

# Factors for selecting solar power plants

What factors affect solar power plant site selection?

TOPSIS<sup>43</sup>, PROMETHEE<sup>44</sup>, and VIKOR<sup>45</sup> have been proven to have good performance in the field of solar power plant site selection. However, in the application of TOPSIS, the factors of solar power plant site selection are not fully considered such as geographical disasters, population density, and visual impact<sup>43</sup>.

How to select a site for a solar power plant?

While developing a utility-scale solar power plant, various factors or criteria have to be taken care of in selecting the site location. Probable Site Selection of Photovoltaic Power Plant (PVPP) is a complex MCDM process, as the required site has to be climatically and geographically acceptable. It must also have the highest generation potentials.

Why is site selection important for solar PV power plants?

Site selection for the utility-scale photovoltaic (PV) solar farm is a critical issue due to its direct impact on the power performance, economic, environmental, social aspects, and existing as well as future infrastructures. In this chapter, we conduct a literature review on site selection of solar PV power plants.

What factors should you consider when choosing a solar power facility?

There are numerous factors to consider in choosing an optimal location and assessing its suitability for the installation and operation of a solar power facility. In this article, we will discuss key factors such as geographical considerations, solar irradiance, land assessment, and environmental and social impact.

How to choose a solar power plant?

Solar power is massive and limitless. Finding a suitable installation site is required because the solar PV power plant's capital investment is sufficiently large high. Selecting a suitable location for the solar plant is important because it directly measures the amount of energy obtained.

What are the criteria for solar PV site selection?

The results show that the most important criteria for solar PV site selection are solar radiation, economic performance indicators (net present value (NPV), internal rate of return (IRR), and return on investment (ROI)), carbon emission savings, and policy support.

A thorough literature review for the utility-scale solar PV plant site selection is presented in [8]; site suitability methods, decision criteria and restriction factors, use of MCDM

Turkey's population is constantly increasing, and thus, the energy consumption is also increasing. Wind turbines, nuclear power plants, and boron and uranium resources are used for energy ...

Site selection is one of the basic vital decisions in the start-up process, expansion or relocation of businesses

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of all kinds. Construction of a new industrial system in the form of solar ...

Site selection for the installation of solar power plants depends primarily on the following aspects: high total horizontal solar power potential in the region; high efficiency of ...

In the process of site selection for solar power plants, the target is to select a suitable place from a list of alternatives (the centers of provinces) to establish a solar power ...

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This research aims to find, define, identify, describe, select and cluster (group, set) the location selection factors of very large concentrated solar power plant investments in ...

Determining criteria for optimal site selection for solar power plants Daria Kereush, Igor Perovych Summary Site selection is one of the basic vital decisions in the start-up process, expansion or ...

ent factor in the process of solar power plant site selection to rect the value of cost and to maximize investors" ... selection of solar power plants are briey reviewed. MCDM is a well ...

Solar energy is a critical component of the energy development strategy. The site selection for solar power plants has a significant impact on the cost of energy production. A ...

2 Techniques Used in Solar Power Plant Site Selection Though it is well-known that considering various factors in the decision criteria can enhance site selection, using the MCDM technique ...

The data determined for this study included spatial data for the factors necessary for the installation of solar PV power plants. The factors affecting selection for installation of ...

Kengpol et al. developed a decision support system for solar power plant site selection in Thailand. They applied fuzzy analytic hierarchy process ... Konya, Karaman, Nev?ehir, and Ni?de) are put in the rows, and ...

Site Selection is a crucial step in installing Solar Power Plant (SPP) as it is determined by a set of quantitative and qualitative factors, which are vague in nature. In this ...

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Slope is one of the highly effective factors in site selection of solar power plants. Slope must less than 3% for all aspects for suitable solar power plants site. Slope was divided ...

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