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A study in green

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Highlights

As transition to renewables seem inevitable, city campuses set precedent readying EV infra
E-scooters, e-buggies, e-rickshaws aid campus mobility

By Garima Prasher

College campuses across the city are turning over a green leaf. As interest in electric vehicles (EVs) grows among students and teachers, Bengaluru campuses are steering towards an environment-friendly future, BM's found out.

Some colleges are setting up charging infrastructure networks; others have brought in sustainable in-campus transport.

"Though the number of personal EVs on campuses is not very high, it surely is on the rise. There are a few students who have electric two-wheelers and some faculty own electric cars," said professor Ashish Verma of the Sustainable Transportation Lab at IISc.

The institute has established an off-grid solar-based EV charging station for EV users and is working towards scaling up the infrastructure.

"The charging station was set up last year to demonstrate clean charging of EVs. The infrastructure is now being used extensively by the campus community.

Currently, the charging facility is free of cost. We are in talks with the Bangalore Electricity Supply Company Limited (BESCOM) to set up grid-based charging points under FAME II.

We are working on a study to decide the optimal number, location and type of charging points," said professor Verma.

BNM Institute of Technology is another campus that is coming up with a zero emission EV charging station. Once up and running, the station will be able to charge four EVs (two-wheelers) simultaneously. The station will be powered by solar energy and will have a power storage facility to enable charging during nights and cloudy days.

"There is an increase in awareness about the adverse impact of fossil fuel-based vehicles on the environment; now, the number of EVs on campus is slowly but steadily increasing. We decided to come up with EV charging stations to encourage students and faculty members to shift to EVs operating on green energy," said a representative of the institute.

Moreover, charging kiosks will link to an IoT-based application, which will notify the owner once the vehicle is fully charged.

While some have already taken the leap, others have decided to wait for the right time.

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“Around 5% of the vehicles on our campus are EVs of staff and students. We have been talking about the advantages of green transport to students and are encouraging the use of EVs. As of now, we do not have a plan to set up charging infrastructure on campus. However, we will surely consider it if the number of green vehicles on the campus goes up,” said Dr Chandrashekar B, principal, RC College.

Not just cars, two-wheelers

Campuses are not just catching on with charging infrastructure for personal EVs. Electric scooters, electric buggies and cargo e-rickshaws are some other types of EVs that are hitting the right note with city colleges.

“Since ours is a residential campus, not many students go for personal vehicles. However, some of our teaching staff who reside on campus do own electric vehicles. We also have one electric buggy and two scooters for a ride around the campus. While currently we have three charging points for these vehicles, we are looking at ramping up the infrastructure due to increase in demand,” said Col (retd) SD Aravendan, chief administrative officer, IIM Bangalore.

Some campuses, meanwhile, are using cargo e-rickshaws for essential services such as on-campus solid waste management.

“The institute started using e-auto rickshaws as a passenger service for the campus community and visitors in 2019. There were five routes, and 10 e-rickshaws were plying on these routes inside the campus. The initiative ran successfully until covid-19 struck. Around the same time, we also started using cargo e-rickshaws for solid waste management, which have been up and running without interruption,” said professor Verma of IISc.

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— Professor Ashish Verma, IISc

The cargo e-rickshaw is being used at International Institute of Information Technology, Bangalore (IIITB) campus too for transporting materials between buildings.

Adoption push
According to professor Verma, as the first step, campuses must put a charging infrastructure policy in place for widespread adoption of EVs.

“Although this is an evolving transportation mode, there is a lot of thrust from the government in promotion and adoption of EVs. The campuses, as the first step, should recognise the need of enabling charging infrastructure through proper policy; think about developing a charging infrastructure network. A lack of infrastructure can be a big deterrent for students, faculty and staff members in the adoption of electric vehicles,” Verma noted.