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6/15/2026

Honorable Sen. Bobby Joe Champion
Honorable Dave Pinto

Honorable Sen. Rich Draheim
Honorable Dave Baker

RE: Submission of Automotive Component Manufacturer SPAP-24-0008 Report to the Minnesota Legislature

Dear Legislators:

As required by Laws of Minnesota 2023, chapter 53, article 20, section 2, subdivision 2 (ss) please find below the Automotive Component Manufacturer SPAP-24-0008 2025 Report to the Minnesota Legislature.

I am writing to express my sincere thanks for your support of the Automotive Component Manufacturer SPAP-24-0008 that provided $1.475M to FLEXFORGE, LLC.

This funding is vital to our organization, FLEXFORGE, LLC. This funding allowed us to initially employ one Minnesota engineering headcount in 2025. This support aids us in tracking to our mandate to manufacture components that will support the Electric Vehicle (EV) Charging Infrastructure (such EV charging handles) and EV Automotive peripheral components (such as EV charging adaptors and charging inlets). To date, the company has also generated two issued Utility patents and a unique International Design patent issued in eleven countries. These patents evolve the state of electric vehicle charging and infrastructure by reducing the cost to charge a vehicle and increasing the efficiency of EV charging stations repairs. Studies indicate that 2026 to 2030 EV Charging Station Growth will yield a market size of $7.6B by 2030 for EV charging handles. FLEXFORGE will utilize a continuation of SPAP-24-0008 to fund for four Minnesota engineering headcount in 2026 (8320 hrs at $36 per-hr) to capture a portion of this market. FLEXFORGE LLC. is also adding a Battery Energy Storage System (BESS) to support the EV charging infrastructure to our portfolio that will require additional headcount in 2027.

Thank you again for your leadership and support.

Sincerely,

Dr. J. Branden Micheau-Cunningham, M.Eng, Ph.D.

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1. Electric Vehicle Infrastructure Overview (Minnesota and Beyond)

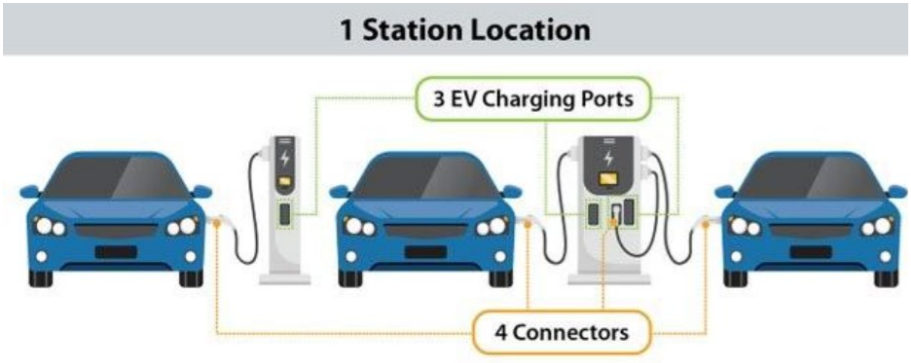
The Minnesota Electric Vehicle Infrastructure Program Report created by the Minnesota Dept. of Transportation (https://www.lrl.mn.gov/docs/2026/mandated/260384.pdf) states that:

Transitioning vehicles to electric vehicles is key in MnDOT's Carbon Reduction Strategy (2023). Electric vehicle (EV) adoption is necessary to achieve reductions in carbon emissions from transportation and improve air quality. For people to use EVs, there needs to be a statewide recharging network. EV adoption and charger installation are growing in Minnesota as shown in the Atlas Public Policy EV Dashboard. This dashboard provides information on types of EVs and charging infrastructure.

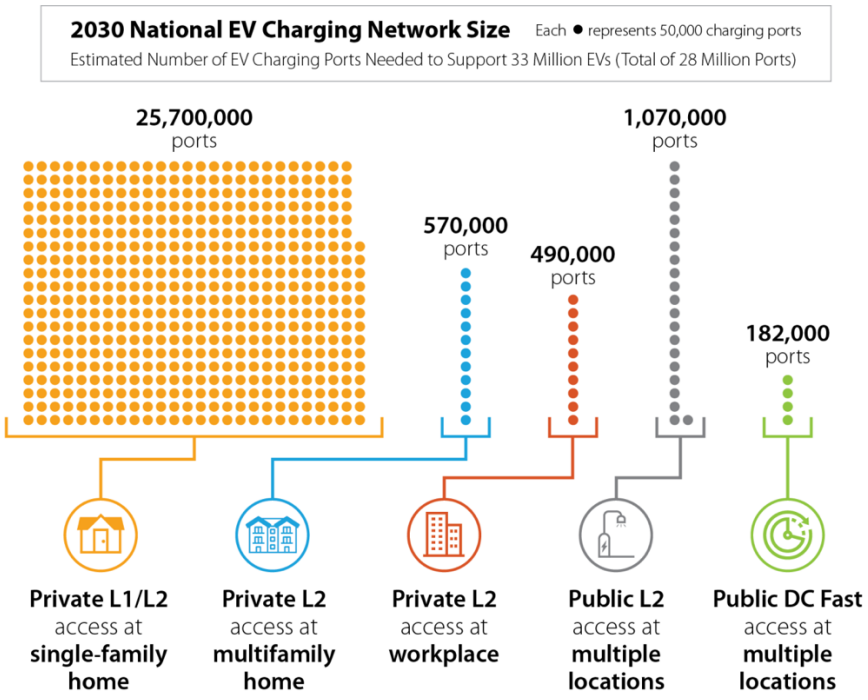
- Battery Electric Vehicles (BEVs) – uses only an electric motor; charged by plugging into an electrical source
- Plug-in Hybrid Electric Vehicles (PHEVs)- uses both an electric motor and a gasoline engine
- Direct Current Fast Charger (DCFC)- typically 50 kW – 350+ kW
- Level 2 Chargers - alternating current charging; typically, 3.6 – 19 kW

Per this EV Dashboard, as of Oct. 8, 2025, there are 59,763 BEVs and 24,914 PHEVs registered in Minnesota. There are approximately 819 DCFC public charging ports and 1,986 Level 2 public charging ports in Minnesota. One charging port can charge one vehicle at a time.

Figure 1-EV charging station components, Alternative Fuels Data Center



In addition, The US Department of Energy states that "By 2030, the U.S. Will Need 28 Million EV Charging Ports To Support 33 Million EVs" https://www.energy.gov/cmei/evgrid-assist-charts-and-figures



The required hardware to charge and EV is a charging station that transfers current from the charging station to the vehicle through a connector. These connectors come in various standardized configurations and are a function of the current levels and types required for the application. The most common charging standards for in North America are:

- SAE J1772
- SAE CCS1
- SAE J3400

Unfortunately, the majority of these parts are made in China or sold by a single source suppliers. This creates a supply chain issue as well as off-shores manufacturing. Studies indicate that 2026 to 2030 EV Charging Station growth will yield a market size of $24 billion by 2030 for EV charging connectors and in addition to forward looking sales around new EV charging installations, we are also able to retrofit our connectors into the aging EV charging infrastructure. The charging adaptor market is projected at $6 billion by 2030.

2. Automotive Component Manufacturer SPAP-24-0008

On June 4, 2024, the State and FLEXFORGE, LLC, entered into a grant contract agreement identified as SWIFT Contract 248395 for a total obligation of $5 million. This grant was funded pursuant to Laws of Minnesota 2023, chapter 53, article 20, section 2, subdivision 2 (ss). On July 2, 2025, FLEXFORGE was informed that as a result of a legislative action, $3.5 million of the original $5 million appropriation to fund this grant contract agreement was canceled without notice.

This severely changed our ability to track to and develop the business on our original roadmap plan and the original 16 FTE to be hired by year three from the June 4, 2024 contract start date. FLEXFORGE has rescaled proportionately and contracted to add 4 FTE in order to support the manufacturing and commercialization of these products in 2026.

As required by Laws of Minnesota 2023, chapter 53, article 20, section 2, subdivision 2 (ss) please find this Automotive Component Manufacturer SPAP-24-0008 2025 Report to the Minnesota Legislature for the provided $1.475M to FLEXFORGE, LLC.

In 2025 the grant funded +3000 engineering hours that have resulted in the design of the following four products:

- J1772 Charging Station Connectors
- CCS1 Charging Station Connectors
- J3400 Charging Station Connectors
- EV Charging Station Adaptor

and two core patents:

- Active And Passive Heat Exchanger for Cooling Electric Vehicle Charging Handles (US 20240262162 A1) August 8, 2024
- Electric Vehicle Charging Adaptor with Forced-Air Cooling (US 20250388103 A1) December 25, 2025

Our unique family of connectors have generated Design Patents in twelve countries. These are based on the harmonized connector design presented in the patent Active and Passive Heat Exchanger for Cooling Electric Vehicle Charging Handles.

Title	Type	Country
DESIGN FOR AN ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - ORG	International Design Depository
01OAPI01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	African Intellectual Property Organization (OAPI)
01BZ01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	Belize
01CA01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	Canada
01CN01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	China
01EM01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	European Union
01JP01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	Japan
01MX01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	Mexico
01UA01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	Ukraine
01GB01 - Hague Design for ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	United Kingdom
01BR01 - HAGUE DESIGN FOR ELECTRICAL VEHICLE CHARGING HANDLE	Design Registration - INT	Brazil
01US02 - ACTIVE AND PASSIVE HEAT EXCHANGER FOR COOLING ELECTRIC VEHICLE CHARGING HANDLES	Design - CON	United States of America

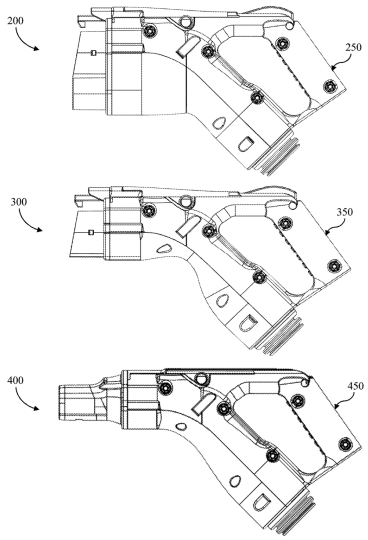
FLEXFORGE is working to obtain Underwriter's Laboratory (UL) certification on all products.

During this funding period, FLEXFORGE also responded to an RFP for EV Charging. In September 2024, the Denver International Airport (DEN) requested proposals to increase the number of public and employee electric vehicle (EV) charging stations available at the airport. The energy grid calculations to support the proposal were done in partnership with Clean Calcs, Austin, TX.

3. FLEXFORGE Manufacturing and Products

FLEXFORGE manufactured our first article during 2024 in Brooklyn Park, MN. In 2024, the SAE J1772 (also known as the Type 1 connector) was the standard North American plug for alternating current (AC) Level 1 and Level 2 electric vehicle charging. These Components are made from 25% GF PA6/6 (Nylon 6/6 reinforced with 25% glass fiber by weight) with electrical contacts of an electroplated copper-alloy. In late 2024, the TESLA designed North American Charging Standard (NACS) connector officially became the SAE standardized J3400 publicly approved EV charging protocol. By transitioning NACS to an open, standardized specification managed by SAE International, all automakers and charging networks can now manufacture, build, and deploy the connector without requiring Tesla's proprietary licensing. This high adoption rate by the North American auto industry required FLEXFORGE to engineer and add a J3400 charging connector to its product line.

This image shows our full suite of EV charging handles. In addition, FLEXFORGE has also generated two issued Utility patents and an International Design Patent issued in eleven countries for EV charging connectors. Our patented designs for SAE J1772, SAE CCS1 and SAE J3400, address the challenges of system heating during high-speed DC Fast charging (increasing the cost and hazards of charging) and the serviceability of all connector types if the connectors are damaged (due to wear or vehicle induced damage).



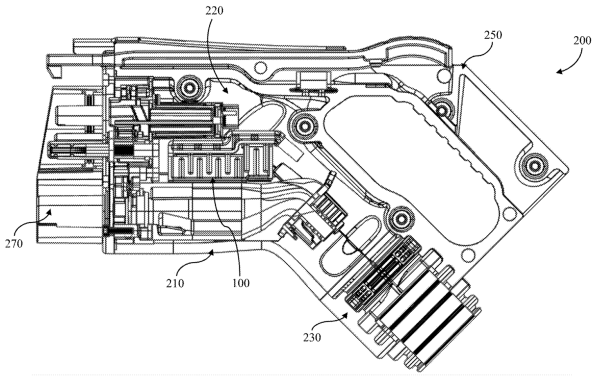


FIG. 15

Under patent, we have also integrated cooling into EV charging adaptors. These adaptors are used between the charging connectors and vehicle to allow cross mode charging.

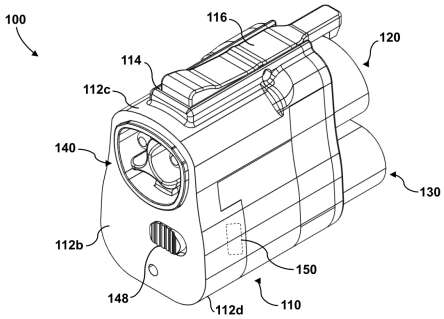


FIG. 1A

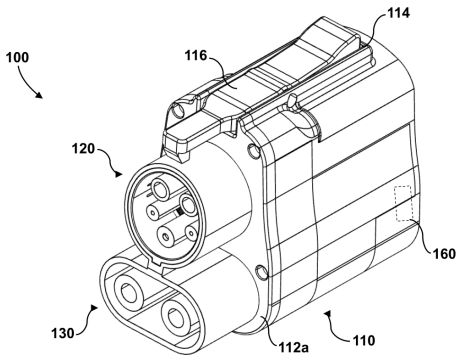
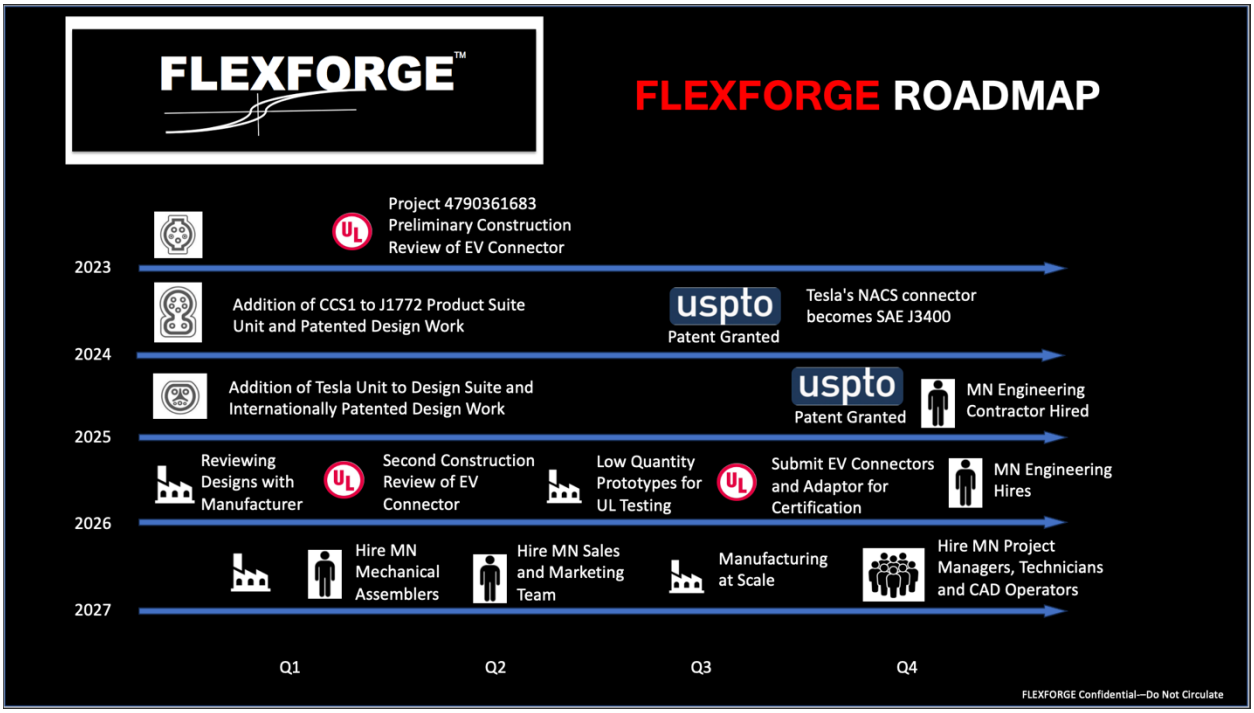


FIG. 1B

These patents evolve the state of electric vehicle charging and infrastructure by reducing the cost to charge a vehicle and increasing the efficiency of EV charging stations repairs.

4. Funding Usage and Roadmap

This funding is vital to our organization, FLEXFORGE, LLC. and allowed us to initially track to our mandate to domestically manufacture components that will support the Electric Vehicle (EV) Charging Infrastructure. Our EV charging connecters and EV Automotive peripheral components such as EV charging adaptors and vehicle-side charging inlets. The company roadmap company shown below will be executed at our 7700 68th Avenue N, Suite 10, Brooklyn Park, MN 55428 location.



5. SPAP-24-0008 Expenditures

In 2025, FLEXFORGE has utilized SPAP-24-0008 in the following manner, to execute FLEXFORGE's EV program, approximately $780,000 has been applied in 2025 with two FT HC. This has been for engineering supervisors, engineering staffing and accounting from January 1,2025 through December 31, 2025. FLEXFORGE has utilized the following amount of SPAP-24-0008 since the beginning of our contract.

Engineering/Supervision	$1,019,652.66
Legal	$13,146.20
Accounting	$1,004.67
Business Certifications	$250.00
Tax Prep	$1,861.00
Subscriptions	$4,680.37

6. Looking Ahead & Conclusion

FLEXFORGE has contracted to employ four FT HC engineering headcount in 2026 at $74,880/yr. to support our manufacturing at 7700 68th Avenue N, Suite 10, Brooklyn Park, MN 55428. With additional funding restored to the original $5M level, FLEXFORGE could place headcount according to the following schedule between FY 2027-29.

Job Type	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Total
Engineering Supervisor	2					
Engineer	1			2		
Jr Engineer	2	1		2	1	
Engineering Manager			1			
Mechanical Assembler		2	1	1		
Electrical Assembler			1	1		
Welder			1			
Machinist		1	1			
Office Manager			1			
Sales and Marketing				4	2	
Accountant	1		1			
Head Count	6	4	5	10	3	28

State funds allocated to the Automotive Component Manufacturer SPAP-24-0008 program are currently obligated to active projects and authorized for use through Fiscal Year 2026. Given the extended timeframe of these projects and their impacts, we request our funding be increased and extended beyond FY26. This extension is critical to ensure adequate resources for ongoing operations and manufacturing of EV charging components for SPAP-24-0008.

As Minnesota continues to advance electric vehicle infrastructure under the NEVI program, FLEXFORGE can assist Minnesota's progress on clean transportation goals, support in economic development, and provide residents and businesses with reliable access to EV charging infrastructure.

Thank you again for your leadership and support.