



Technical Assistance Report

Project Number: 55035-001
Knowledge and Support Technical Assistance (KSTA)
October 2021

People's Republic of China: Research for Demonstration of Carbon Capture, Utilization, and Storage Technologies in Industrial Sectors of Yunnan Province

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 17 September 2021)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.154856
\$1.00	=	CNY6.4576

ABBREVIATIONS

ADB	–	Asian Development Bank
CCUS	–	carbon capture, utilization, and storage
CO ₂	–	carbon dioxide
DEEY	–	Department of Ecology and Environment of Yunnan Province
PRC	–	People's Republic of China
TA	–	technical assistance

NOTE

In this report, "\$" refers to United States dollars.

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KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 55035-001
Project Name	Research for Demonstration of Carbon Capture, Utilization, and Storage Technologies in Industrial Sectors of Yunnan Province	Department/Division EARD/EASI
Nature of Activity Modality	Research and Development Regular	Executing Agency Department of Ecology and Environment of Yunnan Province
Country	China, People's Republic of	
2. Sector	Subsector(s)	ADB Financing (\$ million)
✓ Industry and trade	Trade and services	0.30
	Total	0.30
3. Operational Priorities		Climate Change Information¹
✓ Accelerating progress in gender equality		GHG Reductions (tons per annum) 0.000
✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		Climate Change impact on the Project Low
✓ Strengthening governance and institutional capacity		ADB Financing
		Adaptation (\$ million) 0.00
		Mitigation (\$ million) 0.00
		Cofinancing
		Adaptation (\$ million) 0.00
		Mitigation (\$ million) 0.00
Sustainable Development Goals		Gender Equity and Mainstreaming
SDG 9.4		Some gender elements (SGE) ✓
SDG 13.a		
		Poverty Targeting
		General Intervention on Poverty ✓
4. Risk Categorization	Low	
5. Safeguard Categorization	Safeguard Policy Statement does not apply	
6. Financing		
Modality and Sources		Amount (\$ million)
ADB		0.30
Knowledge and Support technical assistance: Technical Assistance Special Fund		0.30
Cofinancing		1.00
Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility (Full ADB Administration)		1.00
Counterpart		0.00
None		0.00
Total		1.30
Currency of ADB Financing: US Dollar		

¹ The project reduces greenhouse gas emissions. However, it does not fall under the eligibility criteria for climate mitigation finance as defined by the joint multilateral development bank methodology on tracking climate finance, which notes that not all activities that reduce greenhouse gases in the short term are eligible to be counted towards climate mitigation finance. Accordingly, greenfield fossil fuel projects are excluded, and climate mitigation finance is considered zero.

I. INTRODUCTION

1. In late 2020, the Government of the People's Republic of China (PRC) announced an enhanced nationwide effort to address climate change. Subsequently, it requested knowledge and support technical assistance (TA) from the Asian Development Bank (ADB) to support a study on Research for Demonstration of Carbon Capture, Utilization, and Storage Technologies in Industrial Sectors of Yunnan Province.¹ The TA is aligned with the Sustainable Development Goals on building resilient structures and taking urgent action to combat climate change and its impact and operational priorities 2, 3 and 6 of ADB's Strategy 2030;² and supports strategic priority 2: climate change adaptation and mitigation of ADB's country partnership strategy for the PRC, 2021–2025.³ The TA is well aligned with ADB's development agenda of achieving environmentally sustainable growth.

2. The knowledge and support TA will help the Department of Ecology and Environment of Yunnan Province (DEEY) of the PRC develop recommendations for demonstrating carbon sequestration technologies applicable to iron and steel and other carbon-intensive industries, conduct pre-feasibility case studies on the demonstration of carbon sequestration technologies, and enhance the capacity of the Yunnan provincial government to achieve peaking carbon emissions before 2030 and carbon neutrality before 2060.

II. ISSUES

3. The PRC government has been actively engaged in addressing climate change and has become a serious advocate and global lead player. In 2015, the PRC ratified the Paris Agreement on climate change. Initially, the PRC's nationally determined contributions under the Paris Agreement were to achieve the following: (i) reach peak carbon dioxide (CO₂) emissions before 2030, and strive to reach it earlier; (ii) by 2030, reduce CO₂ emissions per unit of gross domestic product (GDP) by 60%–65% compared with the 2005 level; (iii) by 2030, increase the share of non-fossil fuels in the primary energy consumption mix to about 20%; and (iv) by 2030, increase forest stock volume by about 4.5 billion cubic meters compared with 2005 levels.⁴ In September 2020, President Xi Jinping announced that the PRC will strengthen its nationally determined contributions by aiming to peak carbon emissions before 2030 and achieve carbon neutrality before 2060. President Xi further announced in December 2020 that by 2030 the PRC will lower its CO₂ emissions per unit of GDP by more than 65% compared with the 2005 level, increase the share of non-fossil fuels in the primary energy consumption mix to about 25%, increase forest stock volume by 6 billion cubic meters compared with 2005, and increase total installed capacity of wind and solar power to more than 1.2 billion kilowatts.⁵

4. The Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5°C highlights that carbon capture, utilization, and storage (CCUS) technology is a key to achieving global carbon neutrality in this century.⁶ In the PRC, where the government has

¹ The TA first appeared in the business opportunities section of ADB's website on 27 August 2021.

² ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

³ ADB. 2021. *Country Partnership Strategy: People's Republic of China, 2021–2025—Toward High-Quality, Green Development*. Manila.

⁴ Government of the PRC, National Development and Reform Commission. 2015. *Enhanced Actions on Climate Change: China's Intended Nationally Determined Contributions*. Beijing (in Chinese).

⁵ Xinhua News Agency. 2020. Xi Jinping Delivers an Important Speech at the Climate Ambition Summit. 12 December.

⁶ Intergovernmental Panel on Climate Change. 2018. *Special Report: Global Warming of 1.5 °C*. Geneva.

supported CCUS research and development, a variety of technologies have been developed.⁷ However, persistent challenges remain including high investment costs, high energy consumption of CCUS processes, and the lack of policies, regulations and approval procedure of CCUS investment projects.

5. In a joint effort, ADB and the PRC's National Development and Reform Commission developed a road map for CCUS demonstration and deployment in 2015.⁸ The road map combined a long-term strategy with clear short-term actions to kick-start CCUS demonstration within the Thirteenth Five-Year Plan (2016–2020). ADB is updating the road map for CCUS demonstration and deployment to incorporate the latest climate target announced by President Xi Jinping in 2020. As of 2020, the PRC had conducted more than 20 CO₂ capture and storage demonstration projects. The capture demonstration projects are mainly in the coal chemical and the thermal power industries, while the geological utilization and storage projects are mainly carried out around oil and gas basins. There are no CCUS projects in the iron, steel, and nonferrous metal industries in the PRC because of technical difficulties and higher costs compared with coal power generation. In addition, CCUS technology demonstration and application continue to face challenges across all sectors nationwide because of a lack of enabling policies, an absence of fiscal support policies, and unclear policies on including CCUS carbon credits into carbon trade systems to make CCUS projects commercially viable.

6. Yunnan Province is a remote and less developed province in southwest PRC with a significant minority population. The Yunnan provincial government has followed the guidance of central government in addressing climate change by developing locally suitable policies and actions. In February 2021, the provincial government approved the Fourteenth Five-Year Plan for National Economic and Social Development of Yunnan Province and the Long-Term Goals for 2035, which aims to promote green and low-carbon development, reduce carbon emissions, increase carbon sinks, and achieve peaking carbon emissions and carbon neutrality earlier than the target years committed to by the central government.⁹ Yunnan provincial government agencies are developing carbon emission mitigation targets for cities and sectors and policies and measures to support those targets.

7. Yunnan Province has a large share of CO₂ emissions from iron and steel, nonferrous metal, and other carbon-intensive industries that are difficult to decarbonize. In 2019, total CO₂ emissions of the iron and steel industries in Yunnan were 40.34 million tons, accounting for 24.4% of the province's total CO₂ emissions. These carbon-intensive industries play key role in the social and economic development of Yunnan Province; in 2019, steel and iron provided 46,900 jobs. Therefore, exploring a viable and economic approach to CO₂ capture from iron and steel, nonferrous metal, and other carbon-intensive industries is crucial for Yunnan to achieve its peaking carbon emissions and carbon neutrality targets, while maintaining sustainable social and economic development.

8. Yunnan Province has limited financial resources and technological capability compared with other provinces in the PRC, compounding the challenges it faces in achieving peaking carbon emissions and carbon neutrality targets. The TA project will enhance the capacity of the provincial

⁷ ACCA21 (Administrative Centre for China's Agenda 21). 2019. *Technology Roadmap Study of Carbon Capture, Utilization, and Storage Technologies in China*. Beijing.

⁸ ADB. 2015. *Technical Assistance to the People's Republic of China for Road Map for Carbon Capture and Storage Demonstration and Deployment*. Manila.

⁹ People's Daily Online Official Account. 2020. [Suggestions of the Yunnan Provincial Committee of the Communist Party of China on the formulation of the Fourteenth Five-Year Plan for the National Economic and Social Development of Yunnan Province and the Long-term Goals for 2035](#). 18 December.

government to address climate change through enabling policies; identify CCUS technologies applicable in iron, steel, and other carbon-intensive industries; and enhance the provincial government's technical knowledge of the role of CCUS in achieving peaking carbon emissions and carbon neutrality targets.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

9. The TA is aligned with the following impact: Yunnan's peaking carbon emissions target achieved before 2030.¹⁰ The TA will have the following outcome: CCUS strategy to achieve peaking carbon emissions and carbon neutrality in Yunnan Province improved.¹¹

B. Outputs, Methods, and Activities

10. **Output 1: Study on the role of carbon capture, utilization, and storage technology in achieving peaking carbon emissions and carbon neutrality in Yunnan Province produced.** Under this output, the TA team will assess applicable approaches and technologies, including CCUS technology, forest carbon sinks, and others, to achieve peaking carbon emissions before 2030 and carbon neutrality before 2060. Based on the assessment, the TA team will define the role of CCUS technology in achieving peaking carbon emissions and carbon neutrality in Yunnan, comparing it with other approaches and technologies. The TA team will deliver a study report with clear conclusions on the role of CCUS technology for Yunnan to achieve peaking carbon emissions and carbon neutrality objectives.

11. **Output 2: Policy advice and recommendations to support Yunnan Province in achieving peaking carbon emissions and carbon neutrality finalized.** Under this output, the TA team will assess how to enable a favorable policy environment to promote application of and investment in advanced climate mitigation technologies, including CCUS technology. The team will develop innovative policy instruments and recommendations for Yunnan to achieve peaking carbon emissions and carbon neutrality, and will deliver a policy brief that promotes CCUS investment and supports peaking carbon emissions and carbon neutrality of Yunnan Province.

12. **Output 3: Pre-feasibility studies on carbon capture, utilization, and storage application produced.** The TA team will work with DEEY as the executing agency to conduct pre-feasibility studies of two cases for CCUS investment: Wugang Group Kunming Iron and Steel Co., Ltd, and Yunnan Aluminum Co., Ltd. These are examples of typical energy-intensive enterprises in Yunnan and have strong willingness and interest in applying CCUS technology. The TA team will gather project data, identify applicable CCUS technologies, conduct social and economic assessments of applicable CCUS technologies, and identify required policy and financial support mechanisms from the central and local governments to further promote project development and investment. The TA will enhance the engagement of women during the project pre-feasibility studies through seeking women's views and role in promoting CCUS investment.

13. **Output 4: Institutional capacity for investing in carbon capture, utilization, and storage in Yunnan enhanced.** Equipment and instruments to support DEEY in demonstrating and deploying CCUS technologies will be procured under this output. This support will enhance

¹⁰ The People's Government of Yunnan Province. 2031. *Report on the Work of the People's Government of Yunnan Province*. Kunming. (<http://www.yn.gov.cn/>).

¹¹ The design and monitoring framework is in Appendix 1.

the capacity of the provincial government to promote and supervise CCUS investments in the province. A series of training courses for government officials and local experts (including staff and managers of the candidate case study enterprises) will enhance their awareness and knowledge of ways to address climate change and promote CCUS technology application and investment. Training materials in Chinese will be prepared based on updated global best practices and business models for CCUS investment. The training courses will prioritize women experts and officials. In addition, the TA project will support local officials and experts to conduct a technical study tour that highlights examples of successful international CCUS projects and research and development institutions.

14. **Knowledge dissemination.** A policy brief promoting CCUS investment to support peaking carbon emissions and carbon neutrality of Yunnan Province and a training manual of global good CCUS practice will be developed under the TA. The training manual and policy brief will be printed and circulated at training courses, workshops, and conferences, and will be uploaded digitally on ADB's website and Yunnan Government website to maximize readership.

C. Cost and Financing

15. The TA is estimated to cost \$1,450,000, of which (i) \$300,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources) and (ii) \$1,000,000 will be financed on a grant basis by the Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility and administered by ADB.¹² The key expenditure items are listed in Appendix 2. The Yunnan provincial government will provide in-kind contributions in the form of counterpart staff, office accommodation, information, and relevant documents and data for TA implementation.

D. Implementation Arrangements

16. ADB will administer the TA through the Sustainable Infrastructure Division of the East Asia Department and will work closely with DEEY as the executing agency. Implementation arrangements are summarized in the table.

Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period	November 2021–November 2023		
Executing agency	DEEY		
Implementing agencies	Division of International Cooperation, DEEY		
Consultants	To be selected and engaged by ADB		
	Firm: QCBS (90:10)	CCUS—national firm (59 person-months)	\$354,000
	Individual: ICS	International senior CCUS specialist (8 person-months)	\$160,000
		International carbon capture and CO ₂ transportation specialist (6 person-months)	\$100,000
International carbon storage and utilization specialist (6 person-months)		\$100,000	

¹² Financing partners: Global Carbon Capture and Storage Institute and the Government of the United Kingdom.

Aspects	Arrangements		
		International CCUS technology business development specialist (6 person-months)	\$100,000
	Individual: ICS	National project manager (11 person-months)	\$66,000
Procurement	The equipment of CCUS related investment to be procured by consulting firm ^a		
	Mode of procurement: request for quotations	1 contract	\$220,000
Disbursement	Disbursement of TA resources will follow ADB's <i>Technical Assistance Disbursement Handbook (2020, as amended from time to time)</i> .		
Asset turnover arrangement upon TA completion	The procured equipment will be turned over to DEEY upon completion of TA activities.		

ADB = Asian Development Bank; CCUS = carbon capture, utilization, and storage; CO₂ = carbon dioxide; DEEY = Department of Ecology and Environment of Yunnan Province; ICS = individual consultant selection; QCBS = quality- and cost-based selection; TA = technical assistance.

^a List of equipment included in Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 3).
Source: Asian Development Bank.

17. **Consulting services.** ADB will engage the consultants following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.

18. **ADB's procurement.** ADB will not undertake procurement of goods, works and non-consulting services directly under this TA. The consulting firm will procure the equipment for testing the capture of CO₂ in the industrial sector, monitoring and evaluation of stored CO₂, and utilization evaluation of CO₂.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved (i) the Asian Development Bank (ADB) administering a portion of technical assistance not exceeding the equivalent of \$1,000,000 to be financed on a grant basis by the Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility, and (ii) ADB providing the balance not exceeding the equivalent of \$300,000 on a grant basis to the Government of the People's Republic of China for the Research for Demonstration of Carbon Capture, Utilization, and Storage Technologies in Industrial Sectors of Yunnan Province, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Impact the TA is Aligned with Yunnan's peaking carbon emissions target achieved before 2030 (Report on the Work of the People's Government of Yunnan Province [2031]) ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome CCUS strategy to achieve peaking carbon emissions and carbon neutrality in Yunnan Province improved	By 2024: a. A policy or a road map for Yunnan to achieve peaking carbon emissions, which incorporates TA recommendations, adopted by the Yunnan provincial government (2021 baseline: not adopted) (OP 3.1.5)	a. Provincial government policies and actions for addressing climate change: 2023–2025	R: Reduced interest from provincial government to apply CCUS technologies
Outputs 1. Study on the role of CCUS technology in achieving peaking carbon emissions and carbon neutrality in Yunnan Province produced 2. Policy advice and recommendations to support Yunnan Province in achieving peaking carbon emissions and carbon neutrality finalized 3. Pre-feasibility studies on CCUS application produced 4. Institutional capacity for investing in CCUS in Yunnan enhanced	By 2023: 1a. A study report based on an assessment of the role of CCUS in realizing peaking carbon emissions in Yunnan Province drafted and submitted to Yunnan provincial government (2021 baseline: 0) 2a. A report with policy recommendations on CCUS technology prepared and submitted to DEEY (2021 baseline: 0) 3a. Two pre-feasibility case study reports on CCUS technologies in iron and steel and other carbon-intensive industries submitted (2021 baseline: 0) (OP 3.1.5) 4a. At least one local laboratory equipped with equipment and instruments to support CCUS investment (2021 baseline: 0) (OP 3.1.3)	1a. Semiannual reports of DEEY 2a. Semiannual reports of DEEY 3a. Semiannual reports of DEEY 4a–b. Semiannual reports of DEEY	R: Changing guidelines or procedures in accessing the required data and/or information for this study R: Reduced interest from selected enterprises to conduct pre-feasibility study on CCUS investment R: Changing restrictions on travel that may affect in-house training due to pandemic like COVID-19 outbreak

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>4b. At least 30 local experts (at least 10 of whom are women) trained and report improved knowledge and skills in CCUS technology (2021 baseline: 0) (OP 2.2.1; OP 3.1.2)</p> <p>4c. At least 300 government officials (at least 100 of whom are women) trained and report improved knowledge in addressing climate change and CCUS (2021 baseline: 0) (OP 2.2.1; OP 3.1.2, OP 6.1.1)</p>	<p>4c. Survey of workshop participants</p>	
<p>Key Activities with Milestones</p> <p>1. Study on the role of CCUS technology in achieving peaking carbon emissions and carbon neutrality in Yunnan Province produced</p> <p>1.1 Collect the required data and documents to assess Yunnan emission scenarios up to 2060 (December 2021–March 2022)</p> <p>1.2 Analyze Yunnan Province's approaches to realizing its peaking carbon emissions and carbon neutrality targets (April–October 2022)</p> <p>1.3 Assess the role of CCUS technology in achieving peaking carbon emissions and carbon neutrality in Yunnan (November 2022–January 2023)</p> <p>1.4 Prepare assessment report of the role of CCUS technology in achieving peaking carbon emissions and carbon neutrality in Yunnan (February–June 2023)</p> <p>2. Policy advice and recommendations to support Yunnan Province in achieving peaking carbon emissions and carbon neutrality finalized</p> <p>2.1 Collect and analyze enabling policies to guide and support CCUS technology application and investment (January–June 2022)</p> <p>2.2 Based on Yunnan Province's social and economic development and the strategy of the provincial government to achieve peaking carbon emissions and carbon neutrality, assess the required key policies and instruments to support the province to realize peaking carbon emissions and carbon neutrality earlier than required (July–December 2022)</p> <p>2.3 Prepare recommendations on required key policies and instruments, including those that promote CCUS technology investment, to support Yunnan Province in realizing peaking carbon emissions and carbon neutrality (January–June 2023)</p> <p>3. Pre-feasibility studies on CCUS application produced</p> <p>3.1 Collect required data and documents from two case study enterprises and establish a working relationship with the two case study enterprises (January–June 2022)</p> <p>3.2 Conduct social and economic studies of applicable CCUS technologies for the two cases (July–December 2022)</p> <p>3.3 Prepare pre-feasibility case study reports (January–June 2023)</p> <p>4. Institutional capacity for investing in CCUS in Yunnan enhanced</p> <p>4.1 Consult with DEEY to determine the equipment and instruments needed for the local CCUS laboratory, prepare procurement plan, and commence procurement (December 2021–December 2022)</p> <p>4.2 Conduct CCUS training courses for local experts (April 2022–April 2023)</p>			

<p>4.3 Conduct CCUS and climate change training courses for local government officials, and conduct technical study on successful international CCUS projects and research and development institutions (April 2022–October 2023)</p> <p>4.4 Conduct CCUS international study tour (including virtual tour in case travel is not possible) for local officials and experts to learn the experience and lessons from successful international CCUS projects and research and development institutions (July 2022–August 2023)</p>
<p>TA Management Activities</p> <ul style="list-style-type: none"> • Recruit consultant team by January 2022 • Prepare draft inception report with detailed work plan and conduct inception workshop by March 2022 • Draft two pre-feasibility case study reports on CCUS technology investment by January 2023 • Prepare interim report and conduct interim workshop by January 2023 • Conduct review workshop on interim report by March 2023 • Finalize and submit all required reports to ADB and Yunnan provincial government by October 2023
<p>Inputs</p> <p>ADB's Technical Assistance Special Fund (TASF-other sources): \$300,000</p> <p>Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility: \$1,000,000</p> <p>Note: The government will provide counterpart support in the form of in-kind contributions.</p>

ADB = Asian Development Bank; CCUS = carbon capture, utilization, and storage; CO₂ = carbon dioxide; COVID-19 = coronavirus disease; DEEY= Department of Ecology and Environment of Yunnan Province; OP = operational priority; TA = technical assistance; TASF = Technical Assistance Special Fund.

^a The People's Government of Yunnan Province. 2031. *Report on the Work of the People's Government of Yunnan Province*. Kunming. (<http://www.yn.gov.cn/>).

Contribution to Strategy 2030 Operational Priorities:

The expected values and methodological details for all OP indicators to which this TA will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 3).

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount		
	ADB ^a	CCSF ^b	Total
A. Consultants			
1. Remuneration and per diem			
a. International consultants		460.0	460.0
b. National consultants		420.0	420.0
2. Out-of-pocket expenditures			
a. International and local travel ^c		70.0	70.0
B. Equipment ^d	220.0		220.0
C. Training, seminars, and conferences ^e	30.0	30.0	60.0
D. Printed external publications ^f	10.0		10.0
E. Contingencies	40.0	20.0	60.0
Total	300.0	1,000.0	1,300.0

ADB = Asian Development Bank, CCSF = Carbon Capture and Storage Fund.

Note: The technical assistance (TA) is estimated to cost \$1,450,000, of which contributions from ADB and the CCSF are presented in the table. CCSF will finance remuneration and per diem, international and local travel, training, seminars and conferences, and printed external publications; while the Technical Assistance Special Fund will finance the other items. The Yunnan provincial government will provide counterpart support in the form of counterpart staff, office accommodation, information, and documents relevant to conduct the TA, and other in-kind contributions. The value of the government contribution is estimated to account for 10% of the total TA cost.

^a Financed by ADB's Technical Assistance Special Fund (TASF-other sources).

^b Financing partners: Global Carbon Capture and Storage Institute and the Government of the United Kingdom.

^c Including external resource person costs and travel costs of ADB staff acting as resource persons.

^d The initial list of required equipment and instruments includes carbon dioxide (CO₂) monitoring devices, CO₂ capture analogous devices, thermal gravimetric analyzer, light microscope, scanning electron microscope, CO₂ bio-utilizes reactors and incubator, and PHYTO-PAM-II. The final list will be decided through consultation with ADB and the executing agency based on available budget resources.

^e This includes costs for six participants in international study tours to learn advanced CCUS technology applications in other ADB member countries (including Australia, Canada, Japan, and the United Kingdom).

^f The knowledge products of this TA study findings will be disseminated. Printed publications will be circulated in workshops and conferences. The number of hard copies will be agreed upon with the executing agency during TA implementation. The main target audience includes relevant government entities, managers of enterprises in energy-intensive industries, and experts of technical institutions in Yunnan Province.

Source: ADB estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=55035-001-TARreport>

1. Terms of Reference for Consultants
2. Contribution to Strategy 2030 Operational Priorities