



SUCCESS STORY

Lowering Electricity Costs and Saving the Planet: How the Sun is Working for Big C



Photo Credit: Richard Nyberg/USAID Regional Development Mission for Asia

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Nearly four years have passed since Thailand’s retail giant Big C Supercenter and the United States Agency for International Development (USAID) became partners. Big C’s stores across Thailand are cost efficient and profit generating, and with an average store size of 12,000 m², electricity is the second-greatest expense. But Big C’s carbon footprint was at odds with a desire to be an industry leader in corporate social responsibility, and to reduce greenhouse gas emissions from fossil fuels that power operations across the region.

Big C had long considered renewable energy sources to lower electricity costs while making its business more environmentally friendly. However, in the rapidly-evolving clean energy sector, reliable information can be hard to come by. A major move to incorporate renewable energy into operations requires due diligence, complex financial modeling, and analyzing projected impacts on a wide range of business functions.

In 2015, the USAID Private Financing Advisory Network-Asia (PFAN-Asia) program engaged with Big C to support the pilot installation of a solar PV system on the roof of one of its stores. USAID PFAN-Asia provided technical assistance at a pivotal moment for Big C and, acting as an independent advisor, USAID experts assisted in preparing a terms of reference, evaluating bidders’ proposals, and creating a financial model, all of which gave the management team at Big C the information they needed to develop a business model for the pilot rooftop installation.

A year later, as USAID PFAN-Asia wrapped up operations, USAID Clean Power Asia stepped in to ensure continued momentum for solar rooftop. As USAID’s flagship renewable energy program for the region, USAID Clean Power Asia worked with Big C executives to validate key terms in the private power purchase agreement and lent their expertise to create a negotiating strategy. USAID Clean Power Asia staff developed a business model that focused on aggregation of electricity demand for Big C stores, and with so many outlets as potential future solar rooftop sites, Big C sought out favorable pricing.



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Big C subsequently contracted Impact Solar to install and operate rooftop solar systems across 33 stores in Thailand. This first-of-its-kind deal for a major Thai retailer was valued at 1 billion THB (\$31 million) and has a total installed capacity of 27 MW. The first store to come online is in Pathum Thani, just outside Bangkok, where in early September, staff from USAID’s Regional Development Mission to Asia and USAID Clean Power Asia joined Mrs. Vipada Duangratana of Big C and representatives from Impact Solar at a ribbon-cutting ceremony. The rooftop system at Pathum Thani has an installed capacity of just under 1 MW, and in its first month of operation, the system supplied 20 percent of the store’s electricity consumption, representing cost savings of nearly 5 percent, in line with estimates.

USAID engages with companies committed to reducing their carbon footprint while lowering electricity costs and realizing greater profits. A long-time leader in the retail business in Thailand, Big C is now ahead on the environmental front and, with technical assistance from two USAID programs, will soon have the largest combined solar rooftop system in Thailand generating much of their power needs. Big C benefits economically from employing renewable power sources, and Thailand and the world win through the reduction of greenhouse gas emissions estimated at 390,000 tons of carbon dioxide equivalent over 20 years.