



## **NEWS RELEASE**

**Singapore, 2 Aug 2021**

### **NTU Singapore and tech start-up Ecotech Mobility to develop high-powered fast-charging plaza for electric vehicles**

With Singapore's plans to switch its entire fleet of buses – numbering around 5,800 now – to electric and hybrid buses by 2040<sup>1</sup>, fast charging systems that can cater to high power output – over a few hundred times higher than those required by electric cars – will be required.

Current electric vehicle chargers are relatively low powered and can take many hours to fully recharge the large capacity batteries in buses.

The ideal scenario would be for an electric bus to fast charge during the driver's usual break time at the bus interchange and to continue the scheduled route thereafter without compromising commuter travel time, safety and comfort.

To tackle this high-power consumption during fast-charging, scientists from **Nanyang Technological University, Singapore (NTU Singapore)** and tech start-up **Ecotech Mobility** will be developing a high-power density charge and converter system for electric vehicles.

The new power system will be piloted in a first of its kind fast-charging platform called the "High Power Energy Plaza", which can charge multiple electric vehicles quickly with its high-power DC chargers, with capacities up to 550 kilowatts (kW). It can also support low-power applications such as charging of electric bikes, cars and light commercial vehicles.

The Plaza will be designed to operate in different urban environments, to meet both electric vehicles (EVs) and power grid requirements as well as cater to multiple configurations of EV chargers made by different brands.

---

<sup>1</sup> <https://www.channelnewsasia.com/news/singapore/electric-double-decker-buses-join-public-bus-fleet-13383074>

This ambitious project is spearheaded by **Ecotech Mobility Pte Ltd**, in partnership with two NTU entities – the **Energy Research Institute@NTU (ERI@N)** and the **EcoLabs Centre of Innovation for Energy**, a joint initiative by NTU, Enterprise Singapore, and Sustainable Energy Association of Singapore (SEAS).

This collaboration is in line with NTU's goals under the NTU 2025 strategic plan which seeks to address four humanity's grand challenges including in sustainability and accelerate the translation of research discoveries into innovations that mitigate our impact on the environment.

Mr **Nishant Arya**, who founded Ecotech Mobility is also the **Vice Chairman of the JBM Group**, a world-leading multinational conglomerate known for its electric vehicle systems and automotive components.

In the near future, the NTU EcoLabs and Mr Arya also plan to set up a dedicated research translation centre, aimed at investing in, test bedding and scaling up promising home-grown technologies in emerging markets. These include technologies that can complement smart cities solutions such as renewables, EV, Waste to Energy and Internet-of-Things solutions.

**Professor Subodh Mhaisalkar, NTU Associate Vice President (Strategy & Partnerships) and the Executive Director of ERI@N**, said both the joint research translation centre and Ecotech Mobility, can benefit from JBM Group's automotive knowledge and the manufacturing knowhow of EV chargers, as well as NTU's deep research expertise in high power chargers and electromobility.

"Together, NTU EcoLab and Ecotech Mobility can combine their strengths to design high power EV charger products; designed, built, and tested in Singapore for the global markets," added Prof Mhaisalkar, who is also a governing board member of NTU's EcoLab Centre of Innovation for Energy.

"This partnership also creates a unique opportunity for NTU, to translate its intellectual property with established industry players as a joint spin-off. This could pave the road for future research commercialisation as a viable 'venture builder route'.

**Mr Nishant Arya, the founder of Ecotech Mobility Pte Ltd. & Vice Chairman, JBM Group** said, "We are at a cusp of transitioning towards the new age mobility solutions and creating technology led support infrastructure around it. Our expertise in customising world class e-mobility solutions across global geographies will play a pivotal role in executing this project, jointly with NTU."

"With the government's ambitious plan of phasing out internal combustion engines vehicles by 2040 along with deployment of over 60,000 EV chargers, I see a

tremendous opportunity from Singapore. We will create state-of-the-art EV charging solutions for all vehicle segments in Singapore, making it a showcase project in Asia.”

**Mr Geoffrey Yeo, Assistant Chief Executive Officer of Enterprise Singapore who oversees Urban Solutions, Sustainability and Enterprise Finance**, said, “The establishment of Ecotech Mobility and the dedicated translation centre between JBM Group, NTU’s EcoLabs and ERI@N supports the co-development and test-bedding of homegrown technologies by Singapore SMEs and start-ups. The commercial solutions developed will address different market needs and lend vibrancy to Singapore’s innovation and e-mobility ecosystem.”

Mr Yeo, who is also a governing board member of NTU’s EcoLabs, added, “Such partnerships between MNCs and institutes of higher learning also serve as a testament to Singapore’s value proposition as an innovation hub.”

The joint project is expected to complete its prototype by July 2022 and will be test bedded in a pilot at the Experimental Power Grid Centre (EPGC), followed by the NTU’s Smart Campus at Clean Tech One.

The NTU Smart Campus is a hub of smart mobility research which includes a joint research project with Volvo Buses to develop a fully autonomous electric bus and is home to the Centre of Excellence for Testing & Research of AVs – NTU (CETRAN), a dedicated test facility and circuit for autonomous vehicles.

\*\*\*END\*\*\*

**Media contact:**

Lester Kok  
Assistant Director  
Corporate Communications Office  
Nanyang Technological University  
Email: [lesterkok@ntu.edu.sg](mailto:lesterkok@ntu.edu.sg)

***About Nanyang Technological University, Singapore***

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in the Engineering, Business, Science, Humanities, Arts, & Social Sciences, and Graduate colleges. It also has a medical school, the Lee Kong Chian School of Medicine, established jointly with Imperial College London.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre for Environmental Life Sciences Engineering – and

various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI) and Energy Research Institute @ NTU (ERI@N).

Ranked amongst the world's top universities by QS, NTU has also been named the world's top young university for the last seven years. The University's main campus is frequently listed among the Top 15 most beautiful university campuses in the world and it has 57 Green Mark-certified (equivalent to LEED-certified) building projects, of which 95% are certified Green Mark Platinum. Apart from its main campus, NTU also has a campus in Singapore's healthcare district.

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

For more information, visit [www.ntu.edu.sg](http://www.ntu.edu.sg)