

Samart Wongrit 2012: Analysis of Site Suitability for Photovoltaic Installed in Thailand Using GIS based and Solar Radiation Map. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assistant Professor Patamaporn Sripadungtham, Ph.D. 125 pages.

This paper presented a program to analyze and simulate suitable sites for installation of photovoltaic to generate electricity in Thailand. The analysis was performed by using Analytic hierarchy Process (AHP) with pairwise comparison method on the selection criteria process. The criteria are selected from a database of geographic information system and intensity of sunlight. The elimination of the strict selection criteria result in a high degree of numerical simulation maps; the potential of solar intensity, the advantage of area and the slope of area.

The selection criteria were analyzed using FLOWA as a supplement in ArcGIS found that the high site suitability for installation of photovoltaic to representing 43% of the total area in the country. It makes possible to calculate the power of electricity per year of different photovoltaic and determine the efficiency of photovoltaic for use in Thailand.

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Thesis Advisor's signature

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