

## Solar for Education

### Report of Scoping Visit

#### **Background:**

A recent initiative of CUTS International, in collaboration with Friedrich-Ebert-Stiftung (FES) India ideates in creating suitable social coalition(s) among relevant stakeholders with a long term vision of transforming West Bengal towards a more sustainable and greener path. Appellated as Green Growth and Energy Transformation (Grow GET), this project identifies 'Solar for Education' as a politically feasible and commercially viable proposition for the state, given its present socio – political dimensions and buy-ins.

In relation to the above initiative, CUTS undertook a scoping visit in the two districts of West Bengal, namely Jalpaiguri (North Bengal) and South 24-Paraganas (South Bengal), primarily to authenticate the project idea which came up from a series of deliberations by the Seed Community members (comprising of subject experts from both public and private sectors). The selection behind these two states of West Bengal is a result of a collective consortium by these members, mainly taking the demographic preferences into consideration. At an initial stage, the scoping exercise targeted Government and Government aided institutions (schools in particular) from these two districts owing to the fact that most of the institutions and schools (especially for South 24 Paraganas) are Government/undertaking Government in nature. The rationale looms even larger with a secondary research conducted by CUTS, which revealed a substantial percentage of schools in West Bengal having little or no access to electricity in their respective premises<sup>1</sup>. Even if, many of the institutions in these districts had access to electricity, questions can be raised with regards to its quality and reliability owing to frequent voltage drops and power outages. Given this context, the objective of the survey was to create a discourse in promoting renewable source of captive power plants and also provide solar solutions to these institutions.

#### **Context:**

During the course of the survey, researchers from CUTS met with Principal/officials from various schools and colleges, mostly Government and Government aided institutions in the districts of Jalpaiguri and South 24 Paraganas. The names and necessary descriptions of the visited institutions are provided in the following Table:

District	Schools	Colleges	Other Institutions
Jalpaiguri (North Bengal)	1. Manikgunj High School 2. Ghugudanga High School 3. Khagrabari Dakshin High School 4. Ashalata Basu Vidyalaya (Private) 5. St. Paul's High School (Private) 6. Kachua Boalmari High School 7. Kharijaberubari High School 8. Maynaguri Girls' High School	1. Ananda Chandra College, Jalpaiguri 2. Jalpaiguri Govt. Engineering College 3. Jalpaiguri Law College, Jalpaiguri 4. Birpara College, Jalpaiguri	Not Surveyed
South 24 Paraganas (South Bengal)	1. Gangadharpur Kamalakanta High School, Kakdwip 2. Sundarban Adarsha Vidyamandir, Kakdwip	Not Surveyed	Not Surveyed

<sup>1</sup> Around 50 thousand Government and Government aided schools in West Bengal were un-electrified till 2013-2014 (<http://www.indiastat.com/table/education/6370/educationfacilitiesforprimaryeducationatschool19862014/369788/820046/data.aspx>)

	3. Bagariya Kalika Adarsha Vidyamandir, Kulpi		
	4. Vidyadharpur Nabakumar Vidyamandir, Kulpi		
	5. Narayanpur High School HS, Kulpi		

Interviewing these schools and colleges over a stretch of one month, researchers clearly perceived a decent interest among a significant section of the institutions in terms of procuring an alternate source of captive power generation; which even could be off-grid in nature, having the potential to cater to a part of their daily electricity demand. Jalpaiguri Ananda Chandra College is the only institution out of the lot to have installed a 25KW SPV with financial assistance from the State Government of West Bengal, way back in September 2014 with a total expenditure of around INR 6.61 crores. The experience of installing a solar PV and its subsequent maintenance has been shared by Prof. Roy, Principal, AC College Jalpaiguri. He laments: “25 KW plant has been running well as of now, although it hardly meets our regular demand, considering the required capacity load needed for the college. Furthermore, as we are located just beside the highway, maintenance cost has to be borne aplenty”.

However, due to lack of knowledge on procedural formalities to install solar plants and a dearth of proper supply chain related to the business in these districts, the researchers perceived a number of obstacles towards installing solar PV systems on institution rooftops.

#### **Actions:**

As a follow up to this scoping visit activity, CUTS team met with senior officials from the Department of Power, Government of West Bengal; including the Principal Secretary and the Special Secretary of the Department and shared the ground level experience with them. After a thorough round of discussion, CUTS officials were informed that the State Government of West Bengal had already taken initiatives of providing solar PV solutions for the Government and Government aided institutions. All such institutions are a part of the initiative and yearly targets of installing rooftop PV systems had already been adopted.

Thus, CUTS team proposed and planned to carry forward the initiative with the non-Governmental and private institutions, mostly from the urban, semi-urban and peri-urban areas of the state having investment capacities with an ability of catering their own power, reduce the monthly electricity bills, contribute towards reducing the greenhouse gas emissions and subsequently create a goodwill and interest among students on clean and green power in order to build their environment consciousness.

Following this plan, CUTS team further visited a number of Government as well as private schools and colleges in and around Kolkata in terms of assessing the overall scenario, mostly in Kolkata. The list of those institutions is as follows:

<b>District</b>	<b>Schools</b>	<b>Colleges</b>	<b>Other Institutions</b>
Kolkata	1. Jadavpur Sammilita Girls' High School 2. Santoshpur Girls' High School 3. Baghajatin Sammilita Balika Vidyalaya 4. Garfa Dhirendranath High School 5. Ramkrishna Mission	1. Bijoygarh Jyotish Roy College, Kolkata 2. The Bhowanipur Education Society College, Kolkata 3.	1. Ramkrishna Mission Institute of Culture, Golpark, Kolkata

	Vidyamandir, Narendrapur		
6.	St. Lawrence High School (Private)		
7.	St. John's Diocesan Girls'HS School (Private)		
8.	Bijoygarh Vidyapith Boy'sHigh School		

For all of the surveyed Government and Government aided schools and colleges, researchers have found solar PV systems already been installed in each of these institutions with the initiative of the state Government and most of them are running successfully with proper maintenance mechanism. The maintenance costs are directly borne by the institutions without any assistance from the state; the cost of which however depends on multiple locational parameters. In fact, some of the institutions like Bijoygarh Jyotish Roy College, Kolkata and few others have also appealed to the state Government for an increase in their current solar plant size to meet up their regular demand and for a further cut down to the electricity bills.

CUTS team has also visited some of the private schools and colleges in order to understand their general awareness and willingness towards installing solar PV systems in their institutions. The researchers clearly perceived an upright interest for most of them in procuring power from the renewable sources (re: Solar PV systems); given more clarity on the process of installation, subsequent installation charges, maintenance cost, other recurring costs (if any) and so on. In fact, CUTS team has done rounds of facilitation between Ramakrishna Mission Institute of Culture, Golpark, Kolkata and a number of eminent solar plant manufacturers across Kolkata at recent times. In general, although there has been a growing awareness for such initiations at an institution level, continued discourse building and knowledge sharing is required amongst relevant stakeholders in order to increase its viability.