

Overview of FHWA NPRM and Electric Era's Request for LFP BESS Waiver

Background

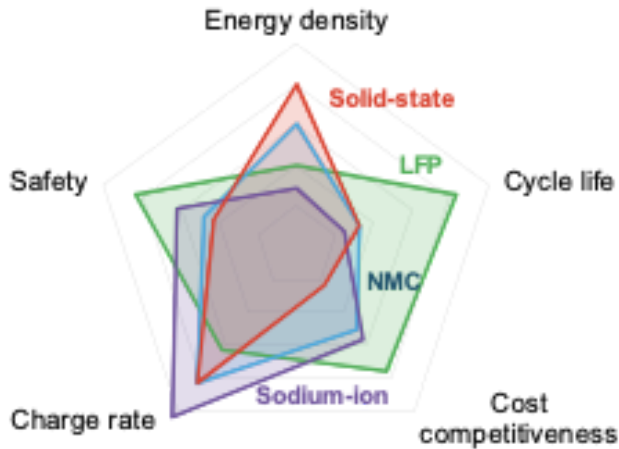
- FHWA issued an [NPRM](#) to rescind a long-standing general waiver from Buy America requirements for all manufactured products. This general waiver has been in place since 1983.
- Electric Era manufactures and sells battery-backed DC (Level 3) EV fast-charging stations. The battery-storage component of Electric Era's charging station falls under the general waiver for manufactured products, allowing it to be eligible for federal funding, including NEVI.
- Concurrently with the NPRM, FHWA issued an [RFI](#) requesting information about which specific manufactured products should receive a waiver from Buy America requirements, as the intent is to replace the blanket, broad general waiver with waivers for specific products.
- If FHWA intends on issuing a Final Rule to rescind the general waiver, Electric Era requests a five-year waiver for LFP BESS (lithium iron phosphate battery energy storage systems), because there are currently no domestic sources of LFP BESS. (LFP is a type of lithium-ion battery.)

Rationale

- LFP is the most ideal and popular lithium-ion chemistry for stationary energy storage: It is the safest, cheapest, and most sustainable type. LFP will only grow in popularity in the United States as energy storage becomes an increasingly important element of our clean-energy transition.
- Unlike other types of lithium-ion battery chemistries, such as NMC (nickel manganese cobalt), the United States has not historically invested in LFP. While the federal government has started to invest in domestic LFP production under this Administration in recent years, the United States is practically starting from scratch compared to other types of lithium-ion batteries. As such, it will require additional time for manufacturers to on-shore LFP production that meets Buy America requirements.
- Electric Era has been surveying battery manufacturers in the United States since the start of 2023 to gauge domestic manufacturing capability. We are not aware of any domestic source of LFP BESS that is Buy America-compliant and that can produce them at commercial scale. This is supported by [recent analysis](#) that also found no real domestic sources of LFP batteries.
- The most optimistic timeline we have heard for Buy America-compliant LFP *cells* is late-2026. Buy America-compliant LFP BESS, which is several integration steps above LFP cells, will take another couple years. In short, we believe Buy America-compliant LFP BESS at commercial scale will not be available for at least five years.

STATUS OF BATTERY PERFORMANCE METRICS IN 2022

Source: BloombergNEF, Long-Term Electric Vehicle Outlook 2023 – Data (June 8, 2023).



	Energy density	Cycle life	Cost competitiveness	Charge rate	Safety
	(Wh/kg)	(Cycles)	(\$/kWh)	(C-rate)	(TR °C)
LFP	0.4	0.83	0.76	0.63	0.83
NMC	0.6	0.33	0.51	0.83	0.48
Sodium-ion	0.29	0.25	0.56	1.04	0.62
Solid-state	0.8	0.33	0.24	0.83	0.43

Impacts

- If FHWA does not issue a waiver for LFP BESS, Electric Era’s charging stations would no longer be eligible for FHWA/federal funding programs like NEVI, CFI, and EVC RAA. Besides not being eligible for federal programs, Electric Era would also find itself out of compliance with many local and state programs, as they are starting to require NEVI compliance as a general baseline standard.
- If FHWA does not issue a waiver for LFP BESS, we also believe that the Administration risks harming its own priorities by undercutting its historic investments in the domestic battery sector and further delaying the implementation of EV charging stations.
- Electric Era has numerous NEVI-funded projects in the pipeline across at least seven states that would be at risk of delay or cancellation if FHWA does not issue a waiver for LFP BESS.
- It would also hurt companies like Electric Era that are committed to US manufacturing and helping further the Administration’s climate-change goals.
- Electric Era currently employs about 30 employees and manufactures its charging stations at its Seattle facility. We are actively planning to expand our manufacturing capacity here in the next

few years to meet growing demand (~50 additional manufacturing workers). We are committed to US manufacturing, and we have been trying to source LFP BESS domestically without success. Falling out of NEVI compliance would threaten not only our planned manufacturing expansion but also the current workforce and our ability to continue producing our patented charging systems.

- Failing to issue a waiver would also harm the country's clean-energy transition efforts in general:
 - LFPs are set to cross 50% of the passenger EV market in the next two years.
 - LFP batteries do not require the production of cobalt, which carries ethics concerns.
 - LFPs are expected to be truckmakers' chemistry of choice for e-trucks.
 - LFPs are critical to stationary energy storage, which needs to increase as the use of renewable energy increases.
- Many medium-/heavy-duty (MHD) vehicle EV charging companies also rely on LFP BESS and would be greatly impacted by FHWA's NPRM, especially since there is growing federal investment in MHD charging.

Conclusion

- Simply put, we ask that the Administration avoid requiring something that does not currently exist in the United States. Battery manufacturers are beginning to work on domestic LFP production, thanks to the Administration's historic investments, but they simply need additional time, as the United States is starting from scratch.
- We ask that FHWA issue a waiver for LFP BESS that provides at least five years for domestic sources to mature.
- Earlier this year, the EPA issued a BABA waiver for its Clean Ports Program, which funds zero-emission equipment and infrastructure, by citing – among other things – the lack of domestic battery sources. We hope FHWA will do something similar and ensure greater consistency across federal programs.