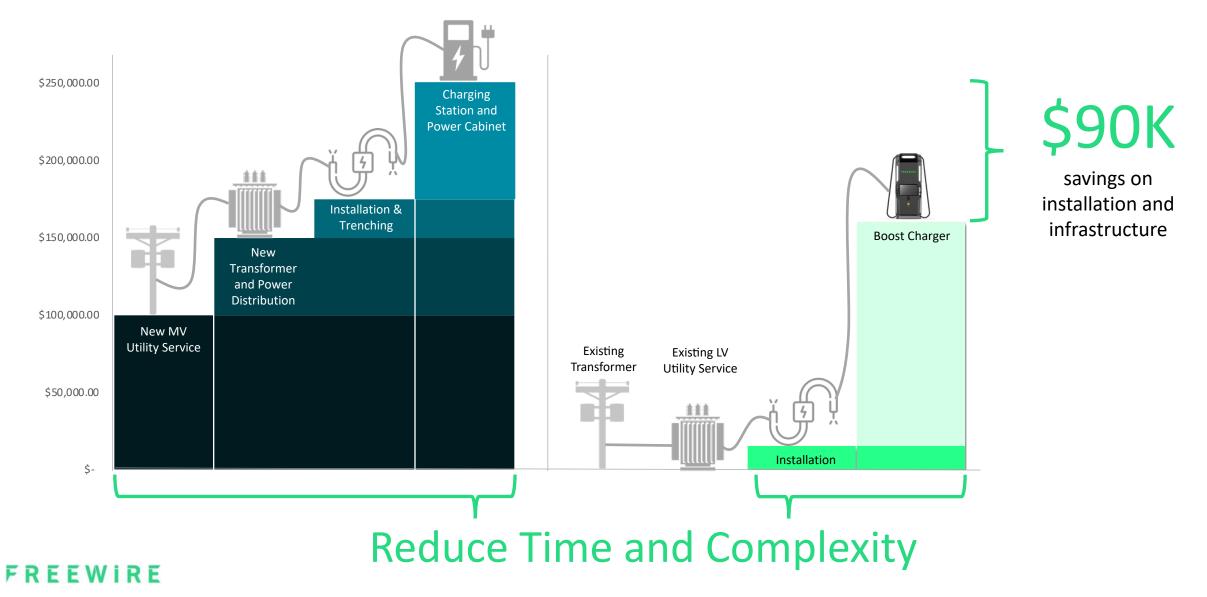
3. Simple, Flexible Installation



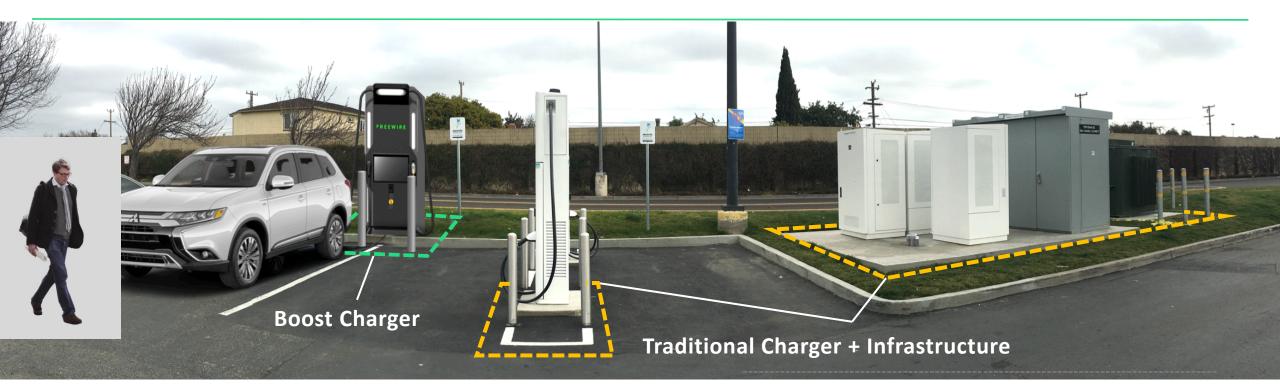
## **Product Overview**



## **Upfront Savings Comparison**



## **More Power in Less Space**





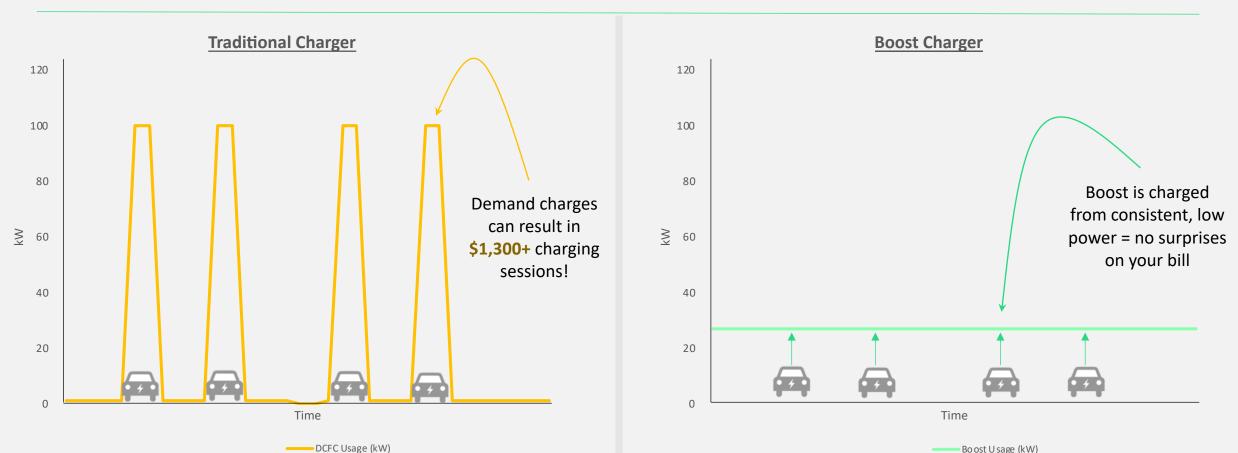


More space efficient

- Boost's simple install process results in a smaller footprint
- Don't sacrifice valuable customer parking space for infrastructure

## **Predictable Power Consumption**

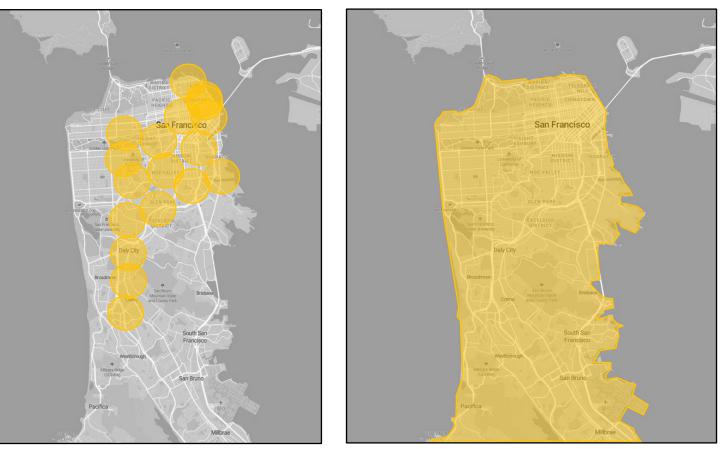
 Other chargers can significantly impact your energy bill. Boost Charger has predictable power consumption, resulting in lower peak demand and associated energy costs



#### **Charger electricity consumption**

## Place Chargers Anywhere and Scale Rapidly

- Single phase input compatible
- 6x installation capacity
  - Install six Boost Chargers in locations that would otherwise support only one ultrafast charger
- Easily upgrade your L2 chargers with ultrafast chargers
- Unlock ultrafast charging potential anywhere



Current transformer capacity at possible fast charging sites in San Francisco

Available site locations for Boost Charger

## AMP Asset & Energy Management



AMP is a backend data platform designed to work with FreeWire's own customer-facing EV charging network or third-party networks (EVgo) via an API. When working with third-party networks, FreeWire maintains control of the Boost Charger to capture value through grid management.

Option 1: FreeWire EV Charging Network



Option 2 (Preferred): Partner EV Charging Network





## Thank you

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## **Daily Operating Analysis**

