

Jurong Island's green shift

Jurong Island – home to Singapore's power plants and petrochemical refineries – produces much of the country's planet-warming emissions. But it is eyeing a greener shift, with an additional 300ha – 10 per cent of the area – set aside for new energies. **Shabana Begum** highlights the island's low-carbon projects.

1 Singapore's largest on-ground solar project by Sembcorp (completed in 2025)
• 118 megawatt-peak of solar power, which can power around 33,200 four-room HDB flats annually.

2 South-east Asia's largest battery energy storage system by Sembcorp (started in 2023)

3 Project to import low-carbon ammonia for bunkering and electricity (by 2030)

4 Vanadium redox flow battery project (started in 2023)
• These novel batteries use vanadium instead of lithium and are suitable for long-duration storage with a lower fire risk.

5 Hydrogen-ready power plants (by 2030)
• Natural gas power plant that can burn at least 30 per cent hydrogen, a cleaner fuel, once built.
• Eight plants of varying types and capacities have been announced.

6 20ha low-carbon data centre park (upcoming)
• These green data centres are expected to use energy-efficient cooling methods and equipment, and use more sustainable energy.



7 Low Carbon Technology Translational Testbed under A*Star (2027)
• Offers companies cost-effective, modular test-bedding of emerging low-carbon technologies.



8 Advanced wastewater treatment plant (end-2025)
9 Jurong Island terminal



10 Jurong Island pond (2022)
• Collects rainwater to minimise floods.
• Sitting above an aquifer, the pond can hold as much water as 50 Olympic-size swimming pools.

11 Jurong Rock Caverns
12 Oasis@Sakra
• Commercial building



13 Chemical plants



NOTE: The locations of these projects are not mapped to scale.

ENERGY AND CHEMICALS SECTOR (BY THE NUMBERS)

Around 3% of Singapore's GDP	Over 27,000 employees	More than 100 companies on Jurong Island	Around a third of Singapore's greenhouse gas emissions come from the refining and petrochemicals sector
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2030 TARGETS FOR ENERGY AND CHEMICALS SECTOR

 2030 target	 2025 progress
Increase output of sustainable products such as plant-based polymers to 1.5 times of 2019 amount	Production has reached 1.4 times of 2019 levels
Refineries and crackers' energy efficiency to be in the top quartile globally	Energy efficiency is currently in the top 50% globally

