

Supporting a more sustainable future

Singapore's largest floating solar farm at Tengeh Reservoir



DC Direct current (DC)

AC Alternating current (AC)

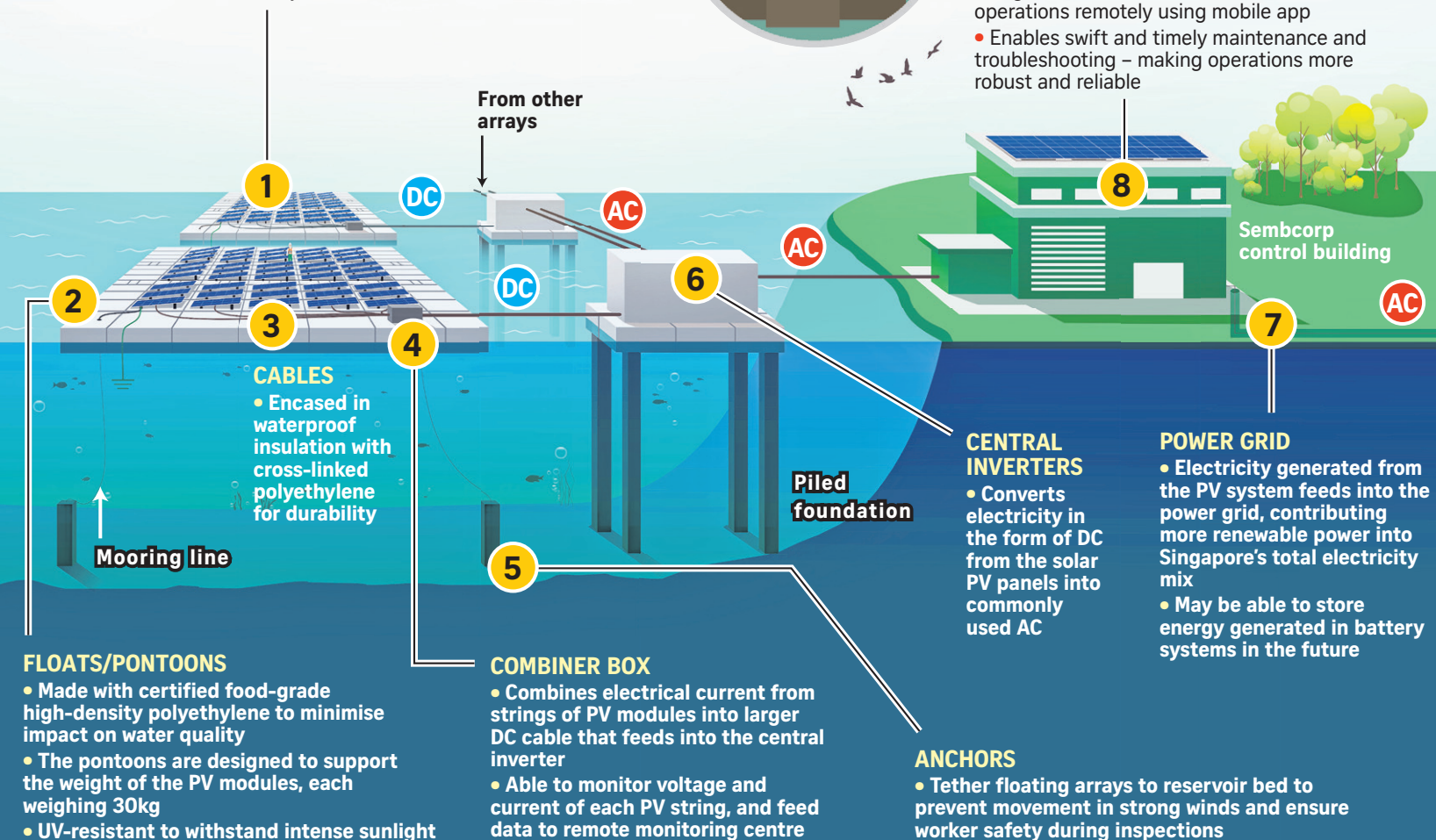
PHOTOVOLTAIC (PV) MODULES

- Tilted to maximise energy generation and optimise rainwater drainage
- Coated with anti-reflective materials to maximise light absorption and minimise glare
- Double-glass solar panels enhance durability in a wet and humid environment



PERFORMANCE MONITORING

- Output of the system is remotely monitored in real time
- Features safety cameras, live video monitoring, dashboards and alerts that help to track environmental factors
- Engineers and technicians can monitor operations remotely using mobile app
- Enables swift and timely maintenance and troubleshooting – making operations more robust and reliable



FLOATS/PONTOONS

- Made with certified food-grade high-density polyethylene to minimise impact on water quality
- The pontoons are designed to support the weight of the PV modules, each weighing 30kg
- UV-resistant to withstand intense sunlight

CABLES

- Encased in waterproof insulation with cross-linked polyethylene for durability

COMBINER BOX

- Combines electrical current from strings of PV modules into larger DC cable that feeds into the central inverter
- Able to monitor voltage and current of each PV string, and feed data to remote monitoring centre

CENTRAL INVERTERS

- Converts electricity in the form of DC from the solar PV panels into commonly used AC

ANCHORS

- Tether floating arrays to reservoir bed to prevent movement in strong winds and ensure worker safety during inspections

POWER GRID

- Electricity generated from the PV system feeds into the power grid, contributing more renewable power into Singapore's total electricity mix
- May be able to store energy generated in battery systems in the future