

Annex D – Low Carbon Technology Projects

Companies	About the Project	Link
Croda Singapore and NanoSun	Advanced Wastewater Treatment Croda Singapore and NanoSun, a spin-off from Nanyang Technological University, are partnering to build an advanced wastewater treatment facility at Croda's Seraya manufacturing site on Jurong Island. The full-scale plant will use NanoSun's innovative water purification technology to treat and reuse high-strength wastewater, which makes up about a quarter of Croda's total output and currently requires external processing. The wastewater treatment plant reduces Croda's dependence on freshwater sources and can lower carbon emissions by 25%. This collaboration follows a successful pilot under the Jurong Island Innovation Challenge (JIIC), an initiative by JTC and Enterprise Singapore, launched in August 2021, marking a significant transition from testing to full-scale implementation.	Link
IHI Corporation, Agency for Science, Technology and Research	Sustainable Aviation Fuel Production Process Technology IHI Corporation and A*STAR Institute of Sustainability for Chemicals, Energy and Environment (A*STAR ISCE²) are collaborating on a pilot-scale project that converts captured carbon dioxide and hydrogen into sustainable aviation fuel (SAF)-range hydrocarbons. The process uses a direct catalytic reaction that produces liquid hydrocarbons in a single step, offering potential efficiencies compared to conventional multi-step SAF production routes. The pilot test rig, located on Jurong Island, allows researchers to study the process under industrially relevant conditions and assess its scalability. This collaboration, formalised through a Memorandum of Understanding signed in 2024, supports the global aviation industry's transition toward net-zero emissions by 2050.	Link

EMBARGOED UNTIL 27 OCTOBER 2025 9:30AM, AFTER MINISTER IN-CHARGE OF ENERGY, SCIENCE & TECHNOLOGY, DR TAN SEE LENG'S KEYNOTE ADDRESS AT THE SINGAPORE ENERGY LECTURE AT SINGAPORE INTERNATIONAL ENERGY WEEK

Agency for Science, Technology and Research	Low Carbon Technology Translational Testbed The Low Carbon Technology Translational Testbed (LCT³) will be established on Jurong Island to support the testing and scale-up of emerging low-carbon technologies in the areas of carbon capture and utilisation, and low-carbon hydrogen production processes. Designed as a national pilot-scale facility, LCT³ will enable companies and researchers to validate technologies under realistic industrial conditions, including high-pressure and high-temperature operations, before larger-scale deployment. It will feature modular, plug-and-play equipment that can be configured for different projects and process requirements. By bridging laboratory research and industrial implementation, LCT³ will help accelerate the translation of low-carbon innovations into deployable solutions for Singapore's energy and chemicals sector.	Link