

‘Battery Passport’ to boost EV safety, exports

Move To Help Track Battery Lifecycle, Performance

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New Delhi: In a move that will help owners of electric vehicles (EVs) get precise details of the batteries being used, India will soon have its own “Battery Passport” regime. Under the system, the specifications of every battery, including its origin, performance, composition, end of life and the entire supply cycle will be captured digitally and embedded in a QR code.

Niti Aayog has started deliberations with ministries and govt departments on the proposed framework, sources said. Officials highlighted that a battery passport serves as an Aadhaar identity of sorts, with every battery having a unique ID that provides all information on the product.

The initiative will not only improve safety and quality standards but also accelerate export of EVs from India. Significantly, India is offering incentives to global EV players to set up plants and export their vehicles from India. It will also be crucial when govt rolls out a battery swapping policy for vehicles, allowing owners to access details of batteries by scanning the QR code printed on them.

The need for such a regime was first felt after a series of fire incidents involving electric two-wheelers and cars. Industry insiders said there had been instan-



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ces of companies importing battery cells of different vintages and using them as part of the same modules. “When cells made in different years are joined together, there is more load on new cells, as the older ones are closer to their expiry date. Such a module impacts performance and can be a safety hazard,” said a source.

Officials privy to govt’s plan said once the battery passport system is implemented, it will be possible to ensure that cells in any battery are manufactured in the same year. Through it, users will get to know about the lifecycle and performance of batteries, which is key considering they account for nearly 40% of the costs of EVs, an official said.

A source said, “This move will help achieve three major goals: trade (export of electric vehicles), safety and quality”.

The European Union in

2023 enacted the Battery Regulation making it mandatory for every industrial or EV battery in EU with a capacity of over 2 kWh to have a battery passport. It will come into force on Feb 1, 2027. The battery passports will require inputs from mining and refining companies, cell and battery producers, vehicle brands, and battery servicing, refurbishing, and recycling companies.

The EU rules specify that the battery passport must contain all information, including unique identifier, basic characteristics of the battery including type and model, updated statistics on performance and durability, and carbon footprint specific to the manufacturing site and batch of batteries. This information will need to be selectively shared with three groups: the general public, regulatory bodies, and battery service and end-of-life processors.