

Guyana

Guyana's Private Sector-Led Solar Power Transition

Guyana hopes to use solar power to reduce the country's reliance on expensive imports of diesel and bunker fuel while still meeting its electricity needs. While solar power is cheaper to generate and considerably better for the environment than burning diesel, the cost of buying and installing solar panels is beyond the reach of most Guyanese businesses and property owners.

However, commitments made in 2018 to invest in a 14 MWp distributed roof-top solar project will catalyze renewable energy access for commercial and industrial companies, provide a cheaper and cleaner energy option for Guyana, and help the government reduce emissions and reach its 100% renewable energy target.

Situated on the northeastern coast of South America, just north of the equator, Guyana experiences an average of 12 hours of daylight all year round. The country and its population of just 785,000 regularly enjoy sunny conditions, making Guyana ideal for solar energy.

"We have a lot of capacity for solar, and many public buildings, including schools, have solar photovoltaic panels," said Sandra Britton, renewable energy liaison officer in Guyana's Department of Environment.

The Global Green Growth Institute (GGGI) has initiated the Urban Sector Solar Energy Program (USSEP) to accelerate private sector participation in scaling up renewable energy in Guyana, provide hands-on policy and technical support to the government, and remove existing market and regulatory barriers. As part of the program, a pipeline of solar projects has been developed to displace captive diesel generation with cheaper and cleaner renewable energy, with the aim of transitioning away from fossil fuels.

About 85% of Guyana's electrical power generation is from imported fossil fuels, with renewables mainly including biomass and very small percentage of solar. Currently, 82% of the population is connected to the national grid.

However, the country's electrical grid is fragile, with frequent power outages. It is uncertain, therefore, how much renewable energy the grid could handle. The existing regulatory connection cap for 100 kW of distributed generation discourages investment in solar by private companies. Guyana also does not have feed-in tariffs for renewables—a premium price paid for pollution-free energy. As a result, companies that do have solar and put their excess electricity onto the grid are not compensated for the energy they provide.



GGGI in Guyana: Private sector participation to scale up renewable energy

Many Guyanese companies are off-grid, generating their own electricity by using diesel or bunker fuel-powered generators. According to Muharrem Askin, a senior energy engineer with GGGI, there is an estimated 70–120 MW of diesel self-generation in Guyana. Much of the commercial and manufacturing sector is either off the network, completely relying on expensive and polluting self-generation, or use the grid as back-up. There is about 20–25 MW of feasible solar installations targeting these customers over the next few years.

While electricity production from solar is essentially cost-free, there are considerable upfront costs to import

solar panels and install them. Further, there is little domestic finance in Guyana to overcome these initial transition costs.

“Guyana is a great place for solar, and while there are a number of companies excited by the possibility of dramatically lowering their energy costs, a lack of local experience and access to finance are barriers,” said Charlotte Camille Chow, an investment officer with GGGI. *“That is why the leasing model was very attractive to most of the companies.”*



GGGI in Guyana: Transitioning to solar power with the Urban Sector Solar Energy Program (USSEP)

The solar pipeline initiative engages local businesses and the industry and informs them about the potential of solar energy and the long-term cost savings that it can help deliver. After identifying interested companies, GGGI took steps to assess their solar potential through site visits. Additionally, due diligence for potential solar developers was completed.

This culminated in selecting one local company, together with an international solar developer, for project implementation. The parties signed a commitment letter to work with GGGI to locate international financing using a lease-to-own model. The project involves an investment of between USD 15–19 million and will have a 14-megawatt generating capacity, which represents just over 6% of Guyana’s total electricity generation capacity.

The solar pipeline initiative also supports Guyana’s climate actions. The country has an ambitious emissions reduction

target under the Paris Agreement. While the 14 MWp project is an important first step, it will also bring technical know-how and raise awareness of clean energy in Guyana. Moreover, GGGI aims to develop utility scale projects to increase the installed renewable power with its Scaling Renewable Energy Program (SREP) in 2019. Within the scope of the program, the government of Guyana will also receive support for a secure grid integration and the management of funds from the Green Climate Fund.

Momentum for solar power in Guyana is growing and needs to continue as considerable oil and gas reserves were only recently discovered off Guyana’s shores. Production may begin as soon as 2020, so Guyana and its delivery partner will have to move quickly to build on early successes in demonstrating to the private sector that solar is a clean, low-cost way to meet much of Guyana’s electricity needs.