

NUS' Kent Ridge campus to become living lab for low-carbon technology

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The Kent Ridge campus of the National University of Singapore (NUS) will become a live test bed for low-carbon technology in a tie-up with Keppel Infrastructure.

The site will be used to create, test and scale projects as part of a larger research collaboration agreement, both organisations said yesterday.

The Kent Ridge location is the university's main campus, occupying about 1.4 sq km in south-west Singapore, bordering Queenstown and Clementi.

Four projects have been chosen to jump-start the on-campus collaboration, which will be called the "low-carbon living laboratory", the statement said.

These are a hybrid power grid to ease the integration of renewable energy resources, novel electric ve-

hicle charging strategies, district cooling systems and enhanced seawater desalination.

The first project will seek to integrate renewable and distributed energy resources, such as solar power, into the existing grid without disrupting the main power grid.

It will do this by creating a "hybrid microgrid" that will plug into the main grid, leading to greater grid reliability and efficiency.

The second project will tap algorithms to balance the needs and constraints of the campus' existing electrical network to aid in the charging of electric vehicles.

The third project will use innovative district cooling systems to save space and energy, and reduce problems such as the urban heat island effect, which occurs when clusters of buildings trap heat.

The final project will be an experiment on enhancing the treatment of seawater before the desalination process, looking at the trapping of carbon dioxide and removing chemicals.

The university's deputy president for research and technology,

Professor Chen Tsuhan, said: "The NUS Kent Ridge campus will serve as a vibrant living laboratory, where innovative solutions are tested in a realistic operational environment before they are deployed at a larger scale.

"These technological capabilities will, in turn, help enhance the climate resilience of our campuses."

The partnership will also give NUS students educational and training opportunities, and options for open collaboration with start-ups, small and medium-sized enterprises and researchers, the statement said.

Keppel Infrastructure's chief executive officer Cindy Lim said

the collaboration is part of its redoubled efforts in innovation and technology development in the field of sustainability.

Keppel Infrastructure is owned by Singapore conglomerate Keppel Corporation.

As part of the larger research agreement, Keppel Infrastructure and NUS will explore collaboration in other energy and sustainability-related areas, the statement added.

These include the decarbonisation of industrial emissions, innovative solar projects as well as technologies and applications of carbon capture.

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