{ FLOATING SOLAR PLANTS }

U.P. marks 35 dams, lakes; panel formed to allot sites

State targets minimum production of 11 GW (11,000 MW) of photovoltaic power

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LUCKNOW: Uttar Pradesh has earmarked 35 dams and other water bodies for the installation of floating solar plants targeting a minimum production of 11 GW (11,000 MW) of photovoltaic power. The move is a bid to tap new renewable energy sources in the state.

Owned and managed by the state's irrigation department, most of these dams/water bodies are situated in Bundelkhand and eastern UP while one is in Uttarakhand.

Floating solar plant refers to any solar array that floats on top of a water body. In this system, solar panels are affixed onto buoyant structures, keeping them afloat on the water body surface. Unlike ground-mounted solar plants that need plenty of space (3 acre per MW), floating solar projects do not need any additional land.

Additional chief secretary, energy and alternative energy, Mahesh Gupta, has issued a government order (GO) on laying guidelines for the allotment of the identified water bodies to set up floating solar plants.

The Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) director and special secretary, energy, Anupam Shukla, said that feasibility studies of some of the identified sites had already been done. According to him, now, the irrigation department will allot the identified sites to the department of alternative energy that will further allot the same to developers on a first-come, first-served basis.

"According to feasibility reports, there is a scope of generating up to 37 GW of solar power from the 35 floating plants," he said, adding, "But even by a conservative estimate of getting 30% of the projected power, the state is sure to get 11 GW or 11,000 MW of solar power from the 35 floating projects."

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According to him the Rihand and the Mata Tila Dams alone have been found capable of generating 1,000 MW and 400 MW of power from the floating solar plants.

The state government, through the same GO, issued on March 14, has also set up a committee to allot water bodies to install floating solar plants. Headed by the ACS energy, the committee also comprises ACS (fisheries), principal secretary (irrigation), managing director, UP Rajya Vidyut Utpadan Nigam Ltd, district magistrates of the area concerned, director, NEDA among others.

The water bodies will be allotted on an annual lease of Rs 15,000 per acre for a period of 30 years in case of a private developer and a token lease of Rs 1 per acre if a water body is allotted to a public sector undertaking.

"Only 30% of the surface areas of the allotted water body will be used for installation of the floating solar plant so that there is no impact on fish in that water body," Shukla said.

While the floating solar plants have the advantage of saving on the huge land, the power produced by such plants is more expensive than the one available from ground-mounted solar plants.

"Owing to the expensive technology involved in setting up floaters, the power from floating solar plants is certainly costlier but cheaper than produced through conventional sources," Shukla said.

The 35 dams/water bodies identified

Saprar dam, Barba Sagar dam, Pathrai dam, Dongri dam, Garhmau lake, Pahuj dam, Parichha dam, Dhukwan dam and Badwar lake all in Jhansi district, Matatila dam, Sajnam dam, Govind Sagar dam, Jam, Pahari dam, Majhgawa dam, Rajghat dam and Shahajad dam all in Lalitpur districts, Arjun dam, Chandrawal dam, Kabrai dam and Belasagar dam in Mahoba district, Modha dam, Lahachaura dam in Hamirpur, Ohan dam, Barua dam, and Bulta dam in Chitrakoot district, Uper Khajori dam and Adva dam in Mirzapur, Musakhand dam and Latifshah dam in Chandoli district, Dhadrao dam,Obra dam, Kanhar dam, Rihand and dam in Sonbhadra, Obra dam, and Kalagarh dam in Pauri district (Uttarakhand)