

The Gaza Community Mobilization for Solar Energy Project - Phase I

In January 2013, IPCRI - Israel Palestine Creative Regional Initiatives launched a study, in cooperation with Mr. Hisham Kullab and others in the Gaza Strip, of solar energy production potential in the Gaza Strip. The objective of the feasibility study was to determine the degree of potential for rooftop photovoltaic solar panel implementation on public schools throughout the Gaza Strip.

The aim of the study was to be the first step in the development of effective renewable energy installations to provide clean and reliable energy to the Gazans. The long-term goal is to assist Gaza in developing a robust renewable energy sector, reducing its energy deficit and enabling sustainable growth.

Study overview

The 2013 study involved a 4-stage process:

1. Mapping of buildings in the Gaza strip: 365 schools buildings in all 7 directorates (238 publicly owned and 127 UNRWA (UN Relief and Works Agency for Palestine Refugees in the Near East) owned)

2. Measuring and surveying of roof area

Notes considered:

- Available area
- Direction of sun-exposure
- Location, size and height of shading objects on the roof
- Surrounding shading objects
- GPS coordinates
- Location of main electricity box and where the plant will connect to the

grid, in the case of a grid-tie plant.

3. Identification of high potential sites and analysis along with key partners

4. Reporting

Study findings

The total rooftop area on public and UNRWA school buildings suitable for implementation of photovoltaic systems was found to be approximately SQM 221,270. The study did not consider private sector schools or universities.

Suitable rooftop area in square meters:

Directorate	Public schools (m ²)	UNRWA schools (m ²)	Total Suitable Rooftop area (m ²)
North Gaza	20510	17920	38430
West Gaza	28070	16380	44450
East Gaza	23870	10080	33950
Middle Area	12530	21070	33600
Khan Younis	13650	9240	22890

East Khan Younis	10990	9310	20300
Rafah	9730	17920	27650
Total	119350	101920	221270

Proposed project development

Following the study, the team proposed the implementation of rooftop photovoltaic systems on public and UNRWA schools across the Gaza Strip. Based on consultancy from the Palestinian renewable energy firm 3K Solar, IPCRI has estimated initial costs of photovoltaic system implementation on UNRWA and public schools at \$1.5 million USD per megawatt. This value is based on the use of standard efficiency Chinese solar panels (an average of 4 panels per kW production) and local labor.

A preliminary letter was prepared for the Palestinian authority detailed the findings and asking for support, moral, administrative and financial to promote this project. Unfortunately, notwithstanding numerous meetings, nothing came of this attempt. As a result, the team decided to take a different approach and to initiate a Community mobilization campaign so as to get the support needed from the community to then pressure decision makers to support and promote a solar energy plan for Gaza.

Community Mobilization - Phase II

To garner the support of the community a community mobilization project was initiated. The project involved engaging under graduate college student and providing them with tools and knowledge to lead a campaign that would call for and propose a way by which the electricity problems of Gaza can be solved.

The campaign entailed:

1. Public education through stands in public places with students who spoke to the local population, explained to them the importance and potential of solar energy and asked them to sign a letter calling upon the authorities and the donor community to put emphasis on solar energy as a means to solve the grave energy shortage in Gaza.
2. Coordination of community resources so as to efficiently generate the pressure needed to change the bureaucratic procedures and create the legal framework needed to facilitate Solar Energy generation.
4. Educate the population about the need of reducing the consumption and pooling of available resource.
5. Encourage new college graduate student to get involved in solving their community needs and developing the expertise needed to create and maintain solar energy generation and encourage the newly graduated students to unite and form committees to develop and exchange expertise.
6. Increase the donor interest and investment in this sector and brings more donors when they see the importance of this issue for the Palestinians.

Material was produced aimed at educating the local population and encouraging them to participate in the bringing about a solution to the Gazan energy crisis. The project built on the group that worked on the rooftop mapping and included “The Engineering Society for Environment and Development” - a group of about 30 graduates of environmental studies and undergraduate engineers. This group lives all over Gaza and was instrumental in getting the word out about the project.

The project also included involving community leaders and religious leaders to have their blessing and support for the campaign.

The most recent war started at the height of the advocacy campaign. At the outbreak of the recent war over 30,000 signatures of Gazans were collected -- with the involvement of youth, women and children as well as all the sectors of the community -- calling for implementation of solar energy projects in Gaza as a means to provide Gaza with sustainable and green energy.