

Does fishery complementary photovoltaic (FPV) power plant affect radiation and energy flux?

Meanwhile, the underlying surface of PV in land is significantly different from those in lake. The fishery complementary photovoltaic (FPV) power plant is a new type of using solar energy by PV power plant in China. The studies of the impact of FPV on the balance of both radiation and energy flux have been less presenting.

Are fishery complementary photovoltaic power plants a new surface type?

The deployment of photovoltaic arrays on the lake has formed a new underlying surface type. But the new underlying surface is different from the natural lake. The impact of fishery complementary photovoltaic (FPV) power plants on the radiation, energy flux, and driving force is unclear.

What are the coordinates of the fishery complementary photovoltaic demonstration base?

The central coordinates of study area 32°17'55" N, 119°47'39" E, and the altitude is 2 m. The fishery complementary photovoltaic demonstration base is composed of four ponds of 5.7-8.9 acre. The FPV is located on the central the pond with about the water depth from 2.5 m to 3 m.

Why is temperature difference important in fishery complementary PV power plant?

The difference in temperature in various water layers benefits the cultivation of different fish in the fishery complementary PV power plant. Fig. 6.

What is fishery PV power (FPV)?

Nevertheless, the research sites are located on land, but land resources are scarce. The fishery PV power (FPV) plant is a new type of solar energy constructed on the water surface to avoid occupying land resources. Additionally, the efficiency of solar energy is greater than that of land because of the cooling effect of the lake.

Where is fishery complementary FPV located?

The model base of the fishery complementary FPV is located in northern Yangzhong, Jiangsu, China. This city has a mean annual temperature of 17.1 °C. The mean annual precipitation and the accumulated sunshine hours are 791.8 mm and 1792.2 h, respectively.

In view of the uniqueness of its structure, the flexible bracket has a wide range of application scenarios, similar to sewage treatment plants, agricultural light complementarity, fishing light ...

In the fishing-light complementary mode, the power of the solar module is transferred due to the low temperature near the water surface. High conversion efficiency; the evaporation rate of the water surface is reduced by ...

Zhang Y T. The largest "fish light complementary" photovoltaic power generation project in China has been put into operation[J]. Ningbo Communication, 2017(2): 29 (in Chinese). Rong Media Center, Xingbin ...

Li, P.; Gao, X.; Jiang, J.; Yang, L.; Li, Y. Characteristic Analysis of Water Quality Variation and Fish Impact Study of Fish-Lighting Complementary Photovoltaic Power Station. Energies 2020, 13, 4822. [Google Scholar]

In addition, from the perspective of energy-saving and emission reduction, if the national average light intensity is combined with the complementary technology of fishing and light, based on the aquaculture area ...

complementary photovoltaic projects for fishing and light. The current site is enclosed aquaculture ponds and sea areas, with an elevation of about -2 to 5 meters. The land comprehensive ...

Photovoltaic (PV) power plants have shown rapid development in the renewable sector, but the research areas have mainly included land installations, and the study of fishery ...

The results showed that the average light intensity of the unshaded area and the shaded area were 16,661.7 Lux and 2437.0 Lux. The average light intensity of the shaded area was 85.4% ...

Abstract: Fish-lighting complementary photovoltaic power station organically combines aquaculture and renewable energy. In this study we aimed to develop a solar photovoltaic that ...

This project is located in Ganyu District, Lianyungang, is the largest domestic flexible solar mounting bracket fish-light complementary project, designed with all five cable flexible Solar Panel Mounting Rack, AC side scale of 300MW, DC ...

Fish-lighting complementary photovoltaic power station organically combines aquaculture and renewable energy. In this study we aimed to develop a solar photovoltaic that is not confined ...

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