Cirata Floating Solar Photovoltaic (FPV) Plant

West Java region, Indonesia

In January 2020, Masdar announced it had signed a power purchase agreement (PPA) with PT. Perusahaan Listrik Negara (Persero) (PLN), the state owned electricity company in Indonesia, for the first floating solar photovoltaic (FPV) plant in the country.

The 145-megawatt (MWac) PV plant, which will also be Masdar's first floating solar PV project and its first renewable energy project in the Southeast Asian market, will be built on a 250-hectare plot of the 6200-hectare Cirata Reservoir, in the West Java region.

Masdar is developing the plant with PT Pembangkitan Jawa-Bali Investasi (PT PJBI), a subsidiary of PLN.

Indonesia is the largest energy user in the Association of Southeast Asian Nations (ASEAN) region, and the country is targeting 23 percent of its energy mix coming from renewables by 2025, rising to 31 percent by 2030.

There are a number of benefits to floating solar panels as expanding populations result in land resources being increasingly allocated to housing, agriculture and industry.

QUICK FACTS

- 145 MWac capacity
- Floating solar PV technology
- Will be Indonesia's first floating solar plant
- Will be southeast Asia's largest floating solar plant
- Masdar's first floating solar PV project
- Masdar's first entry into the Southeast Asian market
- Area: 250 hectares
- Southeast Asia's largest floating solar plant

Floating panels can also be more efficient, due to the water's cooling effect, while they also reduce evaporation, saving fresh water for drinking and provide a dual use since water surfaces can be used to generate electricity.