

Developers plot giant clean energy schemes

Greta Yeoman - Fri, 30 Jul 2021



the Strait of Johor

Sunseap's floating solar farm in

- **Clean energy:** new consortium may give Western Australia a second shot at world-leading energy hub
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- **Floating wind:** more than 70 bids for seabed sites off Scottish coast

Clean energy rebooted

A new consortium may give Western Australia a second shot at becoming home to the world's largest clean energy hub.

Green hydrogen developer InterContinental Energy, renewables firm CWP Global and Indigenous-owned Mirning Green Energy Limited have announced plans to develop a 50 GW clean energy hub across 15,000 square-kilometres between Esperance and Kalgoorlie in south-east Western Australia.

InterContinental and CWP are also part of the consortium behind the proposed 26 GW [Asian Renewable Energy Hub](#) in northern WA. The ASEH project plans were rejected on environmental grounds by the Australian Government last month.

But the proposed \$100 billion (NZ\$105 billion) Western Green Energy Hub is even larger than the northern scheme.

If built to total capacity it will use 50 GW of solar and wind generation to produce 3.5 million tonnes of green hydrogen or 20 million tonnes of green ammonia each year.

The consortium says the south-east WA region provides "an optimal diurnal profile for renewable energy, with consistently high levels of wind and solar energy over a 24-hour period".

The wind and solar generation would be sited around the city of Kalgoorlie-Boulder and the Shire of Dundas.

But the project would also include a coastal area to enable export of the green fuels.

Federal Environment Minister Sussan Ley rejected the updated AREH plans last month as the consortium wanted to build an offshore pipeline through environmentally sensitive areas to transport ammonia from the hub site to waiting ships.

Western Australia's hydrogen minister Alannah MacTiernan has confirmed the Western Green Energy Hub has secured a licence from the state government to work on the proposal.

The scheme would be built in stages. First production is expected by 2030, the consortium says. The full cost could be "up to \$100 billion over the coming decades", the Australian Financial Review [reports](#).

The project is on land owned by the Mirning Traditional Lands Aboriginal Corporation. Mirning Green Energy Ltd is a subsidiary of the corporation.

Floating solar

Singaporean energy firm Sunseap Group aims to build the world's largest floating solar farm in Indonesia.

The [floating farm](#), expected to have a peak capacity of 2.2 GW, will be built on the Duriangkang Reservoir on the island of Batam. It is expected to cover about 1600 hectares.

It would also include energy storage facilities and supply non-intermittent solar energy around the clock, Sunseap says.

A portion of the energy will be used in Batam and the excess could be exported to Singapore – just north of Batam – by subsea cable.

Sunseap and the Batam Indonesia free zone authority, Badan Pengusahaan Batam, signed a memorandum of understanding for the project last week.

The island's current power generation capacity is 540 MW from gas, steam and diesel plants, according to BP Batam's website.

BP Batam chair Muhammad Rudi says the Sunseap investment "will be a timely boost for Batam's industries as they seek to reduce the carbon footprint of their operations".

Construction is expected to begin next year and be completed in 2024. Funding for the floating farm come from Sunseap capital and bank debt.

It is one of several large floating solar schemes in Southeast Asia.

Singaporean solar energy company Sembcorp has launched its 122,000-panel 60 MW float solar array earlier this month. The energy generated could power 16,000 homes, Sembcorp says.

The floating array is the size of 45 football fields and floats in the city-state's Tengeh Reservoir. It will power the five water treatment plants on the island, making Singapore one of the few countries in the world to have a 100 per cent 'green' waterworks system.

Singapore also has a national goal of quadrupling its solar energy deployment by 2025.

Floating wind

Royal Dutch Shell is teaming up with Iberdrola's Scottish Power subsidiary to bid to build the world's first large-scale offshore floating windfarm.

ScottishPower, which has been owned by Spanish electric utility multinational Iberdrola since 2007, is main electricity distributor for central and southern Scotland, as well as parts of north Wales and England.

The two companies have submitted multiple plans to develop a string of large-scale floating offshore windfarms under Crown Estate Scotland's recent leasing round for access to 15 locations off the Scottish coastline.

ScottishPower is already one of the UK's biggest offshore wind developers and Shell is expected to leverage off its decades of experience in the North Sea's rough waters.

Other companies involved in bids for ScotWind sites include Scottish offshore wind developer Red Rock Power, Italian oil giant Eni, oil supermajor TotalEnergies, Macquarie's Green Investment Group, Orsted, Madrid-based floating wind company BlueFloat Energy and Italy's Falck Renewables.

Winning bidders will pay a one-time fee, and will not be able to outbid competition – meaning submissions will have to stand out based on capability, experience and financial resources.

This is in contrast to an auction for seabed plots off the Welsh coast earlier this year which included runaway bids from several companies, including BP, which won the right to build two large windfarms.

The Dogger Bank wind farm – now under construction off north-east England – is the world's largest offshore wind development. It is being built by Scottish energy firm SSE and Norwegian state oil firm Equinor.

Once completed, Dogger will have an installed capacity of 2.4 GW and be capable of powering more than six million homes.

Floating windfarms have expanded the possibilities of offshore wind development as they are not tethered to the seabed, meaning they can be placed in far deeper water.

The Crown Estate Scotland leasing round results are expected to be announced early next year. More than 70 bids have been lodged.

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