

# Non-Technical Summary

150 MW Solar Power Project Sukkur, Pakistan

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## 1. Introduction

Scatec Solar ASA with local partner Nizam Energy is developing a 150 MW solar power plant in Goth Bachal Gagrahara, Taluka Saleh Pat in district Sukkur, Sindh referred as (the 'Project'). Scatec Solar ASA is an integrated independent renewable power producer, delivering sustainable clean energy worldwide. The company, headquartered in Norway, develops, builds, owns, operates, and maintains power plants.

The Project, comprising three plants generating 50 MW each, will be implemented by three independent companies named Meridian Energy (Pvt.) Limited, HNDS Energy (Pvt.) Limited and Helios Power (Pvt.) Limited (also collectively referred as the 'Clients' or the 'Project Developers'). The Project is being financed by FMO Entrepreneurial Development Bank (referred to as the 'Lender').

The Project has signed an Energy Purchase Agreement (EPA) with Central Power Purchasing Agency for 25-years. A total of 468,780 Solar PV modules will be installed for the Project. The Project is an A-risk category according to FMO's Sustainability Policy (and in line with IFC's Performance Standards) and has very limited number of specific associated environmental and social impacts, which can be avoided or readily addressed through mitigation measures.

This Non-Technical Summary (NTS) provides a description of the project and describes the potential benefits and impacts associated with its construction and operation. It also describes how these will be mitigated and managed through all phases of the project's development. In addition, it provides a summary of the public consultation activities and the approach to future stakeholder engagement.

## 2. What does the Project include?

### 2.1 The Project

The detailed design of the Project has been finalised and the Project is expected to comprise of the following elements:

- PV Module Model JA SOLAR JAM72D30 530-535/MB (BIFACIAL)
- 66 kVA new single or double circuit transmission line to the Nara 1 Grid Station (Line will be constructed by SEPCO)
- PV Plant Capacity 3 x 40MWac/ 3 x 50MWp
- Grid Connection 3 (1 x 33/132kV) Substation
- Operations and Maintenance (O&M) building
- Site road
- Boundary wall.

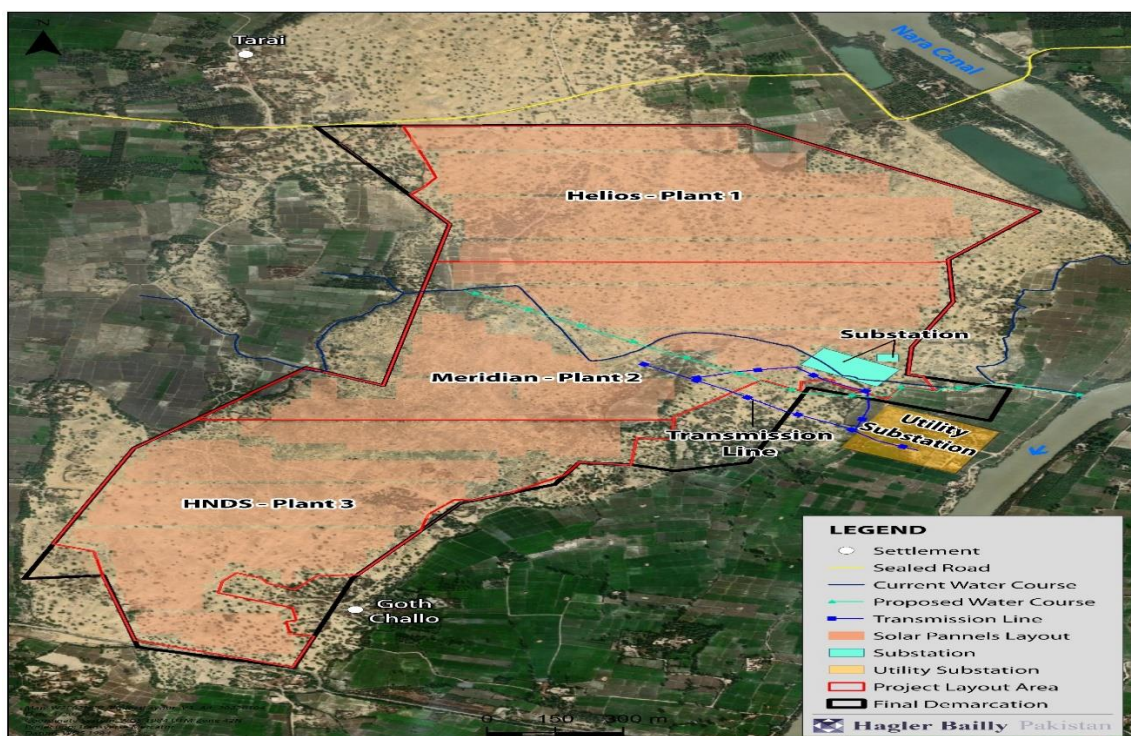
As detailed in figure 1, the Project is in district Sukkur Sindh, Pakistan. The Project site is in Taluka Saleh Pat, which is approximately 55 kilometres (km) from Sukkur city.

Figure 1: Project Location



Figure 2 shows the location of the site. The Project site covers an area of 287 hectares (ha) (710 acres), which has been leased by the Government of Sindh. The Project will be connected via a 66 kVA new single or double circuit transmission line to the Nara 1 Grid Station which is located at ~400 m from the Project site.

Figure 2: Project Layout



## 2.2 Project Status

At the time of writing the project design has been finalized and Notice to Proceed (NTP) issued to the Contractor on 15 June 2022 to start the construction. At site the levelling and grading work of PV area, construction of boundary wall and arrangements of Temporary Site Facilities (TSF) are in progress. In addition to that the delivery of Electrical Balance of Plant (EBOP) equipment e.g., transformers and piling structures has also been started. The total construction duration is 10 months and expected to achieve commercial operation date (C.O.D) on 15 April 2023.

## 3. Why is the Development required?

Pakistan primarily produces electricity from expensive imported fossil fuels. Pakistan's total installed power generation capacity is 38700 MW, of which 57 percent of energy comes from thermal (fossil fuels), 31 percent from hydro, 4 percent from renewable (wind, solar and bagasse) and 8 percent from nuclear.

Fossil fuels are not environmentally friendly, and their prices are unstable on the global market, which puts a lot of strain on the nation's economy. The huge deficit between supply and demand has resulted in routine load-shedding. The continuing power crisis has badly affected the daily lives and industries.

Pakistan having huge development potential in renewable energy resources is now focusing on cost and climate efficiency. The Alternate Renewable Energy Policy of Pakistan aims to increase the share of renewable energy in the national power grid from 5% to 20% in 2025 and to 30% in 2030.

The project will replace the fossil fuel with solar energy to strengthen the non-dependency on imported fossil fuels and reduce the greenhouse gas emissions. Further, it will increase the percentage of use of renewable energy and aid in reaching national goal of 30% renewable energy by 2030.

## 4. What are the benefits of Project to the local community?

The Project will help to provide a reliable and steady income generation means for local community by providing the opportunities of local employment, small material/ equipment (locally available) supply contracts, etc. The majority of hiring for both construction and operation phases will be preferred from the local labour market. During the peak construction 1000 to 1100 workers are expected to be on site. Up to 300 of these are expected to be workers who have a specific skill sets and will most likely need to be brought in from wider regions. However, it is envisaged that around 700 jobs will go to the members of local community during construction phase. Although this work is temporary, job opportunities are expected to benefit the local community. Scatec Solar's policy is to use local labour where possible.

During operation phase, approximately 40 to 50 workers will be engaged on the plant which includes O&M staff, E&S team, asset management team and workers for vegetation & panel cleaning activity. Workers for vegetation and panel cleaning will be employed for short term on need basis.

## 5. Potential adverse socio-economic impacts of the project.

### 5.1 Land Acquisition, Involuntary Resettlement and Economic Displacement

The Land required for the project's construction was owned by the Government of Sindh (GoS) and total 287 ha (710 acres) of land has been leased to the project company. The project company has



legal rights to use the land for the development of the project. Out of 287 ha of the leased land project company will use approx. 250 ha (540 acres) for the development of the project.

Part of this land was being used by local communities and change of land use related to the project have some consequences on the well-being of the community. Around 113 households have been affected by the project by losing their built-up structures, other assets, and agricultural land. Out of 113 project affected households (PAH) 83 PAH are to be physically displaced and require relocation.

A detailed Resettlement Action Plan (RAP) has been prepared for the project which identifies the potential social issues related to resettlement and proposes measures to mitigate adverse impacts. RAP includes the provision of the stakeholder engagement to ensure meaningful and adequate consultation with all stakeholders in project planning processes, particularly the primary stakeholders in the project area. Thus, the resettlement planning processes have followed a participatory planning process with local inputs in decision-making, policy development and mitigation measures.

To register and resolve the grievances of the community in this process, a Grievance Redress Mechanism (GRM) has also been established and being implemented.

## 5.2 Pressure on Social Infrastructure and Services

There is a potential for an influx of job seekers in the area due to the jobs created by the project. The influx will increase pressure on the availability of infrastructure and services, such as those pertaining to education, health care and medication, water, and transportation in the Project area. However, the construction period is temporary, pressure on social infrastructure & services is likely only to be relevant in a relatively short period. Further, the Grievance Redress Mechanism (GRM) will help to identify any issues at a stage so that they can be dealt with effectively.

## 5.3 Conflicts due to Provision of Employment to Outsiders

A conflict can arise due to unequal access to the project opportunities such as employment and small contracts. Complaints can be expected from nearby local communities if the distribution of jobs among local communities is perceived to be unfair and preference given to the expatriates. As the local community consider themselves as the rightful owners of the project benefits owing to their vicinity to the project. The project company is committed to provide the maximum benefits to the local communities and obligated the main contractors to engage 100 % unskilled workforce from the local community and prefer them in semi-skilled jobs if resources available.

## 6. What will be the key environmental impacts of the project and how will they be mitigated?

The construction phase of the Project will have the following environmental impacts.

### 6.1 Soil and Water Contamination

#### **Impact overview**

Hazardous waste is typically associated with the contamination of groundwater, soil and the surrounding environment through leaks and spills. Accidental leaks and spills involving oils and solvents can be carried through rainfall runoff to surrounding areas or also potentially groundwater through seepage. This risk is considered of high significance due to the magnitude and extent i.e., contamination of the canal will affect all downstream receptors such as fish etc.

#### **Mitigation measures**

It will be ensured that the stormwater from surrounding areas does not enter the construction site and pass to the canal or surrounding agricultural area through proper contouring and installation of embankments, where necessary. Runoff channels will be provided (where necessary) to avoid flooding or the construction of storm water drainage system. Industrial good practices will be followed for the storage of fuel and chemicals.

## 6.2 Solid Waste Generation

### Impact overview

The construction phase will result in the generation of construction debris, packaging material, domestic and kitchen waste etc. Inappropriate management of waste may cause soil and water contamination, occupational health hazard, visual nuisance and can also be detrimental to the local fauna.

### Mitigation measures

The project has a dedicated waste management plan that identifies waste sources, management options and monitoring requirements. Waste will be segregated and stored in a dedicated scrapyard and will only be disposed through a locally authorized waste management contractor. It will be ensured that domestic waste is not disposed or burnt in the open or dumped into water bodies like the nearby canal.

## 6.3 Water Use Impact

### Impact overview

The construction phase involves the use of water for various activities such as dust control, concrete batching and curing, domestic usage and other. The project will use the ground water during the construction phase however, based on a conceptual water balance, this is expected to be less than 1% of the annual groundwater recharge and would not result in any significant decrease in the groundwater levels of the area.

### Mitigation measures

A water management plan focusing on water use and conservation management will be developed and implemented. Measures will be taken to minimize water use where possible. Monitoring of groundwater levels will be undertaken through a monitoring well and an aquifer yield study will be carried out if significant changes are observed. Complaints made through the GRM regarding the project's water use will be investigated.

## 6.4 Traffic Impact

### Impact overview

The construction phase involves high number of vehicles to bring the materials, plant and personal to and from the site. Heavy traffic movement creates a nuisance for local communities who may utilize the traffic route for their daily activities. In addition to that heavy vehicle movement has the potential to generate dust and noise.

### Mitigation Measures

A project's Traffic Management Plan (TMP) has been developed and being implemented. The TMP identify/map sensitive areas (traffic safety related) and include mitigation measures. Further, it will be ensured that the truck-trips do not occur during peak traffic hours. Auxiliary roads will be constructed where possible to reduce the use of roads utilized by the public.

## 6.5 Occupational Health and Safety

### Impact overview

The potential occupational health and safety (OHS) impacts of the project include those that are typically associated with construction such as injury from falling objects, fall or trip hazards, electric shocks, and hazardous chemicals etc.

### Mitigation measures

A project specific Occupational Health and Safety Plan, including tracking and monitoring of accident investigation, corrective actions and lessons learned has been developed and being implemented. Hazard risk assessments will be developed for each high-risk activity to prevent and avoid any adverse situation. Implementation of mitigation measures such as provision of PPEs will reduce the overall consequence of OHS impacts.

## 6.6 Ecology

The terrestrial flora and fauna species in the project area are mostly common. The nearest protected area in vicinity of the Project is Nara Desert Wildlife Sanctuary which is 3 km from the Project site while Takkar Wildlife Sanctuary and Nara Canal Game Reserve are located at 11 and 17 km from the Project site, respectively.

The anticipated aspects affecting ecology and biodiversity in the project area are below:

- **Terrestrial habitat loss caused by construction related activities**

Site clearance and construction of Project infrastructure will result in immediate and direct modification of terrestrial habitat at the Project site; however, the modification will be less severe in the areas that lie adjacent to and immediately outside the Project facilities.

The project will ensure that footprints are clearly demarcated and restricted. Disturbance to, or movement of, soil and vegetation be minimized. Soil damage and erosion will be prevented, and natural vegetation will be retained as much as possible.

- **Impacts on abundance and diversity of terrestrial flora and fauna caused by construction related activities**

There will be no significant impact on the flora as in the project area no endangered or rare plant species are present as all plant species are common and abundant in the wider area. Habitat loss caused by construction of project infrastructure will not have any significant impact on the overall population of these vegetation species.

On fauna the larger mammals are not likely to be affected due to the high mobility of these species. The loss of smaller fauna which provide prey for these larger species is not considered critical as the area of disturbance is small.

## 7. How will the project ensure effective management and monitoring of impacts?

The project company and the construction contractors will fully implement the requirements of the Environmental and Social Action Plan (ESAP) and Environment and Social Management System (ESMS) developed for the Project. This includes a requirement to compliance of ESAP and monitor the implementation of ESMS, monitor EHSS performance. Further, retain an experienced project company



Environment and Social (E&S) Manager to monitor overall E&S performance. In addition to that appointment of an experienced EPC HSSE Manager and a Labour Coordinator dedicated to the Project for the implementation of best OHS practices and compliance of Labour laws working conditions management.

## 8. Stakeholder engagement plan (SEP)

A Stakeholder Engagement Plan (SEP) has been developed with the objective of identifying key stakeholders and ensuring that, where relevant, they are informed in a timely manner of the potential impacts of project.

The SEP also identifies a formal grievance mechanism to be used by stakeholders (internal and external) for dealing with complaints, concerns, queries, and comments. If activities change or new activities relating to stakeholder engagement commence, the SEP will be brought up to date. It will also be reviewed periodically during project implementation and updated, as necessary. The SEP includes the following:

- Public consultations and information disclosure requirements.
- Identification of stakeholders and other affected parties.
- Overview of previous engagement activities.
- Stakeholder Engagement Programme (SEP) including methods of engagement and resources; and a
- Grievance mechanism with a template for provision of comments/complaints.

Stakeholders could be individuals and organisations that may be directly or indirectly affected by the project either in a positive or negative way, who wish to express their views.

## 9. Further information

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