



## China, People's Republic of: Geothermal District Heating Project

Project Name	Geothermal District Heating Project			
Project Number	51186-001			
Borrower/Company	Arctic Green Energy Corporation Private Limited Sinopec Green Energy Geothermal Development Company Limited			
Country	China, People's Republic of			
Location	Nation-wide			
Approval Number	7540/3637, 7541/3638			
Type of ADB Assistance / Amount	3637	Ordinary capital resources	USD 50.00 million	Approved
	3638	Ordinary capital resources	USD 200.00 million	Approved
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth			
Drivers of Change	Private sector development			
Sector / Subsector	<b>Energy</b> - Energy utility services			
Gender Equity and Mainstreaming	No gender elements			
Responsible ADB Department	Private Sector Operations Department			
Responsible ADB Division	Infrastructure Finance Division 2			
Responsible ADB Officer	Roberts, Scott C.			
Project Sponsor(s)	Sinopec Green Energy Geothermal Development Company Limited			
Description	The project involves (i) a loan of up to US\$200 million equivalent to Sinopec Green Energy Geothermal Development (SGE) to support the company's construction and operation of a series of geothermal-based district heating networks; (ii) a loan of up to US\$50 million to Arctic Green Energy, a shareholder in SGE, to refinance certain existing debt which restricts AGE's ability to invest in SGE's expansion.			
Objectives and Scope	The project will support the construction, acquisition, rehabilitation, and operation of a series of urban district heating systems based on geothermal energy. ADB will extend financing on a subproject-by-subproject basis, subject to defined environmental, social, development, and financial criteria. Subprojects will be identified during the project implementation stage. By facilitating the delivery of clean and reliable heating services, the project helps mitigate air pollution and climate change, which are key development challenges for the PRC.			
Linkage to Country/Regional Strategy	The project addresses three of the five strategic priorities of ADB's country partnership strategy for the PRC, 2016-2020: (i) managing climate change and the environment (in the area of environmental sustainability and pollution control), (ii) supporting inclusive economic growth (in the area of inclusive and green cities development), and (iii) private sector development. With over 70% of SGE's investment pipeline targeting the greater Beijing-Tianjin-Hebei region, the project complements ADB's sovereign initiatives to address the region's severe air pollution. Finally, the project is in line with ADB's Energy Policy and its Urban Operational Plan, 2012-2020.			

### Safeguard Categories

Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

### Summary of Environmental and Social Aspects

Environmental Aspects	The project is classified as category B for environment. Potential environmental impacts are generally site-specific, reversible, and mostly associated with drilling and construction activities. Impacts during operations impacts may arise in subprojects that do not attain high rates of reinjection of geothermal tail-water. Anticipated environmental impacts will be avoided by implementing generally recognized good practices as well as preventive and control measures, including tail-water management policies. A value addition of the project will be the establishment of a corporate-level Environmental and Social Management System (ESMS), designed in consultation with ADB, that will operate in parallel with the company's existing site-level policies and procedures.
Involuntary Resettlement	The project is categorized B for involuntary resettlement. Due diligence found no loss of shelter or residential land due to land acquisition on past subprojects, and none is expected on future subprojects. Temporary non-major economic displacement during well drilling and pipe laying, as well as permanent non-major economic displacement in case of heat central construction in rural villages, may arise. SGE will enhance its current land access and acquisition procedures, developed in accordance with national requirements, to enable compliance of future ADB-funded subprojects with SPS requirements.
Indigenous Peoples	The project is categorized C for indigenous peoples, since no distinct and vulnerable ethnic minority communities were found present in SGE's existing sites. Ethnic minority screening procedures are anticipated to be developed in the ESMS to identify, mitigate, and manage any potential adverse or beneficial impacts of ADB-funded subprojects.
Stakeholder Communication, Participation, and Consultation	Due diligence found that people affected by construction impacts are consulted in the environmental impact assessment and land acquisition processes as required by law. SGE will prepare a procedure for grievance resolution and ongoing consultation as part of the impact assessment action plan requirements for each subproject. End users' needs are captured in building designs, which the project will incorporate. The project ensures adequate participation of civil society organizations through the local governments master planning activity for the cities in which the heating system concessions will operate.

#### Timetable for assistance design, processing and implementation

Concept Clearance	09 Jun 2017
Due Diligence	
Credit Committee Meeting	14 Nov 2017 to 14 Nov 2017
Approval	14 Dec 2017
Last PDS Update	02 May 2018
Project Page	<a href="https://www.adb.org/projects/51186-001/main">https://www.adb.org/projects/51186-001/main</a>
Request for Information	<a href="http://www.adb.org/forms/request-information-form?subject=51186-001">http://www.adb.org/forms/request-information-form?subject=51186-001</a>
Date Generated	09 November 2018

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