

Lesson Learnt from Solar Photovoltaic Power Generation in Thailand with Global Self-Consumption Experience

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Abstract : Nowadays, the usage of power generated from photovoltaic system has been promoted significantly in Thailand. The targeted result which is to increase the Solar Power Generation in 2036 to 6000 megawatts (MW) was planned by Alternative Energy Development Plan (AEDP 2015) and Power Development Plan (PDP 2015). The solar rooftop 200 MW was promoted and supported under the Feed-in Tariff scheme (FiT) in two phases; phase I in 2012 and phase II in 2015. However, the number of people interested in supporting the projects reduced due to many reasons which range from the first process to the last that is to sell electricity back to Electricity Authority. This paper will review this situation especially in total electricity generated from solar rooftop system during the day that has been sold back to the grid utility in different capacity FiT rates. With many stakeholders involved, the regulations and criteria were established to maintain the standard of the system. Besides, lots of problems have occurred during the processes including reliability and quality. These problems were shortly followed by other irrevocably issues concerning politics, social, economic etc. In order to effectively develop solar PV power system in Thailand, the problems and solutions were compared to those from six countries including Japan, Australia, America, China, German and Malaysia. This paper particularly focuses on policies and measurement implemented to encourage the rising in solar PV system interest. This review enables one to gain insight into the nature of the changes that have taken place in each and every country mentioned above as well as the underlying reasons behind them. Brief analysis is carried out on identify key challenges and opportunities for solar PV application. This could help create a development path that is suitable with situations to enhance the overall performance of solar PV power generating system in Thailand.

Keywords : solar PV rooftop, PV policy, self-consumption, solar PV power generation

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