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On August 6, Israeli authorities approved new set of regulations requiring all new detached houses and nonresidential buildings with a roof area of at least 100 and 250 sq. m. respectively to install solar panels (of minimum 5kW capacity) for electricity generation. This came after a series of incentives announced by the energy ministry earlier this year which included special tariffs and exemption from construction permits, tax benefits, and premium payments for small-scale electricity producers.

Though no official reports or estimates have been released on the matter, it is highlylikely that numerous industrial operations with domestic supply as well as energy exports to neighbours such as Egypt and Jordan were impacted. Even though the supply volumes were resumed in November, the conflict exposed serious vulnerabilities and weaknesses in the Israel"s energy sector.

Rather than investing in land-intensive large scale solar plants, Israel has explored two alternate and viable options: firstly, investment in small-scale solar paneling and dual-use renewable energy generation systems. Dual-use refers to the installation of solar panels on facilities that already exist, such as buildings, reservoirs, parking lots, traffic junctions and even cemeteries. As per energy ministry"s online index-2023, Haifa, Jerusalem and Tel Aviv have realized only 10%, 5%, and 3% of their respective solar energy potential.

Secondly, there has been an increased focus on micro-grids. In 2021, Israeli journalist Sue Surkes argued that one in eight Israelis who wish to install solar panels on their rooftops are unable to do so due to lack ofenough spacefor thegrid. Microgrids use solar energy from rooftop or land-based fields that can be stored in batteries for use at night. In 2022, the World Bank projected that by 2030, solar micro-grids might provide power to half a billion people, ifserious action is taken by countries to address costing issues and overcome financial barriers.

Israel is taking additional steps in this direction by setting up of energy islands that are self-sufficient and can work without the support of national power grid. Kibbutz Maale Gilboa, located on a remote hilltop in northern Israel, is one such example. The pilot project is being led by Dovi Miller, who was instrumental in setting up the Kibbutz in 1960s and now heads its energy operations. The project is likely to be completed within two years, and will guide other similar projects across Israel.

History of Israel"s solar quest: Israel"s quest for solar energy goes back to the 1950s when Levi Yissar invented a solar water heater, marking the beginning of the usage of solar energy in Israel. Over 50,000 solar heaters had been sold by the late 1960s, and about 5% of domestic water was heated by the sun. The 1970s were an important milestone with regard to solar energy. After two decades of research, four solar ponds were constructed in Israel for pilot studies.

Though everyone is aware of the need to embrace cleaner energy sources in theory, large-scale shifts in energy

mix cannot be achieved in practice without a top-down approach backed by government-funding. Taking a leaf out the US model, Israel must introduce similar tax benefits and credit policies to encourage and endorse large-scale installation of micro-grid dual use solar systems, explained Malhotra.

*Author’s note: With inputs from Sumit Malhotra, a US-based structured credit investor specializing in the Solar financing sector. He has held key positions at prominent institutions, including Moody"s, Deutsche Bank, WebBank, and i80 Group.