Appendix B – NEVI Requirements

The requirements below must be followed to ensure compliance with the NEVI Formula Program Final Rule that went into effect starting March 30, 2023.

Installation, Operation, and Maintenance

EVSE Specifications

- All EVSE must be certified by an Occupational Safety and Health Administration Nationally Recognized Testing Laboratory.
- There is a minimum of four (4) DCFC chargers capable of continuously and concurrently charge a minimum power capacity of 150kW each, and able to support output voltages between 250- and 920-volts DC.
- Charging ports are compatible with standard electric vehicle charging protocols, such as SAE J1772 or CHAdeMO, and must be able to charge any Combined Charging System (CCS)-compliant vehicle.

Access

- All EVSE must be accessible 24 hours per day, 7 days per week year-round.
- All EVSE must be ADA compliant.
- ALL EVSE must provide access for limited English proficiencies.
- No EVSE should require a membership for use.

Payment Options

- All charging stations must have contactless payment methods accepting all major debit/credit cards and Plug and Charge payment capabilities using the ISO 15118 standard.
- All charging stations must have automated toll-free phone number or a short message/messaging system (SMS) that provides the EV charging customer with the option to initiate a charging session and submit payment.
- There should be no delay, limit, or curtail power flow based on payment method or membership.
- All payment methods must provide access for limited English proficiencies and accessibility for people with disabilities.

Safety and Security

- States must implement physical and cybersecurity strategies consistent with their respective State Deployment Plans.

Interoperability

Charger-to-EV Communication.

- Chargers must conform to ISO 15118-3 and must have hardware capable of implementing both ISO 15118-2 and ISO 15118-20. Charger software must conform to ISO 15118-2 and be capable of Plug and Charge within 1 year of final rules. Conformance testing for charger software and hardware should follow ISO 15118-4 and ISO 15118-5, respectively.

Charger-to-Charger-Network Communication

- Chargers must conform to Open Charge Point Protocol (OCPP) 1.6J or higher. Chargers must conform to OCPP 2.0.1 within 1 year of final rules

Charging-Network-to-Charging-Network Communication

- Within a year of final rule, charging networks must be capable of communicating with other charging networks in accordance with Open Charge Point Interface (OCPI) 2.2.1.

Network Switching Capability

- Chargers must be designed to securely switch charging network providers without any changes to hardware.

Traffic Control Devices or On-Premises Signs

- Ensure compliance with 23 CFR part 655 and 23 CFR part 750.

Data

Privacy

- Charging station operators must collect, process, and retain only the personal information necessary to provide the charging service to a consumer.
- Chargers and charging networks should be compliant with appropriate Payment Card Industry Data Security Standards (PCI DSS) for the processing, transmission, and storage of cardholder data.

Collection and Reporting

- Charging stations must provide a **quarterly** report to INDOT that would include the following:
    - Charging station identifier that the data can be associated with
    - Charging port identifier
    - Charging session start time, end time, and any error codes associated with an unsuccessful charging session by port
    - Energy (kWh) dispensed to EVs per charging session by port
    - Peak session power (kW) by port
    - Payment method associated with each charging session
    - Charging station port uptime, T_outage, and T_excluded
    - Duration (minutes) of each outage
- Beginning in 2024, States and other direct recipients must ensure the following data are submitted on an **annual** basis, on or before March 1, in a manner prescribed by FHWA. Any annual data made public will be aggregated and anonymized to protect confidential business information. This would include the following:
    - Maintenance and repair cost per charging station for the previous year
    - For private entities, identification of and participation in any State or local business opportunity certification programs including but not limited to minority-owned businesses, Veteran-owned businesses, woman-owned businesses, and businesses owned by economically disadvantaged individuals
- Beginning in 2024, states and other direct recipients must ensure the following data are collected and submitted once for each charging station, on or before March 1 of each year, in a manner prescribed by the FHWA. Any **one-time** data made public will be aggregated and anonymized to protect confidential business information. This would include the following:
    - The name and address of the private entity(ies) involved in the operation and maintenance of chargers.
    - Distributed energy resource installed capacity, in kW or kWh as appropriate, of asset by type (e.g., stationary battery, solar, etc.) per charging station; and
    - Charging station real property acquisition cost, charging equipment acquisition and installation cost, and distributed energy resource acquisition and installation cost; and
    - Aggregate grid connection and upgrade costs paid to the electric utility as part of the project, separated into:

    - Total distribution and system costs, such as extensions to overhead/underground lines, and upgrades from single-phase to three-phase lines;
    - Total service costs, such as the cost of including poles, transformers, meters, and on-service connection equipment.

Charging Network Connectivity

Charger-to-Charger-Network Communication

- EVSE Secure communication with charging network via OCPP (see § 680.120 c.1); Hardware ability to change networks; Receive/implement secure, remote software updates, with real-time protocol translation, encryption/decryption, authentication, and authorization with network; Remote charger monitoring, diagnostics, control, and smart charge management capabilities.
- EVSE & Network must securely measure, communicate, store, and report energy/power dispensed, real-time charging-port status, real-time price to the customer, and port uptime.

Charging-Network-to-Charging-Network Communication

- The charging network should be capable of communicating with other networks to enable an EV driver to use a single credential to charge at charging stations that are a part of multiple charging networks.

Charging-Network-to-Grid Communication

- Charging networks must be capable of secure communication with electric utilities, other energy providers, or local energy management systems.

Disrupted Network Connectivity

- Chargers must remain functional if communication with the charging network is temporarily disrupted, such that they initiate and complete charging sessions, providing the minimum required power level defined in § 680.106(d).

Public Information on EVSE Locations, Pricing, Accessibility

Communication of Price

- Chargers must display and base the price for electricity to charge in $/kWh.
- Pricing displayed/communicated real-time. Price at start session cannot change during session.

- Price structure including other fees in addition to price for electricity must be clearly displayed and explained via app or website with instructions for finding this info posted and accessible at each charging station.

Minimum Uptime

- Each charging port must have an average annual uptime of at least 97 percent, with certain exclusions for maintenance, vandalism, and natural disasters, calculated on a monthly basis for the previous twelve months.
- The equation to calculate uptime is: μ= ((525,600 - (T_outage - T_excluded))/525,600) X 100

Third-Party Data Sharing

Charging station operators must ensure that the following data fields are made available, free of charge, to third-party software developers, via application programming interface:

1. Unique charging station name or identifier;
2. Address (street address, city, State, and zip code) of the property where the
3. charging station is located;
4. Geographic coordinates in decimal degrees of exact charging station location;
5. Charging station operator name;
6. Charging network provider name;
7. Charging station status (operational, under construction, planned, or decommissioned);
8. Charging station access information:
    a) Charging station access type (public or limited to commercial vehicles);
    b) (Charging station access days/times (hours of operation for the charging station);
9. Charging port information:
    i. Number of charging ports;
    ii. Unique port identifier;
    iii. Connector types available by port;
    iv. Charging level by port (DCFC, AC Level 2, etc.);
    v. Power delivery rating in kilowatts by port;
    vi. Accessibility by vehicle with trailer (pull-through stall) by port (yes/no);
    vii. Real-time status by port in terms defined by Open Charge Point Interface 2.2.1;
        a. (9) Pricing and payment information:
10. Pricing structure;
    i. Real-time price to charge at each charging port, in terms defined by Open Charge Point Interface 2.2.1; and

ii. Payment methods accepted at charging station.

References

Minimum Federal statutory requirements can be found in the Final NEVI Standards and Requirements Part 680 – National Electric Vehicle Infrastructure Standards and Requirements[1]. These Final Federal requirements govern the following aspects of NEVI funded projects:

1. Procurement Process Transparency: § 680.106(a)
2. Number and Type of Chargers: § 680.106(b)
3. Connector Type: Section: § 680.106(c)
4. Power Levels: § 680.106(d)
5. Availability: § 680.106(e)
6. Payment Methods: § 680.106(f)
7. Equipment Certification: § 680.106(g)
8. Security: § 680.106(h)
9. Long Term Stewardship: § 680.106(i)
10. Qualified Technician: § 680.106(j)
11. Customer Service: § 680.106(k)
12. Customer Data Privacy: § 680.106(l)
13. Use of Program Income: § 680.106(m)
14. Interoperability of Electric Vehicle Charging Infrastructure: § 680.108
15. Traffic Control Devices or on-premises signs: § 680.110
16. Data Submittal: § 680.112
17. Charging Network Connectivity: § 680.114
18. Communication of Price: § 680.116(a)
19. Minimum Uptime: § 680.116(b)
20. Third-Party Data Sharing: § 680.116(c)
21. Title 23, 2 CFR 200, and Buy America: § 680.118(a)
22. Davis Bacon Federal Wage Rate: § 680.118(b)
23. ADA Requirements: § 680.118(c)
24. Title VI of the Civil Rights Act of 1964: § 680.118(d)
25. Title VIII of the Civil Rights Act of 1968: § 680.118(e)
26. Uniform Relocation Assistance and Real Property Acquisition Act: § 680.118(g)
27. National Environmental Policy Act of 1969 (NEPA): § 680.118(h)

[1] https://www.federalregister.gov/documents/2023/02/28/2023-03500/national-electric-vehicle-infrastructure-standards-and-requirements