Solar industry singapore

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Singapore"s electricity consumption rose by 1%, to reach 55 TWh in 2023. In terms of ...

Singapore continues to advance towards achieving its renewable energy and climate change goals, installing rooftop solar photovoltaic (PV) systems on public housing, and more recently with the launch of floating solar energy R&D initiatives and project development. The country could be doing more, faster, according to some, more specifically when it comes to policy-making and adoption of solar energy in the commercial and industrial (C&I) sector, however.

Solar power generation capacityin Singapore is likely to exceed 350 megawatts-peak (MWp) by 2020, a national goal, Jasper Wong, the head of Construction and Infrastructure, Sector Solutions Group for United Overseas Bank"s (UOB) Wholesale Banking Group, told Solar Magazine. "By using solar power, companies have the opportunity to transition to a renewable energy source, to lower their carbon emissions and also to reduce their energy costs. In addition, with solar energy costs declining rapidly over the last few years, it has become more cost-effective for companies to explore the use of such energy," Wong said.

Solar energy investment and capacity deployment could be growing faster, some in the solar industry say, however. "It"s true that Singapore doesn"t have lots of land for project development...The good thing is the government of Singapore is doing its best to drive "solarization" and clean energy in a step by step manner, but if you consider Singapore has 2 gigawatts (GW) of solar power potential and you look at the level and speed of activity--around 200 megawatts-peak (MWp) of installed capacity--progress hasn"t been all that impressive," Atem Ramsundersingh, founder and CEO of regional distributed solar and clean energy investor and developer WEnergy Global, said in an interview.

"Singapore"s energy policy is to not favor one form of energy over the other, but rather organize supply and demand through a market-based platform, the National Electricity Market of Singapore (NEMS)," Thomas Reindl, Deputy CEO of the Solar Energy Research Institute of Singapore(SERIS) at the National University of Singapore (NUS), explained in an interview.

"Given Singapore"s land and water resource limitations, it has been taking pragmatic and measured steps in promoting solar energy as a sustainable renewable energy source," Reindl said. A long road lies ahead before Singapore achieves those goals, however.

Imported natural gas is used to generate about 95 percent of national electricity supply. All told, just 203.2 MWp/156.4 MWac of grid-connected solar power capacitywas up and running in Singapore as of year-end 2018. The vast bulk, 193.9 MWp/149.3 MWac, is categorized as non-residential.

Singapore aims to become a leader in urban solar, proving in reality that it is possible to have major

contributions from solar PV, even in a densely built-up urban context and despite the challenges arising from tropical climate conditions. The technologies and solutions developed here can then also benefit other megacities in the tropical sunbelt and beyond. Being a global leader in floating solar is one example for that.

Reindl also highlighted that concerns and commitments to reduce greenhouse gas (GHG) emissions and stem the tide of rising global mean temperatures prompted the Singapore government to introduce a carbon tax in January. The carbon tax rate has been set at S$5 (~USD3.68) per metric ton of equivalent carbon dioxide emissions (tCO2e) from 2019 to 2023.

Government authorities intend to review the carbon tax rate by 2023 with an eye towards raising it to S$10-S$15 (~USD7.35-11.03). "This will contribute to leveling the playing field in the energy sector," Reindl told Solar Magazine.

"Political economy plays out in every country. You have to make sure the oil and gas industry in Singapore supports [the carbon tax] effort--oil and gas industry players, including traders, distributors, suppliers, etc. With these types of struggles between interest groups you"re talking about serious shifts in people"s and industry interests," Ramsundersingh commented.

Reindl drew attention to two particularly important initiatives Singapore"s government is undertaking to boost emissions-free solar energy use.