

INTEGRATED SAFEGUARDS DATA SHEET

CONCEPT STAGE

Report No.: ISDSC1261

Date ISDS Prepared/Updated: 28-Aug-2012

I. BASIC INFORMATION

A. Basic Project Data

Country:	China	Project ID:	P129657
Project Name:	Concentrated Solar Power Project (P129657)		
Task Team Leader:	Yanqin Song		
Estimated Appraisal Date:	10-Dec-2012	Estimated Board Date:	02-Jul-2013
Managing Unit:	EASCS	Lending Instrument:	Specific Investment Loan
Sector:	Other Renewable Energy (100%)		
Theme:	Climate change (100%)		
Financing (In USD Million)			
Financing Source			Amount
Borrower			76.00
International Bank for Reconstruction and Development			80.00
Financing Gap			0.00
Total			156.00
Environmental Category:	B - Partial Assessment		
Is this a Repeater project?	No		

B. Project Objectives

The development objective of the proposed project is to demonstrate the technical and economic viability of the CSP development in cold, dry and high latitude conditions in China and contributes towards achievement of China's 2020 CSP development target.

C. Project Description

The proposed project is a national concessional bidding project organized National Energy Administration (NEA). As one of the leading RE enterprises in China, China Datang Corporation Renewable Power Co. Ltd (Datang RE hereafter), whose mother company is Datang Corporation (Datang), won the bid. Datang RE created and registered a subsidiary, Datang Ordos Renewable Power Co. Ltd., in Ordos, Inner Mongolia, to develop the proposed project.

The proposed project includes the construction of a 50 MW CSP plant on a 200 ha site in the Gobi area. Annual power generation is estimated at 120 GWh. The approved tariff is about US\$ 0.15/kWh. According to the concession's conditions, the project should be built within 30 months after the project company is registered. The project company was registered in December 2011.

Technology and cost. Following the requirement in the concession program, parabolic trough technology was selected for the proposed CSP project with 4 hours of thermal storage. Given the water scarcity in the northern region of China, the plant will be dry-cooled. The CAPEX is estimated to range from US\$ 148 million to US\$156 million.

Project scope. The project scope includes development and construction of a 50MW Concentrating Solar Power plant. The designed plant consists of four principle components: a solar field, heat transfer fluid (HTF) system, thermal energy storage system, and power block. Bank resources will be used for financing a solar field, HTF system, and thermal energy storage system.

Financing. The total project investment is estimated to be US\$156 million and the proposed IBRD loan would be around US\$80 million. The remaining financing will be covered by (a) Equity from Datang RE as required by Chinese law (at least 20 percent); and (b) a commercial loan from the China Construction Bank.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project is located in Balagong Town of Hangjinqi in Ordos, Inner Mongolia. The site is well suited for solar projects, especially for development of CSP, due to adequate solar resources and proximity to the power grid. An existing 220 kV substation is located 700 meters away from the project site. The land acquisition for the proposed CSP plant is currently under progress.

E. Borrowers Institutional Capacity for Safeguard Policies

If Datang RE is designated, it has strong technical staff and is financially robust. It is listed on Hongkong Stock Exchange and therefore developed adequate governance, financial management, and auditing system. Datang RE is experienced in design, construction, and operation of wind power and other renewable energy projects, such as solar PV. As of June 30, 2010, the company's total installed capacity reached 2720 MW, becoming one of the leading renewable energy companies in China. Datang RE's financial situation is considered strong and it has solid experience with power plant's construction and operation.

If the Project Company is designated as implementing agency, it will be assisted by Datang RE and staffed adequately to carry out the preparation and implementation of the project. The Bank will also provide the required training and ensure that adequate systems are developed during the preparation of the project.

In any case, the Task Team will assess the capacity of the implementing agency for implementing environmental and social safeguard requirements and, as needed, an appropriate capacity development program will be included in the project for management of environmental and social issues in accordance with World Bank requirements.

F. Environmental and Social Safeguards Specialists on the Team

Chongwu Sun (EASCS)

Jun Zeng (EASCS)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

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Safeguard Policies	Triggered?	Explanation (Optional)
<p>Environmental Assessment OP/ BP 4.01</p>	<p>Yes</p>	<p>Project related environmental issues appear to be minimal. In accordance with Chinese Environmental Assessment requirements, A Chinese Environmental Impact Assessment Report was prepared, for a 85 MW CSP power plant, by Nanjing Research Institute of Environmental Sciences, a institute holding EA Class A Certificate issued by the Ministry of Environmental Protection, and approved by Inner Mongolia EPB in 2008. The capacity of the proposed CSP for Bank financing is reduced to 50 MW, at the same location.</p> <p>Through site visit and discussion with the client and their EA consultant, the task team conducted preliminary environmental screening:</p> <p>The proposed project is located the New Energy Development Zone, in Balagong Town of Hangjinqi in Ordos, Inner Mongolia (see Figure 1-1). The site is well suited for solar projects, especially for development of CSP, due to adequate solar resources and proximity to the power grid. An existing 220 kV substation is located 700 meters away from the project site. There are no farming and other active economic activities in that area and villages are at least 5 km away from the Zone.</p> <p>Environmental Issues-Construction Environment, worker health and safety issues associated with construction are the traditional aspects of moving men, materials, and machines, namely:</p> <p>Waste gas Pollution during construction period is mainly dust from: excavation and use of explosives, and stacking, transport, loading, unloading of construction materials (concrete, sand, etc.) Exhaust gases and dust from movement of various vehicles and construction equipment, and storage sites of construction rubbish</p>

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	<p>Noise Noise sources include mechanical devices and vehicles including grab, blender, vibrator, concrete transportation vehicles, bulldozer, impact driller, air compressor, welder, multiple function wood planner, trucks, pile drivers and grinders.</p> <p>Waste water The waste water from this project during the construction period is sewage from the construction crew and small amounts from equipment cleaning and mechanical flushing.</p> <p>Solid waste The solid waste during the construction period of this project is non-hazardous waste generated mainly from the construction rubbish and rubbish from construction crews.</p> <p>Health and Safety Use of heavy equipment, lifting and moving equipment and materials, handling and use of explosives and various hazardous materials (paints, cleaning materials, oil, greases, etc.).</p> <p>Environmental Issues-Operation The project will use a dry cooling system, so water requirements will be minimal. The main pollution during operation period mainly is nonhazardous solid waste and wastewater generated from the workers daily functions. There will also be a small amount of wastewater produced from mirror cleaning and the concentrate stream from the reverse osmosis desalting system producing purified water for: mirror cleaning, boiler make-up, and cooling system for the heat transfer fluids etc.</p> <p>There are minor health and safety issues associated with the use and handling of the heat transfer fluids (HTF). These materials are relatively inert and safe, but they are combustible. The HTF can burn at elevated temperatures. Its chemical nature is such that its use as heat transfer medium in a properly designed and operated system does not normally</p>
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		<p>constitute a serious fire or explosion hazard: vapor leaking into the air rapidly cools down to temperatures below the fire point. However, high pressure mists can form an explosive mixture with air if there is a leak in the heat exchange system between the molten nitrate salt and the HFT. The feasibility study recommended nitrogen blanketing to avoid the formation of an explosive mixture in case of a HTF to nitrate salt leakage. An emergency response plan is recommended for the operation of the CSP, included in the EMP.</p> <p>Based on the above, this policy is triggered and the instruments are: EIA and EMP.</p> <p>IFC's Environmental, Health and Safety (EHS) Guidelines on Community Health and Safety, and Occupational Health and Safety are applicable to this project.</p> <p>The project has been categorized B because (1) there is no hazardous materials/wastes from the proposed technology and processing of the CSP project; (2) the proposed CSP project is not located in a sensitive environmental area, and there is no significant flora and fauna in the area; and (3) the environmental impacts of the proposed project screened and identified are measurable and manageable and none of them are unprecedented.</p>
Natural Habitats OP/BP 4.04	No	<p>As mentioned above, according to domestic requirement and regulation, an EIA was prepared and cleared in 2008 for a 80 MW CSP at the same site, located in the semi-desert area. However, that project was not proceeded. When this 50 MW CSP project is proposed for Bank financing, that EIA was provided for Bank information. In that EIA, there was information about survey of natural resource, which indicated that there was no significant natural habitat resource near the site and no significant flora and fauna in that area. Based on this available information, OP4.04 is not triggered. The TT will ask the EA consultant to recheck and confirm this in the EA process.</p>

Forests OP/BP 4.36	No	The project will not involve any forestry activity.
Pest Management OP 4.09	No	The project will not involve any pesticides.
Physical Cultural Resources OP/BP 4.11	No	Initial screening and site visit by the task team did not reveal any relics or physical resources that are culturally or historically significant. The EA report prepared in 2008 had confirmed this. The task team request the institute which prepared EA to further consult with relevant government authorities responsible for protection of physical cultural resources during EA preparation process. Furthermore, EMP will include chance find procedures in accordance with both Chinese regulations and World Bank policy.
Indigenous Peoples OP/BP 4.10	TBD	The project will be constructed in Bayinger Village at Balagong Town, Hangjing Banner, Ordos Municipality, Inner Mongolia Autonomous Region. There are 619 households living in the Bayinger Village. Among its 1500 people, 925 are Mongolians and the remaining are Han people. Within the village, there is no clear boundary between Mongolians and Han people; Although Mongolians has its own language, the villagers use Mandarin in their daily lives and they also intermarry. Moreover, they are not presenting customary social and political institutions. And in the village, they live together with Han people and share land and natural resources. Based on these discussion, the team consider the OP4.10 is not triggered. But assessment will be carried out in the preparation stage regarding any potential impacts on local communities from the construction of the transmission line.
Involuntary Resettlement OP/BP 4.12	No	The project will occupy a total of 200 ha of land area. The land was taken by the local government in 2008. Therefore, there will be no land acquisition or structure demolishing needed for the project construction. The power plant will be connected to the existing substation with a 110 kV-line. The construction of the required transmission line will be located along the existing highway with no land acquisition required.

Safety of Dams OP/BP 4.37	No	The project is not expected to involve any dams.
Projects on International Waterways OP/BP 7.50	No	The project will not involve any international waterways.
Projects in Disputed Areas OP/BP 7.60	No	The project will not involve any disputed areas.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 15-Nov-2012

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

Complete the PAD stage ISDS before November 15, 2012

IV. APPROVALS

Task Team Leader:	Name: Yanqin Song	
<i>Approved By:</i>		
Regional Safeguards Coordinator:	Name: Panneer Selvam Lakshminarayanan (RSA)	Date: 12-Sep-2012
Sector Manager:	Name: Mark R. Lundell (SM)	Date: 29-Aug-2012

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.