



CASE STUDY 37: THAILAND – RENEWABLE ENERGY ACCELERATION PROGRAMME

Barriers	Regulatory risk
Instrument	Senior Debt
Application	Financing of Solar Photovoltaic Power Plants
Amount	US\$41.6 million

PROJECT BACKGROUND AND OBJECTIVES

Major new investment in generating capacity will be needed to satisfy Thailand’s rapid economic growth. As of 2008, installed capacity was 29.1GW. The latest Power Development Plan (2008 – 2021) forecasts an annual growth rate in demand of 5 percent over the next decade. To meet this, an additional generation capacity of 30.2GW will be needed by 2021.

Despite the government’s Alternative Energy Development Plan, most of the increased power capacity is expected to come from gas-fired and coal-fired generation. In 2006, the Government of Thailand created incentives for private sector investment in renewable energy, setting a supplementary feed-in tariff or “adder” for each renewable energy technology. The size and term of the adder varies by technology. Investments in solar power have failed to take-off due to the lack of experience in this sector and because the adder tariff, though significant, is only for 10 years and provides insufficient marginal project returns for the risk assumed in these early solar investments.

In this context, IFC has used funding from the Clean Technology Fund (CTF) to support two investments in order to catalyze the development of private sector solar projects by establishing a track record of performance for future investors and developers, and provide demonstrational information that concessional financing can address some of the regulatory risk.

The projects are two green-field 6 MWp grid-tied solar photovoltaic power plant located in Nakornratchasima and Loei provinces in north east Thailand by Solar Power Company Limited. They will be developed under Thailand’s Very Small Power Project (“VSPP”) program which supports independent generators smaller than 10MW.

INSTRUMENTS USED

IFC is investing in the project in the form of senior debt. US\$2.6 million from the CTF have also been structured in the form of senior debt. The CTF loan has concessional pricing and a longer tenor vis-à-vis the IFC’s loan. The CTF investment is structured primarily to address investor risk perceptions related to tariff uncertainty, specifically after the adder terminates after year ten. Without the CTF, the sponsor, commercial banks and IFC would be reluctant to support the project. CTF’s participation in this project with a repayment profile that goes beyond the adder period is expected to provide risk coverage from the regulatory risk that is not commensurate with the financial incentive required to make material equity returns on solar projects.

INSTITUTIONAL ARRANGEMENTS

The CTF aims to target and apply concessional funds to support private sector solar projects and address existing market barriers to catalyze accelerated growth of this market and ultimately transform the renewable energy sector in Thailand. The objective of the CTF investment is to enable a financing package to be

completed for one of the first few solar power farms in Thailand. The CTF funding is used to address some of the regulatory risks that the project faces as an early entrant into the Thai solar market. The project's ultimate objective is to accelerate the adoption of private-sector driven PV technology in Thailand by supporting a local Thai developer to demonstrate the viability of PV projects for future market entrants and financiers.

The projects are part of the CTF Thailand Renewable Energy Accelerator Program.

OUTCOMES

The project will support the construction and operation of large-scale, grid-tied solar farms in Thailand, expected to create a replicable model and a demonstration effect for local solar IPP developers. The project will promote private sector investment in the PV sector which is at an early stage of development in Thailand and is expected to demonstrate to the government and to industry players the market conditions necessary for private sector growth of utility scale solar PV plants in Thailand

Further reading

IFC, SPC 4-5: Summary of Proposed Investment – click [here](#)

Climate Investment Funds, Thailand Renewable Energy Accelerator Program (the “Program”) – click [here](#)