

Electric Vehicle Charging Seminar

What to Consider?

2024 Schaedler Yesco Expo



AGENDA

1 Siemens Plug-to-Grid™

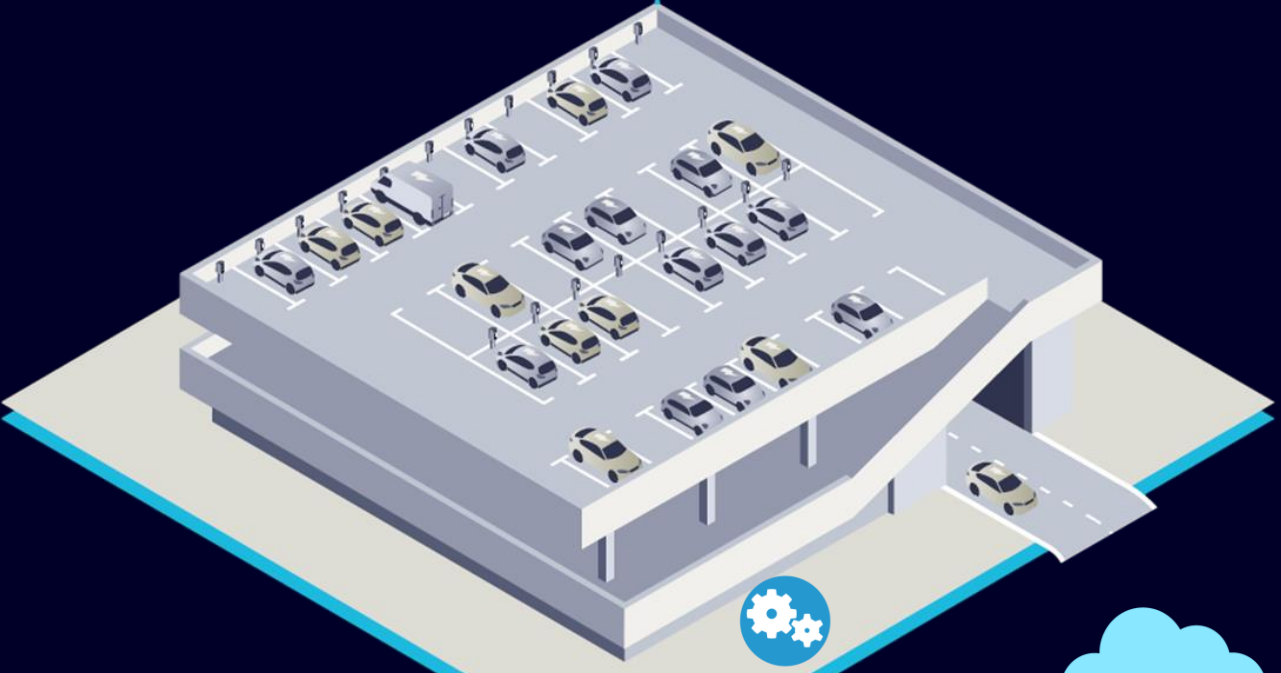
2 EV 101 – The Basics

3 Level 2 Chargers – What to Consider

4 Level 3 Chargers – Overview

5 Q & A Period

eMobility Supports Scaling Infrastructure Beyond EV chargers



Siemens PlugtoGrid™ Solution:

- Electrical Infrastructure
- EV Charging Solutions
- Asset management
- Financing
- Support Services
- And more!



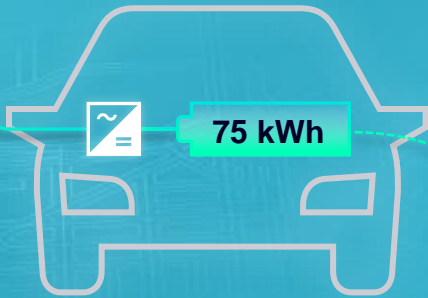
EV Chargers 101

The Basics

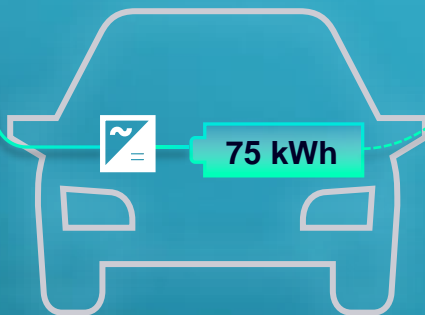


Electric Vehicles 101 ... Plug Types

AC
208/240V



DC
480V



N. America

AC



J1772 (Type 1)



Tesla

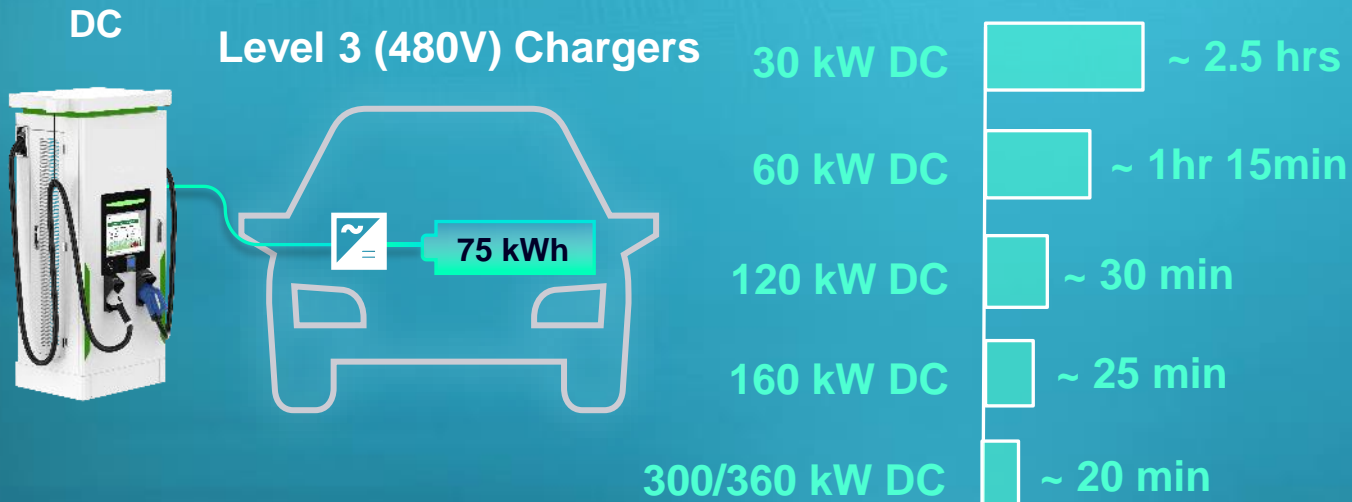
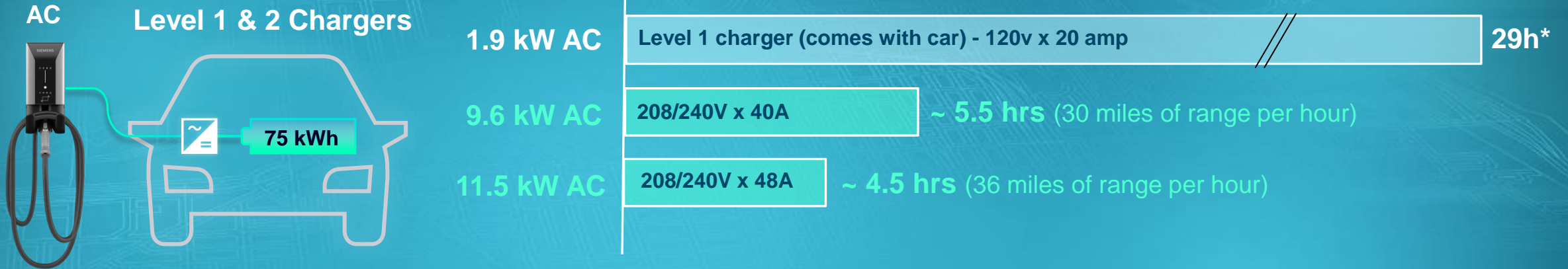
DC



CCS1

- In North America all vehicle manufacturers (except Tesla) use SAE J1772 connectors
- Tesla provides an adapter to enable use with J1772 connector charging stations
- Every EV sold in North America can use any charging station with J1772 connector.
- The CCS1 connector uses the J1772 charging inlet and adds two more pins below
- Tesla uses the same connector for level 1, level 2 and DC fast charge

Common Charging Times of an Average EV



AC vs DC Considerations

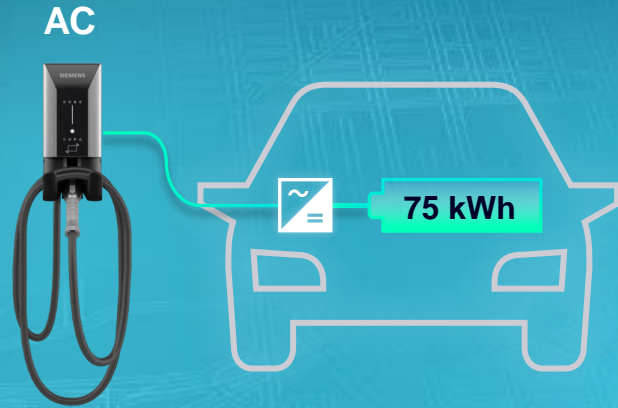
- Use Case / Dwell Time
- Cost
- Site Capacity
- Lead time
- Space Requirements

Level 2 Chargers

What to Consider?



Level 2 – Common Installation



9.6 kW AC

208/240V x 40A

~ 5.7 hrs (30 miles of range per hour)

11.5 kW AC

208/240V x 48A

~ 4.7 hrs (36 miles of range per hour)

Fleets



K-12 & Higher Ed



Hospitals



Gov't & Municipality



Commercial Buildings
Offices



Multifamily



Residential



Level 2 Chargers

What to Consider

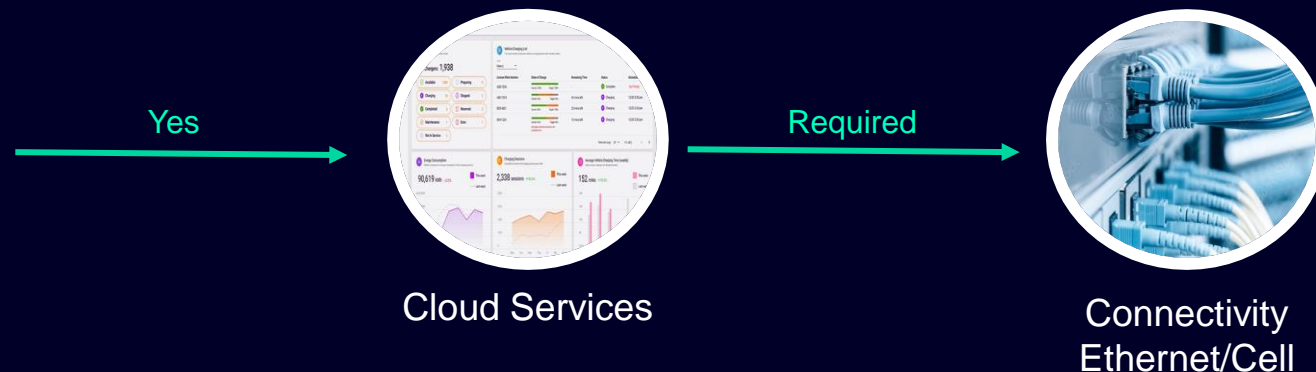
Service Capacity

- Existing Site Service Capacity Evaluation – work with your Electrical Contractor
- New Service Capacity – work with your EC & Utility
- Select the right amperage for your users

Charger Amps	Breaker Size	Approx. Charge Time
48A	60A	4.5 hours
40A	50A	5.5 hours
32A	40A	6.5 hours

Software Features

- Will the user pay for charging?
- Do you need monitoring/reporting?
- Do you need access control?
- Do you need Load Management?



Level 2 Chargers

What to Consider

Hardware Selection



- ✓ **Power**
 - ✓ 11.5kW (48A), 9.6kW (40A)
 - ✓ Service Limitations
- ✓ **Mounting Method**
 - ✓ Wall or Pedestal
 - ✓ Cable Retraction
- ✓ **Buy America Compliance**

Cloud Services



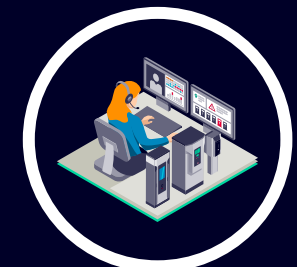
- ✓ **Billing**
- ✓ **Monitoring**
- ✓ **Load Management**
 - ✓ Maximize site capacity
- ✓ **RFID (Security) Management**

Connectivity Method



- ✓ **Ethernet**
 - ✓ Preferred Stability
 - ✓ One time cost
- ✓ **Cellular LTE**
 - ✓ Preferred Stability
 - ✓ Annual Data Cost
- ✓ **Wi-Fi**
 - ✓ Inconsistent Stability
 - ✓ Not Recommended
- ★ **Connectivity Required for Firmware Updates**


Services Offerings



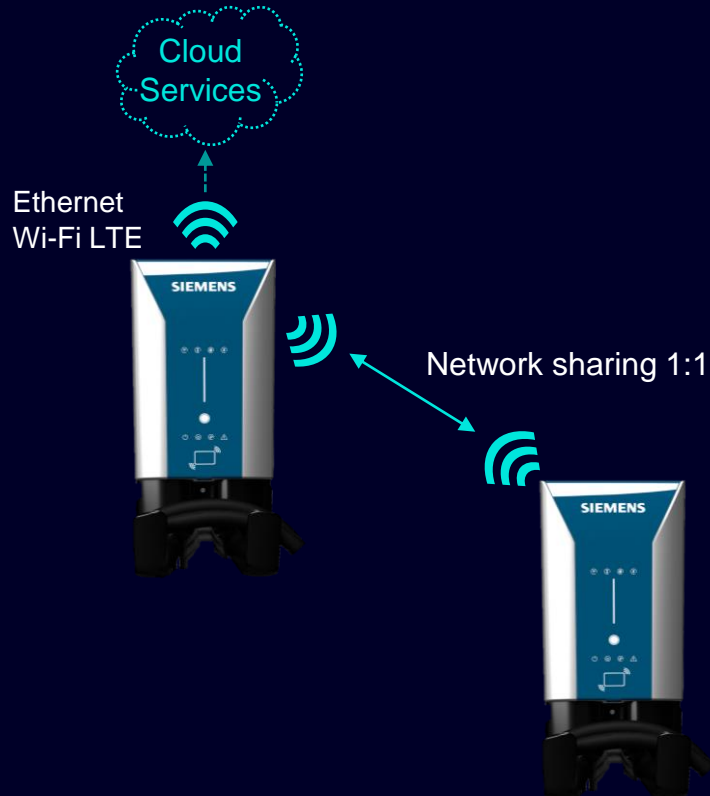
- ✓ **Startup**
 - ✓ Assigned Project Manager
 - ✓ On-site Commissioning
 - ✓ Cloud Services Support
- ✓ **Service Packages**
 - ✓ Extended Warranty
 - ✓ Preventative Maintenance
 - ✓ Corrective Maintenance SLA
 - ✓ Proactive Monitoring
 - ✓ Uptime Guarantee (97%)

Siemens Flexible Solution VersiCharge AC Series



Product	VersiCharge Blue 48A	VersiCharge 48A/40A
Category	Commercial	Residential
Buy America Compliant		✗
kW, Amperage	11.5kW	11.5kW, 9.6kW
Cable Length	25 feet	20 feet
Warranty	5 years	3 years
RFID Access Control	✓	✗
Wall Mount	✓	✓
Pedestal Mount	✓	✓
UL & Energy Star	✓	✓
NEMA4 Housing	✓	✓
Cloud Connectivity Type	Ethernet, Cellular, WiFi	Ethernet, Cellular

Siemens Packaged Solutions VersiPack



⚡ Dual Cloud Package

- Qty 2 – Buy America Level 48A Chargers
- Qty 1 – 95” Dual Mount Pedestal with Cable Retraction
- 1-Year of Cloud Services
- 1-Year Cellular Data Plan
- 1-Year of cloud services for two devices

Part Number: US2:VERSIPACK48BAC

⚡ Single Cloud Package

- Qty 1 – Buy America Level 48A Chargers
- Qty 1 – 95” Single Mount Pedestal with Cable Retraction
- 1-Year of Cloud Services
- 1-Year Cellular Data Plan
- 1-Year of cloud services for two devices

Part Number: US2:VERSIPACK48BA1

VersiPacks available in Non-Buy America Versions

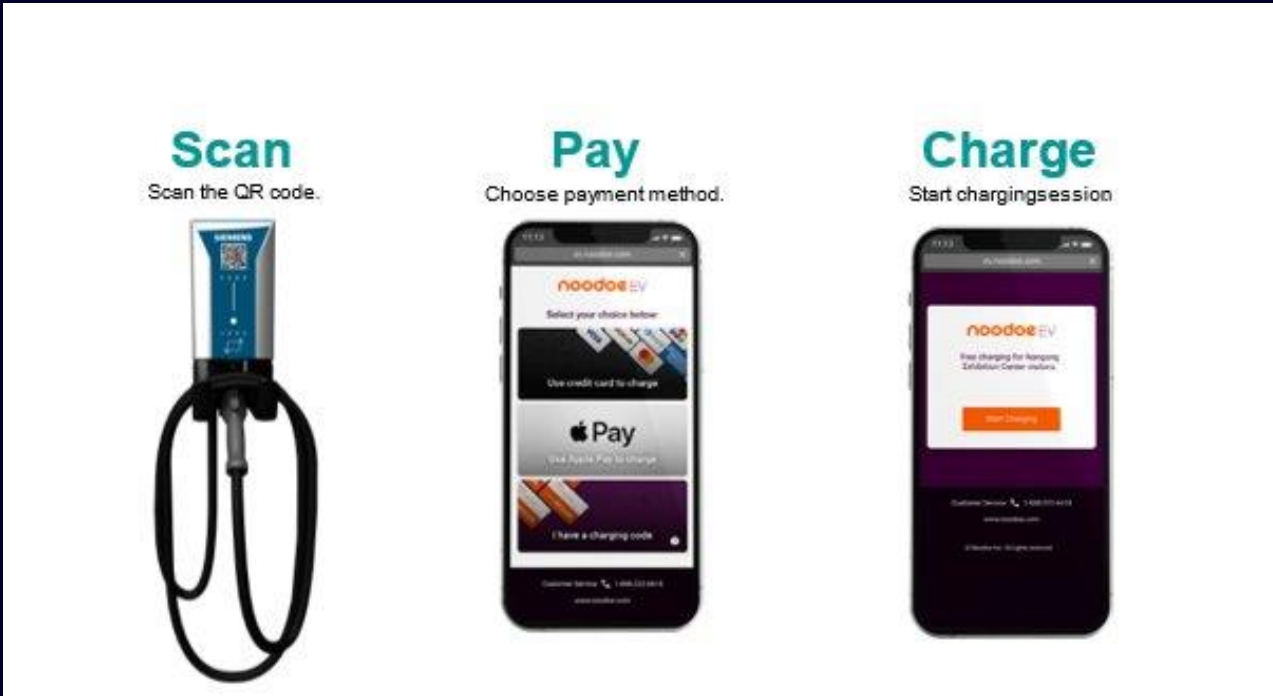


AC STARTUP

- White Glove Startup & Commissioning Services

Cloud Services

Customer Experience



Driver Features & Benefits

- App is not required for usage
- Driver App Dashboard
 - Available Charger Map
 - Store Payment Methods
 - Charge Session Notifications
 - View Charging History

Driver Charging Process

- Scan QR Code
- Choose/Input Payment Method
- Charge

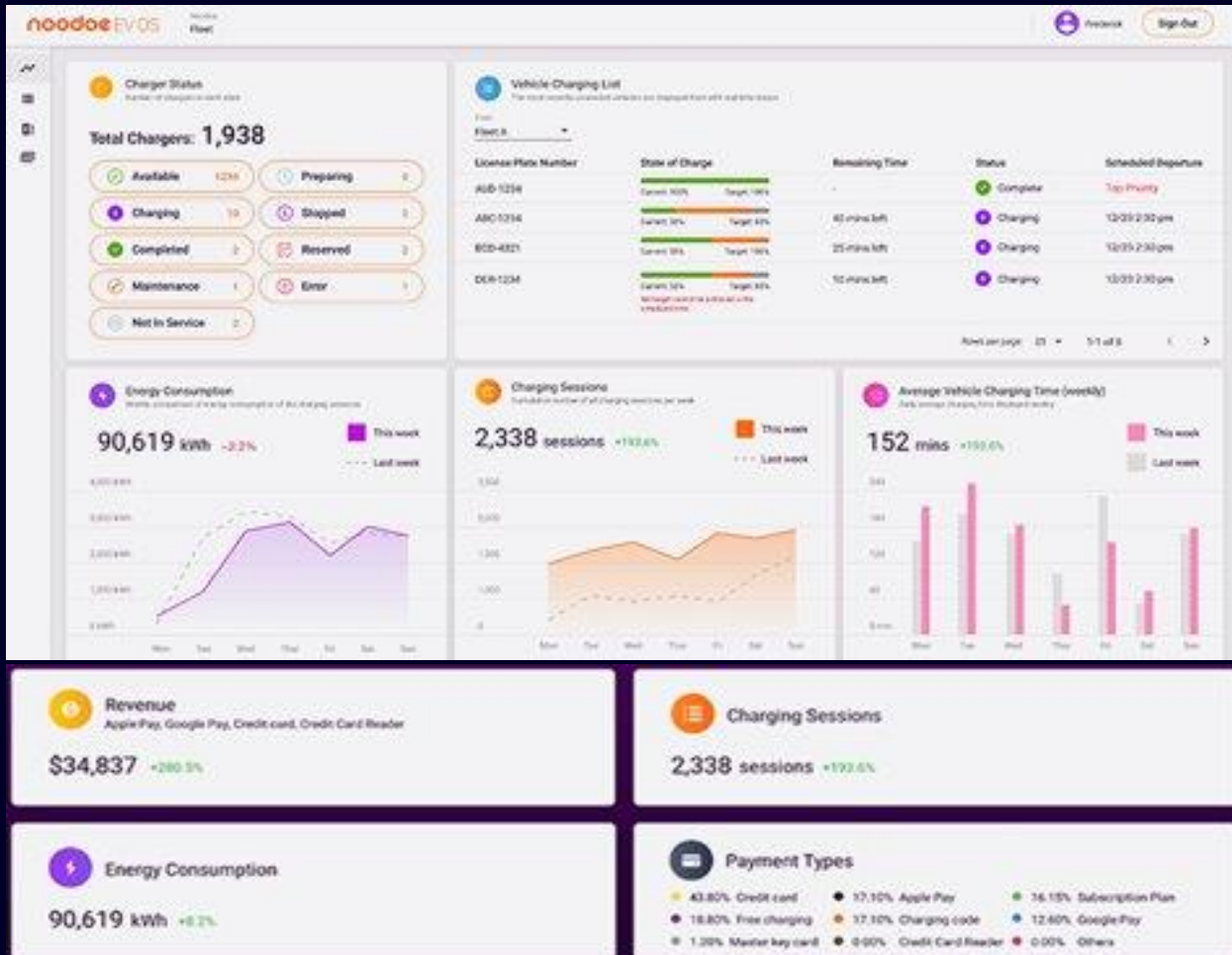


Owners can easily link a “generic” QR code to an AC charger by just scanning with a phone.

Scan the QR code – scan the charger's serial number and they are linked!



Cloud Services Owner Experience



Owner Features & Benefits

- Remote Monitoring via Owner Dashboard
- Remote Device Management
- Reporting Capabilities (including API)
- Billing and Price Management
 - Customize Billing Rates & Logic
 - Automatic Funds Transfer
- Load Management
 - Limit Output by Charger/Groups
 - Load Shifting & Load Shaving
 - Smart Scheduling

Siemens Customer Service Offerings



+ Remote Care Services



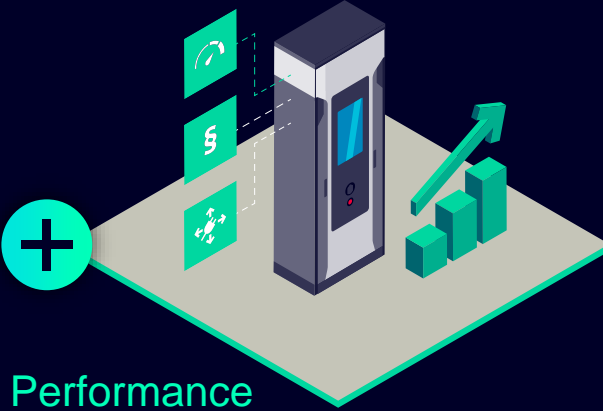
+ Startup & Commissioning Service



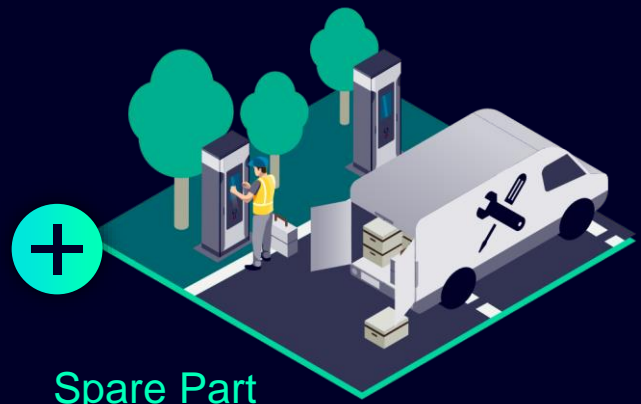
+ Training



+ Preventative Maintenance



+ SLA Performance Contracts



+ Spare Part Packages

Level 3 DC Fast Chargers


Solutions



⚡ Level 3 DC Fast Chargers

3-year Warranty
8-12 Week Lead Time

Fleet charging solutions for public, commercial, fleet and private sectors

30kW	60 kW	60kW – 160kW	300kW / 360kW
			
<ul style="list-style-type: none"> • 30 kW /100A • 4G / Wi-Fi / Ethernet connectivity • 7" Touch screen display • CCS1 Connector • Wall Mount / Pedestal (Optional) • Easy Installation (Indoor / Outdoor) 	<ul style="list-style-type: none"> • Mobile Unit • Adjustable Output <ul style="list-style-type: none"> • 11kW / 19kW / 50kW • Non-Permanent Installation • 4-pin Receptacle • Not capable of payment 	<ul style="list-style-type: none"> • 60kW / 60kW / 120kW / 160kW • 4G / Wi-Fi / Ethernet connectivity • Compact All-In-One DC Charger • Dual CCS1 • Parallel Charging • 10" touch screen • Optional Credit Card Reader / RFID • Cord Management • 160kW Buy America Available 	<ul style="list-style-type: none"> • 300kW / 360kW • 4G / Wi-Fi / Ethernet connectivity • Compact All-In-One DC Charger • Dual CCS1 – Liquid Cooled Cables • Parallel Charging • 10" touch screen • Optional Credit Card Reader / RFID • Cord Management • Buy America Available

Q & A

What Questions Do You Have?

