



Pakistan: Determining the Potential for Carbon Capture and Storage

Project Name	Determining the Potential for Carbon Capture and Storage	
Project Number	47277-001	
Country	Pakistan	
Project Status	Active	
Project Type / Modality of Assistance	Technical Assistance	
Source of Funding / Amount	TA 8648-PAK: Determining the Potential for Carbon Capture and Storage Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility US\$ 1.00 million	
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth	
Drivers of Change	Governance and capacity development Knowledge solutions Partnerships	
Sector / Subsector	Energy - Energy efficiency and conservation - Energy sector development and institutional reform Industry and trade - Industry and trade sector development	
Gender Equity and Mainstreaming	No gender elements	
Description	The proposed TA will support Pakistan in the implementation of its national climate change policy, particularly in mitigating climate change through development of GHG reduction technologies. The TA will explore the potential of CCS by developing demonstration roadmaps, engaging in dialogues with public and private sectors, and drafting relevant policy statements. The TA will specifically look into CO2 emitting sectors such as energy, agriculture, transport and industrial processes for the purpose of determining best type of demonstration roadmaps.	
Project Rationale and Linkage to Country/Regional Strategy	Over the last 20 years, carbon emissions in Pakistan grew by 105% from 152.79 million tons in 1990 to 313.48 million tons in 2010. The significant increase in greenhouse gases (GHGs), particularly carbon dioxide (CO2) is mainly attributed to the burning of fossil fuels like coal and oil for electricity, transport and those in manufacturing industries. This includes industries producing fertilizers (ammonia), cement, alternative fuels (methane & ethanol) and iron & steel (>45% of CO2 emissions came from industrial sector). Likewise, the clearing of land for agriculture, industry and other human activities have also upped GHG concentrations. GHG emission will be further increased with the anticipated shift to coal generation in the near future to decrease the existing power shortfall. Meeting the country's energy needs and the quest for economic growth presents a huge challenge to reduce the country's GHG levels. Pakistan will therefore need a portfolio of low-carbon technologies to reduce GHGs in the shortest possible time to avoid the more serious effects of climate change. Renewable energies (REs) will clearly play a critical role in moving the country to a low carbon future but the challenge of reducing emissions and simultaneously increasing energy source is daunting. REs contribution in the energy mix remains low that even with a rapid increase in its use is unlikely to meet energy demand and reduce GHG. With coal becoming a dominant source of energy across all sectors, CCS will be a critical technology for meeting the country's goal of reducing GHG. The new national Climate Change Policy underscores this need to develop low carbon technologies, specifically CCS for energy and other sectors like agriculture, transport and industries.	
Impact	CCS roadmap is implemented	

Project Outcome

Description of Outcome	Improved capacity in planning and management of demonstration project in Pakistan.
Progress Toward Outcome	Individual Experts engaged and mobilized. Consultation with Executing Agency and other stakeholders ongoing.

Implementation Progress

Description of Project Outputs	1. Scoping analysis on the potential for CCS undertaken 2. Knowledge dissemination program for CCS undertaken 3. Road map for CCS demonstration with priority demonstration projects identified
Status of Implementation Progress (Outputs, Activities, and Issues)	Some work has been undertaken but bulk of the activities will be in 2016, and 2017 beginning with a stakeholders' workshop is being organized in Q2 and Q3 2017.
Geographical Location	Nationwide

Summary of Environmental and Social Aspects

Environmental Aspects

Involuntary Resettlement

Indigenous Peoples

Stakeholder Communication, Participation, and Consultation

During Project Design	The CDTA was conceived during a series of discussions between ADB and MOWP and Climate Change Division during reconnaissance and fact-finding missions in June and September 2013. It builds on ongoing activities in CCS being supported by ADB in other countries, and will help expand ADB's support for CCS to other high-priority developing member countries as a way of mitigating carbon emissions.
During Project Implementation	An inception workshop was organized in Q2 2016, which will be the first part of stakeholder specific consultation. In addition, we will conduct ADB conducted review missions and first study tour in April 2016, where jointly with relevant government agencies participated. A preliminary roadmap for storage is under preparation, which will be discussed at two individual workshops in Islamabad. A team of local peer reviewer (experts) will provide independent review of the consultant's work before it is finalized. A second international study tour will be in Seoul in April 2017.

Business Opportunities

Consulting Services	The TA will require 15 person-months of international and 34 person-months of national consulting services. ADB will engage consultants according to its Guidelines on the Use of Consultants (2013, as amended from time to time). Because of the highly specialized nature of the CCS technology and the limited number of experts in the field, the TA will be implemented by a team of international and national consultants. Because of limited firms with required expertise, consultants were hired on an individual basis.
Procurement	Equipment required under the TA, including computers and GIS software for mapping purposes, will be procured following ADB's Procurement Guidelines (2013, as amended from time to time).

Responsible Staff

Responsible ADB Officer	Hasnie, Sohail
Responsible ADB Department	Central and West Asia Department
Responsible ADB Division	Energy Division, CWRD
Executing Agencies	<i>Ministry of Climate Change, Government of Pakistan Mr. Irfan Tariq, Director General, Ministry of Climate Change LD & RD Complex, Sector G-5/2, near State Bank of Pakistan, Islamabad</i>

Timetable

Concept Clearance	21 Feb 2014
Fact Finding	-
MRM	-
Approval	14 May 2014
Last Review Mission	-
Last PDS Update	28 Mar 2017

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Milestones

Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
14 May 2014	09 Jun 2014	09 Jun 2014	31 Aug 2015	31 Aug 2017	-

Financing Plan/TA Utilization						Cumulative Disbursements		
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
0.00	1,000,000.00	0.00	0.00	0.00	0.00	1,000,000.00	14 May 2014	240,321.34

Project Page <https://www.adb.org/projects/47277-001/main>

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