

Your EV Connections: "This is How We Do It"

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# Your EV Connections: This Is How WF No It!

### With Presenters:

- Jennifer Mefford- National Co-Chair of EVITP
- Kenneth MacDougal-Director of Business Dev. NECA-Penn Del Jersey
- Special guest, Fred Chempp-Sr. Project Manager, Ally Construction Services

## How EVSE Business is Coming to Market

### Federal \$\$/State \$\$ NEVI

- NEVI State RFP's out NOW
  - Highway DC/FC charging plans
  - Check Clean Fuels or Google NEVI RFP for your state
  - CFIs Out now for Municipal charging proposals (cities, towns and communities submit to State)
  - School Buses Buses and Charging (schools must submit a proposal to State=opportunity)

## **Private Investment – Bigger than NEVI**

- Companies are investing to ready for Fleet Deployments and IRA \$\$ that support expansion.
- Depot charging & home fleet charging
- Talk to your existing Customers about their plans/U.S. Content
- Real Estate companies







### **CONTENTS**

- Firm Overview
- 2 Relevant Experience
- 3 Electric Vehicle & Other Market Trends
- 4 Partnership Opportunities



### **INDUSTRY SECTORS**

















### **COMPANY SUCCESS**

- \$8MM (2017) to \$60MM+ (Projected 2023)
- 14 to 55+ Employees in 6 Years
- **Certified Veteran-Owned Business**
- Highwire Gold (2020) to Platinum Safety Awardee (2022)
- ISNetworld A Ratings Across all Participating Clients
- Offices in PA, NJ and MA

- Cost Plus, Design-Build, Lump Sum Construction Management Contracts, Construction Management as Advisor
- Full-Time Safety Director on Staff
- **Construction Management and Facilities** Infrastructure Services
- State Certified Internal Safety Committee

- Lead Project Job Safety Assessment (JSA) Development and Oversee Safe Execution of Project Plan
- **Experience in Following and Executing Current Good** Manufacturing Practice (cGMP) Regulations
- **EPCM At-Risk Construction Management**

### **CLIENT FEEDBACK**

REALIZATION

"I comfortably rely on ALLY for their construction expertise, guidance and practical knowledge...The success of my current project is testimony in itself to the ALLY team." AMANDA V. DIRECTOR | NYL INVESTORS

"...your entire team are ROCK STARS. We are at the point where they know how I think and what I want, it is an awesome customer experience." CHRIS H., COMMERCIAL STRATEGY MERCK

"ALLY executes over hundreds of projects a year for us supporting the Merck account...they go above and beyond to provide their employees with exemplary work/life balance, benefits and culture... I am 100% confident in their abilities and character." ROBERT M.

PROJECT EXECUTIVE MFRCK ACCOUNT

"I have worked with ALLY for several years and consider them a trusted partner...! value their dedication to good service and experienced people." DEAN T., BROKER

"During the training on the G2E equipment last week, Ryan (the trainer from InSinkerator, the company that designs and manufactures the G2E system) paused to tell us all what a clean and professional install MERCK has received...and that he wanted to use it as a best in class design. Kudos to you...I appreciate the safe and excellent work that you guys

do, and appreciate your partnership in High Risk Work Permit process!"

EINAR P.

SR. PM | MERCK ACCOUNT



### **ELECTRIC VEHICLE INFRASTRUCTURE SNAPSHOTS**



## TYPE PARKING GARAGE EV CHARGERS INSTALL LOCATION WEST POINT, PA TIME 6 MONTHS

- Existing parking garage installation of 16 EV Chargers working in conjunction with electrical contractor, electrical engineer and space planning vendor.
- Scope included design and constructability coordination with Tesla.
- All work was performed to allow passage of employees to not disrupt flow of traffic in active garages.

## TYPE EV CHARGERS INSTALL LOCATION RAHWAY, NJ TIME 12 WEEKS SF 100,000

- Installation of 36 Tesla/Universal combination car charging stations and associated infrastructure in 3 parking garages.
- Chargers installed on the 5th and 6th floor of each garage requiring a vertical installation component for the electrical infrastructure.
- Each garage was operational during the installation.

## TYPE PARKING LOT EV INSTALL LOCATION SOMERVILLE, NJ TIME 2 WEEKS

- · Installation of one Tesla car charging station
- Installation of one twin Universal car charging station (ability to charge three cars).
- Chargers were installed in a parking lot roughly 300 feet from the building requiring installation of underground conduit and an outdoor distribution panel.



## TYPE EV INFRASTRUCTURE LOCATION WEST POINT, PA TIME 9 MONTHS SF 75.000

- Existing parking garage electrical distribution system was in poor condition due to water infiltration and age of equipment.
- Provided a 40 year life span service with the flexibility for the EV charger footprint to increase by providing additional power for future demands.
- Scope included installing a 480 volt 400 amp for service from another building to provide temporary power for the garage and life safety elevators, security and fire alarm without service interruptions.



# EV MARKET TRENDS

### STRONG ACCELERATION IN EV ADOPTION FORECASTED

Over the next decade, the EV adoption rate will vary widely given rapid changes in both government policies and the auto manufacturing industry. S&P Global Mobility forecasts electric vehicle sales in the United States could reach 40 percent of total passenger car sales by 2030, and more optimistic projections foresee electric vehicle sales



### GOVERNMENT POLICY DRIVING DEMAND FOR ELECTRIC VEHICLES

surpassing 50 percent by 2030. (Source U.S. Bureau of Labor Statistics, FEB2023).

- NOVEMBER2021 Infrastructure Investment and Jobs Act, signed into law allocating \$7.5 billion to building out a nationwide charging network.
- Large investments were included in legislation to upgrade the nation's power grid for accommodating rising electricity demand as EV adoption grows
   —and to expand domestic battery production and recycling capacity.
- AUGUST2022 Inflation Reduction Act, signed into law an extended a tax credit for consumers of up to \$7,500 for the purchase of new EVs until 2032 and provided, for the first time, that tax credits could be used for purchasing used EVs.
- State government policies also offer incentives, such as rebates, to encourage EV ownership by helping offset the high upfront costs of EVs.
- A number of states have also implemented a zero-emission vehicle (ZEV) program, which requires auto manufacturers to sell a set quota of battery-electric or plug-in hybrid-electric vehicles, and have passed laws that ban the sale of new gas-powered vehicles by 2035.



# EV MARKET TRENDS

### **INCREASE IN EV CHARGING OCCUPATIONS**

As the number of EVs on the road increases, so too will demand for charging infrastructure. Electrical-related occupations, mainly electricians, can perform home installations but to support the widespread adoption of EVs, a reliable and publicly available charging network will be needed.

- Studies indicate one public charger is needed for every 10 to 15 EVs, even with drivers charging at home.
- The following is a small sample of the occupations that will be responsible for deploying and supporting the nationwide buildout of EV chargers: Urban and Regional Planners, Electricians, Electrical Power-Line Installers and Repairers.

Employment, 2021	Employment, 2031	Employment Change 2021–2031	% Employment Change 2021– 2031	Annual Average Occupational Openings 2021– 2031	Median Annual Aage, 2021	Education Requiremen t
158,134.7	166,452.1	8,317.4	5.3	19,532.5	\$45,760	Not Applicable
41.9	43.5	1.6	3.8	3.8	78,500	Master's degree
711.2	761.4	50.2	7.1	79.9	60,040	High school diploma or equivalent
126.6	130.7	4.0	3.2	11.1	78,310	High school diploma or equivalent
1,358.4	1,430.3	71.9	5.3	143.2	37,770	No formal educational credential
	2021 158,134.7 41.9 711.2 126.6	2021     2031       158,134.7     166,452.1       41.9     43.5       711.2     761.4       126.6     130.7	Employment, 2021 2031 Change 2021–2031  158,134.7 166,452.1 8,317.4  41.9 43.5 1.6  711.2 761.4 50.2	Employment, 2021 Change 2021–2031 Change 2021–2031  158,134.7 166,452.1 8,317.4 5.3  41.9 43.5 1.6 3.8  711.2 761.4 50.2 7.1  126.6 130.7 4.0 3.2	Employment, 2021         Employment, 2031         Employment Change 2021- 2031         % Employment Change 2021- 2031         Occupational Openings 2021- 2031           158,134.7         166,452.1         8,317.4         5.3         19,532.5           41.9         43.5         1.6         3.8         3.8           711.2         761.4         50.2         7.1         79.9           126.6         130.7         4.0         3.2         11.1	Employment, 2021         Employment, 2031         Employment Change 2021- 2031         Semployment Change 2021- 2031         Occupational Openings 2021- 2031         Median Annual Aage, 2021           158,134.7         166,452.1         8,317.4         5.3         19,532.5         \$45,760           41.9         43.5         1.6         3.8         3.8         78,500           711.2         761.4         50.2         7.1         79.9         60,040           126.6         130.7         4.0         3.2         11.1         78,310

# OTHER MARKET TRENDS

### OTHER ALTERNATIVE ENERGY MARKET OPPORTUNITIES FOR THE CONSTRUCTION INDUSTRY

- Solar- Ground Array or Roof Top
- Solid Oxide Fuel Cells (SOFC) Natural Gas
- Polymer Electrolyte Membrane (PEM) Fuel Cell-Hydrogen
- Wind Horizontal or Vertical Axis Turbine

#### **Terra High Power Gen III Charger** Long cable reach thanks to the long charge No exposed hardware ensuring 3 x 50 kW+ redundant power cable with retraction system safe and vandalism-proof modules for high reliability. design, suitable for installation High voltage charging up to 4G connection in public locations 920 V DC for next generation for remote updates of electric vehicles, including and for integration with trucks and buses back-end applications Improved visibility in dark parking areas with LED strips and top light Light and flexible 500 A liquid cooled CCS cable for easy handling Customizable 15" touchsreen and payment terminal to improve user experience Future proof due to wide output voltage range of 150 - 920 V DC, supporting todays and next generation EVs Single or dual outlet CCS and CHAdeMO connectors to serve the widest range of EVs Integrated isolation transformer DC connection to power Compact charge post eliminates the need for installing cabinets with Dynamic to optimize space around costly additional equipment and DC power sharing and the vehicle ensures the electric vehicle is site power management Silent and powerful protected from any short circuit options cooler for 500 A charging event that occurs on another at low noise levels electric vehicle or on the grid

#### SPECIFICATIONS

#### MAX CHARGING POWER

CCS: 500 A - 350 kW CHAdeMO: 200 A

### MAX CHARGING VOLTAGE

CCS: 920 V DC CHAdeMO: 500 V DC

### POWER EFFICIENCY

### 94% at full load

### DIMENSIONS & WEIGHT Charge Post

Height 245.8 cm / 96.8 in Width 59 cm / 23.2 in Depth 42.5 cm / 16.7 in

250 kg / 551 lbs

#### **Power Cabinet**

Height 203 cm / 79.9 in Width 117 cm / 46.1 in Depth 77 cm / 30.3 in

1340 kg / 2954 lbs





### PARTNERSHIP OPPORTUNITIES

### **ALLY NEW CLIENT NEEDS**

- Construction management of 480-volt Level III EV Charging Stations.
- Develop potentially 500 locations across the U.S.
- ALLY will manage the construction activities of a percentage of these charger locations starting in the New England area, then move South.

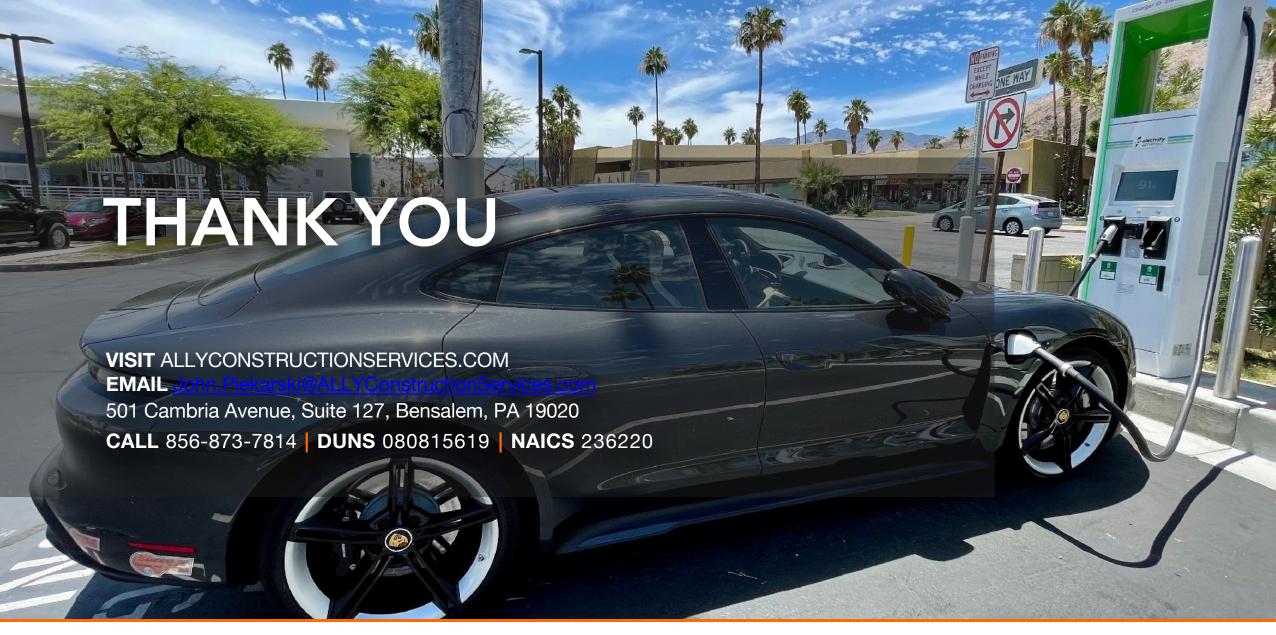
### **PARTNERSHIP REQUIREMENTS**

- Safety.
- Quality.
- Experienced trained professionals.
- Reputable and reliable.
- Schedule driven.
- Cooperation, Innovative ideas and efficiency.



















### How EVSE Business is Coming to Market

### Consumer Market – Residential

- Customer Self-Select
  - Not required to use a Program Manager
  - Most are opting for Program Manager support
  - Bundled services (smart panel upgrades)
  - Bi-directional capability

## **Program Managers – Contractor Networks**

- Provide turn-key service through contractor networks for management for OEM's, EVSE companies, corporations and consumers.
- Not only Residential Fleet is growing the fastest.
- If you're not in the Network, you won't get served these work orders
- EV Solar Storage
- Seeking BETTER contractors



















- Consumer (Home)
- Workplace
- Retail
- Public
- Fleet
- Transit
- Service & Maintenance

