



Blending Sunshine and Donor Funds for a Brighter Future

Solar Power Company Group

Photo credit: IFC Infrastructure

AT A GLANCE

- With early funding support from IFC and CTF combined with additional funds from Thai commercial banks, SPCG had installed 36 solar plants by 2014, avoiding 200,000 tons of greenhouse-gas emissions annually.³
- The construction of the IFC-supported plants created both indirect and direct employment for Thailand's rural population, leveraging experience gained by local villagers in previous SPCG construction projects.
- IFC and CTF's long-term financing offered a tailored investment that was aligned with country development objectives and environmental policy goals, catalyzing and sparking fast growth within the Thai solar market. By receiving an amount of funds not available domestically, SPCG exceeded its original goal of producing 204 MW to deliver 250 MW, eventually obtaining financing solely from commercial banks.⁴
- As Thailand's economy developed, energy consumption increased — primarily in the form of finite domestic gas resources — which led to a rise in greenhouse-gas emissions by 70 percent from 2000 to 2010. SPCG proved that Thailand could meet increased demand while at the same time increasing the diversity of its energy mix, which had been dominated by fossil fuels, coal, and natural gas (over 90 percent).⁵
- SPCG is expanding its scalable model day-by-day, looking to spark clean and widespread energy across rural Myanmar, where only 13 percent of the population has access to electricity, most of which is diesel-generated and creates high pollution rates.⁶

Thailand's Solar Power Company Group (SPCG) pioneered the country's utility-scale solar energy market, jolting it to new heights. Employing a greenfield 6 megawatt (MW) grid-tied solar photovoltaic (PV) plant, SPCG positioned itself as the country's leading provider of zero-emission solar energy. An initial IFC \$1.7 million equity investment in 2010 followed by a 2011 investment of \$12 million in blended finance helped bring about this success. The 2011 investment utilized a unique investment approach that deployed IFC debt financing of \$8 million combined with \$4 million from the Climate Investments Fund's (CIF) Clean Technology Fund (CTF) funding window, catalyzing a climate-smart investment that would not otherwise have been possible. By using blended finance, IFC unlocked the Thai solar PV market, making it one of the most attractive among global emerging economies.¹ As a result, in 2015, Thailand had more solar capacity than the entire Southeast Asia region combined.²

AMPLE ROOM TO SHINE

In less than a generation, Thailand moved from a low-income country to an upper-income country, demonstrating significant progress in social and economic development. Its economic growth of 7.5 percent at the end of the 20th century led to the addition of millions of jobs, and as a result, millions of people ascended from poverty—making it one of the most widely-cited development success stories.⁷ However, this growth also led to increased greenhouse-gas emissions because of its high dependence on fossil fuels.⁸ In response, the government set a national goal to achieve 30 percent of its energy from renewables by 2036, which created an incentive for expanding

the renewables market.⁹ In 2008, the grid received just 2 MW from installed solar capacity, but it expanded dramatically to more than 500 MW in 2013.^{10,11} A key factor behind this growth was the extraordinary vision and drive of SPCG's CEO, Ms. Wandee Khunchornyakong.

Not only has SPCG achieved extraordinary results in its own right, it skyrocketed Thailand to be one of Southeast Asia's highest volume producers of renewable energy. Thailand's installed solar capacity increased ten-fold by 2013, with nearly 25 percent coming from SPCG alone.¹² SPCG is exploring replication of its scalable model across some of the most impoverished regions of Thailand and even outside of its borders, with a specific interest in launching operations in Myanmar.¹³

IFC'S TRANSFORMATIVE APPROACH

The road to success was not without its challenges. Although government incentives increased and technology prices fell, allowing SPCG to obtain its first 34 solar farm permits, a major problem remained: financing. The market was increasingly open to facilitating investments in renewables, but local banks lacked the financial capacity to invest in what was at the time an expensive industry, especially one as large-scale as SPCG's utility-sized solar plants. However, this was an ideal challenge for IFC, which provided assistance when it was needed, supporting what proved to be a viable business model, rapidly bringing solar up to scale.

IFC's initial \$1.7 million equity investment attracted an additional \$12 million local currency financing package from Bangkok's Kasikornbank, an internationally ranked bank.¹⁴ Opening in 2010, the first project, known as Korat 1, became the largest utility-based solar project in Thailand and Southeast Asia. A short time afterward, IFC mobilized an additional \$12 million in funds through a \$4 million loan from its own accounts blended with \$8 million in CTF funds. This blended finance approach helped reduce risk and attract further investment for two more 6 MW solar PV farms, Korat 2 and Loei 1, both located in sunny, rural Thailand.

IFC and CTF's combined initial loan of \$12 million has since triggered over \$800 million in private investments, allowing SPCG to deliver 250 MW of solar PV capacity to Thai homes and businesses, truly transforming the way both Southeast Asian and worldwide investors perceive investments in renewables.¹⁵ With a simple business plan, SPCG helped pave the way for the increased commercial potential of grid-connected solar power in Southeast Asia.

"Solar energy is the 'endless power'—it's clean and available at no cost. Other countries can replicate our experience in Thailand and undergo similar transformations that benefit their citizens."

— **Wandee Khunchornyakong**
CEO
Solar Power Company Group (SPCG)

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CONTACT

SONA PANAJYAN | Washington, DC
spanajyan@ifc.org | +1 (202) 473 9751
www.ifc.org/climatebusiness