

How has the solar photovoltaic industry developed in Singapore?

Since the last Solar Photovoltaic (PV) Roadmap for Singapore was published in 2014, the PV sector has developed substantially in terms of the diversity of the underlying technologies, the economics, the size of the industry, and the modes of deployment.

How many solar PV installations are there in Singapore?

As of the 1H 2024, there were a total of 9,763 solar PV installations in Singapore. Residential installations accounted for a high proportion of the installations at 41% (or 3,974), followed by town councils and public housing common services at 40% (or 3,945).

What is the potential of solar electricity generation in Singapore?

The potential of PV electricity generation in Singapore depends primarily on the availability of space and on the energy yield of the PV systems. The capability of the grid to integrate fluctuating solar electricity is critical if large amounts of solar electricity are to be delivered into the electricity supply system.

Is solar energy a viable energy source for Singapore?

Solar energy is an important energy source for Singapore, but its potential is limited since Singapore is a highly urbanized, densely populated island state. Solar photovoltaic (PV) panels harness the sun's energy, turning it into electricity, while emitting no greenhouse gases such as carbon dioxide during operation.

Should solar PV be mandated in Singapore?

Given the vast potential for solar PV on rooftops and facades in Singapore, further encouraging or mandating solar PV on buildings could be an option, e.g. through increasing the green mark (GM) points (absolute and relative) for the adoption of solar PV on rooftops or facades. This would also support the SLE/ZEB/PEB building agenda of BCA.

Is PV generation variable in Singapore?

PV-generated electricity is inherently variable and characterised by the diurnal cycle. Although the diversification of PV systems across Singapore will go some way to reducing the variability of the lumped PV electricity generation, the limited spatial extent of Singapore implies that variability will be a permanent consideration¹.

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