

24 Apr 2013

# Teplodar PV solar project non-technical summary

## 1 Introduction

This document provides a non-technical overview of Teplodar solar power plant construction in Odesa Oblast proposed by private company Teplodar PV LLC. It also presents a summary of potential environmental and social impacts and other environmental and social issues relevant to the proposed activities. Appropriate measures to mitigate key adverse environmental and social effects that may arise during project construction and operation are also provided in *Table 1* at the end of this document.

This Non-Technical Summary (NTS) document will be placed in the locations shown below for public disclosure. Anyone can provide comments and recommendations on the environmental, social and other aspects of the project.

Environmental and social documents will be available for review during normal business hours at the following location:

- *Teplodar Town Hall*  
Address: 7, Pionernaya Street, Teplodar, Odesa oblast, 65490, Phone: +380 485024864
- *Teplodar PV LLC Company offices*  
Address: 129, Energetikov Avenue, Teplodar, Odesa oblast, 65490 Phone: +380487602096

For further information on this project, or to provide comments on the project or the environmental and social documentation, please contact:

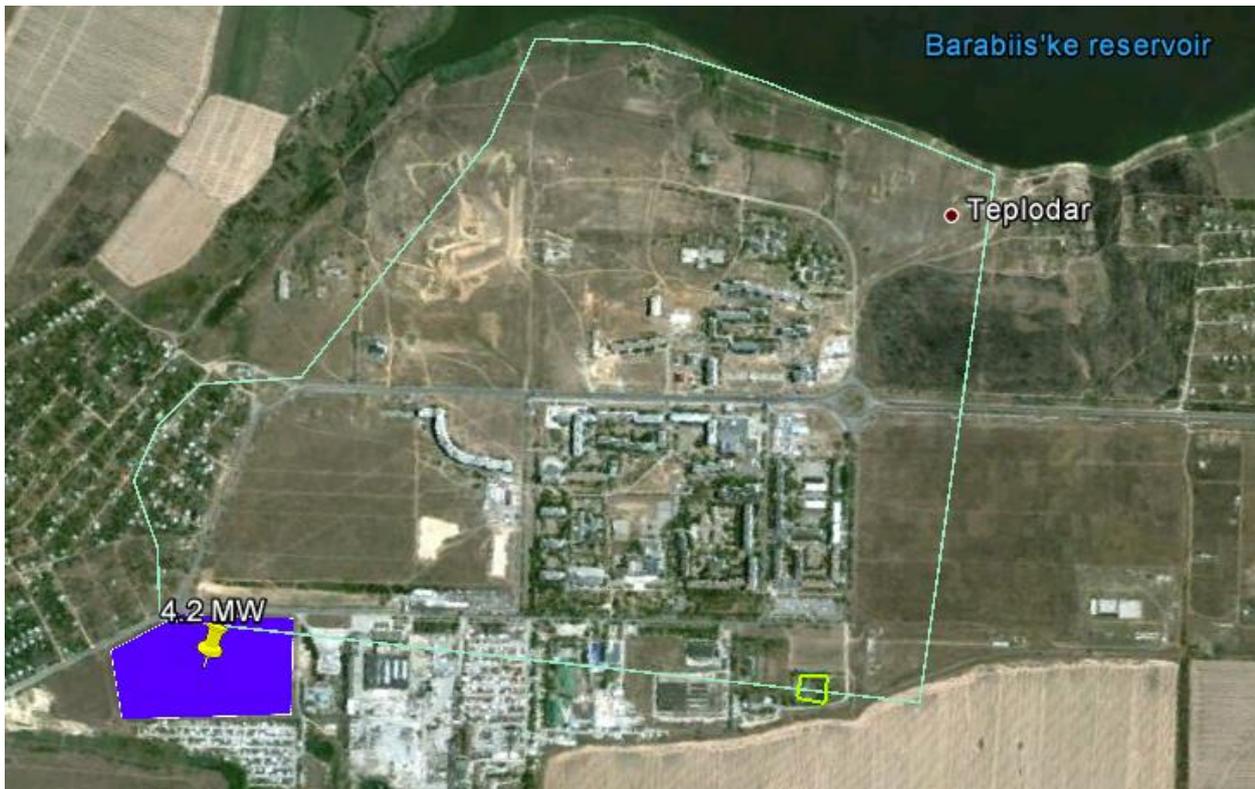
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## 2 Description of the Proposed Development

The project developer Teplodar PV Limited Liability Company was established in 2012 and at present is registered in the town of Teplodar of Odessa Oblast. Main business focus of the company is the development of solar energy project of Teplodar solar power plant.

The project is located just outside the Teplodar town in Odessa Oblast. *Figure 1.1* further below shows the location of the site for the solar plant.

**Figure 1.1 Project location** (Latitude: 46°30'43.74"N Longitude: 30°19'2.11"E)



The project will install 17,182 solar PV modules each having 245 Wp capacity, as well as 12 inverters each having a nominal capacity of 330 KWp. The planned installed capacity of the project will be 4.209 megawatt, which will provide an annual gross electricity generation of 4,916 MW-hours.

Electricity generated at the solar plant will be connected to the distribution grid via a 110/10kV substation and 1200m long of 10 kV cable (underground) transmission line, and will be sold to the grid at the feed-in tariff under the "Green Tariff Law".

The solar power plant will be operated on an area of close to 7 hectares that is leased for the construction of a solar power plant by Teplodar PV LLC.

By using the renewable solar power, the project will have significant environmental benefits over other types of energy generation, such as those utilising fossil fuels (gas, coal) or nuclear. It will contribute to the reduction of emissions of greenhouse gases in the approximate amount of 5000 tons of CO<sub>2</sub> annually, as well as create new jobs and improve security of energy supply in the area.

### **3 Environmental, Health, Safety and Social Review**

#### **3.1 Project studies and documents**

Solar energy power plants can be considered as having perhaps the least impact on the environment and the biodiversity of the surroundings. However, to assess and manage their impacts several environmental documents have been prepared including the following.

The project preparation included basic assessment of the environmental conditions of the site, surrounding area, and environmental and social impacts.

As part of the environmental and social due diligence evaluation, a wide review was conducted of corporate environmental, health, safety and social management arrangements. From the overall review, an Environmental and Social Action Plan (ESAP) has been developed, which identifies mitigation measures to minimise, reduce, eliminate or control potential adverse impacts of the Project on the environment and the people. Key mitigation measures are summarised in *Table 1* of this document further below.

The Stakeholder Engagement Plan (SEP) has been developed to describe how Teplodar PV will communicate with people and institutions who may be affected by, or interested in the Project, at various stages of project preparation and implementation. Teplodar PV will assign a social liaison officer, who will be responsible for keeping open dialogue with stakeholder groups and local residents. At any time before and during construction and operation, any stakeholder can raise concerns, provide comments and feedback about the Project. All such comments and grievances from people will be accepted, processed and answered by Teplodar PV in a timely manner.

#### **3.2 Sensitive locations**

The project is situated in an area of low environmental sensitivity.

There are no protected areas in the immediate vicinity of the project. Moreover the site is located in the industrial zone of Teplodar town in the area not suitable for agriculture. There is no residential properties laying in immediately near the site. No noise or flickering is expected during the operation of the solar plant which may disturb the residents of the town.

#### **3.3 Project impacts and their mitigation**

An evaluation of potential environmental and social impacts determined that, in addition to its benefits, the project could have negative impacts on the environment and people, if not managed carefully. Therefore, Teplodar PV will implement certain actions (called “mitigation measures”) to prevent, reduce, or mitigate negative impacts of this project. A summary of key impacts and mitigation measures that have been identified, is provided in *Table 1* below.

**Table 1 Overview of Key Potential Project Impacts and Their Mitigation**

No	Issue	Potential impact	Mitigation measures
1	General construction impacts	Impacts during construction of the main (solar modules and inverter stations) and associated (transmission line) project facilities, such as land excavation, dust, noise, air emissions from vehicles involved, etc.	<ul style="list-style-type: none"> <li>- Prepare and implement construction management plan to reduce and mitigate general construction impacts, including noise, air emissions, waste generation and disposal, erosion risks;</li> <li>- Choose contractors who adhere to relevant environmental and social requirements;</li> <li>- Continuously monitor impacts to comply with appropriate national environmental standards and EBRD requirements.</li> </ul>
2	Transmission line	Associated 10kV 1200m long transmission line (underground cable) leading to the local substation will be crossing several roads and land areas and require excavation and horizontal drilling (to cross the roads).	<ul style="list-style-type: none"> <li>- Ensure appropriate design and routing of the transmission line/cable to avoid or minimize impacts on other local infrastructure and vehicle traffic;</li> <li>- Comply with relevant sanitary, environmental and safety requirements and norms.</li> </ul>
3	Surveillance and security systems	Potential alarms and bright lights turning on during night time.	<ul style="list-style-type: none"> <li>- Correctly install and regularly maintaining the equipment;</li> <li>- Adjust sensitivity levels to avoid unnecessary disturbances.</li> </ul>