Experts Call for Subsidies to Foster Growth of EV Charging Infrastructure

Industry stakeholders discuss ways to accelerate the EV adoption in India

Electric Vehicle (EV) sales in India have steadily grown in the last few years. In 2022, the sector witnessed a staggering 300% growth in sales compared to 2021, with one million units sold.

The trend continued in the first quarter of 2023, with EV sales reached 349,676 units, a year-over-year increase of 81% compared to 192,565 units sold in the same period last year, according to the data released by the Ministry of Road Transport and Highways through its Vahan Dashboard.

India has over 2 million registered EVs as of March 2023 and aims for EVs to make up 30% of all vehicles by 2030.

As of 2022, 73% of EVs were 2-wheelers, 24% were 4-wheelers, and 3% were 3-wheelers.

An India Smart Grid Forum report projects a 500% growth from 2022 to 2032, with major demand coming from the 4-wheeler segment.

The current and future trends in EV adoption was one of the topics industry insiders discussed at the 'Mercom India Renewables Summit 2023,' an exclusive event held on April 26-27 in New Delhi.

At a session titled '**Electric Vehicles – The Next Big Source of Renewable Power Demand**' on April 27, panelists discussed ways to speed up the growth of electric vehicle infrastructure in the country.

The panel featured Joseph Teja, Public Policy Analyst at NITI Aayog, Abhishek Dabas, CEO of Gentari Green Mobility India, and Awadhesh Kumar Jha, Executive Director at Fortum Charge & Drive India.

Priya Sanjay, MD, Mercom India, moderated the discussion.

Speaking on the growth of electric mobility in the last few years, Teja said, "From the financial year (FY) 2022 to FY 2023, the sector witnessed an exponential growth of 157%. Currently, 33 of 36 states and union territories have an EV policy. According to the Economic Survey, the annual growth of EVs stands at 49%, and the country will have EV sales of 10 million by 2030."

Jha argued that EV charging infrastructure is keeping pace with EV sales. "We have electric two-wheelers (E2Ws), electric three-wheelers (E3Ws), and electric buses. E2Ws don't require electric charging stations. E3Ws are going for battery swapping, and we have gross car sales of 80,000 cars, out of which 20,000 cars don't support fast charging. We have a density of 20-30 cars per charging station. So, we can safely say that EV charging stations are keeping pace with EV sales."

Charging Infrastructure

On the charging infrastructure, Teja said, "I believe energy architecture is the melting point of technologies. With the influx of renewable energy into the system, distribution companies (DISCOMs) are facing challenges in balancing this renewable energy. Given these challenges, we have to develop the charging infrastructure."

Teja said developing public-private partnerships is imperative to create charging infrastructure in the country.

Sharing his experience from Malaysia, Gentari Green's home country, Dabas said, "We have 60 kW, 120 kW, and 180 kW charging points. For E2Ws and E3Ws, the charging infrastructure is captive. Profitability depends on how many fast chargers we deploy. Now we have enough chargers, and range anxiety is also not an issue. We need to solve sanctioned load problem and grid stability."

FAME-II and the Need for Subsidy

India aims for EVs to make up 30% of all vehicles by 2030. The Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) program, state subsidies, and a wider range of consumer options have contributed to the rising sales.

Recently, a parliamentary committee recommended extending the FAME-II program by two years beyond March 31, 2024.

Speaking on the FAME-II program, Teja said, "Under FAME-II, nearly 1 million E2Ws are supported, and multiple segments are under it. Charging infrastructure is one such important segment. We are trying to get private players into the system. This is the next big area. We are also developing green corridors in the states, which will greatly expedite the growth of EVs."

"Under FAME II, private cars will not be incentivized, as the government wants to promote more and more E2Ws. In terms of charging infrastructure, private players are entirely out of the subsidy curve. Now they are shifting the amount to oil firms. Most of the charging infrastructure has been set up by private players without any subsidy. The growth of EVs is not because of subsidy, it is due to the demand," Jha added.

Agreeing with Jha on the point of subsidy, Dabas noted that there was a need for subsidy to develop charging infrastructure, which the government should look into to foster the growth of EVs in the country.

Open Access for Charging Stations

"We are talking about vehicle electrification and making the environment cleaner by using electric energy. The grid is also getting greener. By 2030, 60% of the capacity will come from the grid and 40% from renewables. Currently, you have a 1 MW load requirement

for open access and 100 kW for green open access. This is helpful for EVS as you can draw power from green sources," Jha said.

He pointed out there is a need for bidirectional meters and an enabling regulatory framework. The framework for ancillary services is there, but it requires a bit of tweaking. Original equipment manufacturers should also be brought onboard.

"The real bottleneck would come from DISCOMs and the existing infrastructure. DISCOMs are not upgrading their systems, which is a big problem," Jha noted.

"Open access can be of great help for charging stations, and a number of solar systems are being installed. When you look at highways, connections are not stable, and we have grid stability issues. We can have secondary storage. We can install the solar system and have storage for night travelers. There is also a great market for interstate bus services, which should be looked into," Dabas said.

"Over a period of time, in the near future, we might see the execution of fast charging and less battery size," Dabas said.