

MEDIA RELEASE

22 April 2020

Singapore Meets Its 2020 Solar Deployment Target

Singapore achieved its 2020 solar deployment target of 350 megawatt-peak (MWp) in the first quarter of this year.

2. Solar energy is one of the key switches in Singapore's Energy Story in which we co-create a cleaner, affordable and more reliable energy future. With climate change, how we produce and use energy will see shifts as well. The government and industry are working closely to deploy cleaner energy solutions such as solar energy. (Refer to Annex A for more information on Singapore's Energy Story.)

3. The solar installation that helped cross the 350MWp mark is a 6MWp rooftop solar installation at an industrial facility at 40 Penjuru Lane¹, a CapitaLand industrial property held under Ascendas Real Estate Investment Trust. The solar panels were installed and operated by Sembcorp Industries. This partnership between CapitaLand and Sembcorp Industries allowed the industrial facility to reduce its carbon footprint, and the excess electricity generated is sold on the wholesale electricity market. CapitaLand is also on Sembcorp's newly launched renewable energy certification (REC) aggregator platform and will use the RECs to power its corporate offices and properties with 100% renewable energy.

4. Mr Ngiam Shih Chun, Chief Executive of Energy Market Authority said, "In our efforts towards greater sustainability to tackle climate change, Singapore will increase solar adoption as solar is our most viable source of renewable energy. With strong support from stakeholders such as the commercial and industrial companies, we have successfully met the 350MWp solar target this year. We will press on towards the next

¹ Sembcorp Industries has partnered CapitaLand Group to install and operate rooftop solar farms at six properties owned by CapitaLand's business space and industrial real estate investment trust, Ascendas Real Estate Investment Trust. The installation formed the largest combined rooftop solar facility in Singapore by a real estate investment trust. 40 Penjuru Lane is one of the properties under this partnership.

solar target of at least 2GWp by 2030 and will continue to work with our stakeholders to make this possible”.

5. Set in 2010, the 350MWp target for 2020 is equivalent to powering about 60,000 households for a year. Looking ahead, Singapore is now setting its sights on the next target of at least 2 gigawatt-peak (GWp) of solar deployment by 2030. This is equivalent to powering about 350,000 households for a year.

6. Aligned with JTC’s ambition to make industrial estate more environmentally friendly to support businesses, JTC will be rolling out extensions for two of its solar initiatives, namely the next phases of the SolarLand programme and the SolarRoof programme, to optimise the use of over 740,000 sqm of industrial land and roof space, equivalent to about 103 soccer fields². Estimated to contribute over 82MWp of solar energy capacity towards the 2030 national target, it will generate about 78,000MWh to power over 14,600 households and reduce over 32,000 tonnes of carbon emissions per year.

7. Following the roll out of the first two phases at Jurong Island and Changi Business Park, JTC issued a tender for the third phase of its SolarLand programme in February this year. This will maximise the use of over 560,000 sqm of temporary vacant land all across Singapore to deploy more than 67MWp of solar energy capacity. The system is made modular and flexible by using mobile PV panels and hybrid SPPG substations, and can be redeployed when the land is needed for other uses.

8. To better use industrial roof space, JTC will be issuing a tender in the first half of 2020 for the second phase of its SolarRoof programme to create an additional 15MWp of solar energy capacity. Launched in 2016, the SolarRoof model enables the direct export of solar electricity generated from rooftops to the national power grid. Besides JTC’s industrial buildings, JTC is also exploring to allow its lessees to tap on the new contract for solar panel installations on their own rooftops. This aims to further catalyse the adoption of solar deployment across Singapore’s industrial estates.

9. “Solar energy is one of the most promising renewable energy sources for Singapore. As the lead agency for industrial development, JTC is partnering the industry and customers to make our development more sustainable. Our SolarLand

² 1 soccer field = 7,140sqm

and SolarRoof programmes aim to overcome some of the constraints faced by the local solar market, such as space constraints and high capital costs. Through these efforts, we hope to reduce the carbon footprint and optimise the use of industrial land and roof spaces by installing solar panels to contribute clean energy to Singapore.” said JTC’s Group Director of Engineering, Calvin Chung.

(Refer to Annex B for photos of 40 Penjuru Lane and installations of SolarLand and SolarRoof.)

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About the Energy Market Authority

The Energy Market Authority (EMA) is a statutory board under the Ministry of Trade and Industry. Our main goals are to ensure a reliable and secure energy supply, promote effective competition in the energy market and develop a dynamic energy sector in Singapore. Through our work, EMA seeks to forge a progressive energy landscape for sustained growth.

Website: www.ema.gov.sg | Follow us: Instagram: @EMA_Singapore | Facebook: facebook.com/EnergyMarketAuthority | Twitter: @EMA_Sg

About JTC

JTC is the government agency championing sustainable industrial development. Together with our partners, we masterplan clean, green and smart estates as attractive destinations for talent and the community. We also drive innovation in the Building and Infrastructure sector.

Website: www.jtc.gov.sg | Follow us: facebook.com/jtccorp or instagram.com/JTC_sg

FACTSHEET FOR SINGAPORE'S ENERGY STORY

To tackle climate change concerns, Singapore has to change the way we consume and produce energy. Minister for Trade & Industry, Mr Chan Chun Sing launched Singapore's Energy Story at the Singapore International Energy Week (SIEW) last October to map our efforts towards a clean, affordable and reliable energy future.

2. Singapore's Energy Story sets the vision for how Singapore can power our future through four switches (Natural Gas, Solar, Regional Power Grids and Emerging Low-Carbon Alternatives), supported by efforts to improve energy efficiency in all sectors.

1st Switch: Natural Gas

Natural gas is the cleanest form of fossil fuel and will continue to be a dominant fuel for Singapore's electricity in the near future. EMA will continue to diversify our gas sources and work with our power generation companies to improve the efficiency of their power plants.

2nd Switch: Solar

Solar is the most promising renewable energy source for Singapore. Energy storage systems is also vital as it helps us counter the intermittency of renewable energy sources. Singapore is working towards meeting a new solar target of at least 2 gigawatt-peak by 2030, and an energy storage deployment target of 200MW beyond 2025.

3rd Switch: Regional Power Grids

We are studying ways to leverage on regional power grids for cost-competitive energy. This could be realised through bilateral cooperation or regional initiatives.

4th Switch: Emerging Low-Carbon Alternatives

We are exploring emerging low-carbon solutions (e.g. carbon capture, utilisation and storage technologies, hydrogen) that can help reduce Singapore's carbon footprint.

We will continue to improve our energy efficiency in the various sectors. We will also empower our households with more information to help them better manage their electricity consumption.

Visit www.beyondthecurrent.gov.sg for more information on Singapore's Energy Story.

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ANNEX B



Aerial view of the solar installations at 40 Penjuru Lane

Image credit: CapitaLand and Sembcorp



Aerial view of the solar installations at 40 Penjuru Lane

Image credit: CapitaLand and Sembcorp



Aerial view of the SolarLand installation on Jurong Island.

Using a modular and flexible system that can be redeployed when the land is needed, JTC's SolarLand maximises the use of temporary vacant land in land-scarce Singapore to generate solar energy in the interim.

Image credit: JTC



Aerial view of the SolarRoof installation on JTC Space @ Gul.

JTC's SolarRoof model enables the direct export of solar power generated from industrial rooftops to the national power grid.

Image credit: JTC



Aerial view of the SolarRoof installation on Jurong Town Hall.

JTC's SolarRoof model enables the direct export of solar power generated from industrial rooftops to the national power grid.

Image credit: JTC