



CLIMATE &
CLEAN AIR
COALITION
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS



ESCAP
Economic and Social Commission
for Asia and the Pacific



Pathways for Clean Air and Clean Energy – Regional Sharing Session on Policy, Finance, and Technology Solutions in the Philippines, Indonesia, and Viet Nam

Innovation, Integration, Impact- Advancing Clean Energy and Clean Air with ADB

Lei Zhang

Unit Head, Project Administration, Energy Sector Office, ADB

11 March 2026



The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.

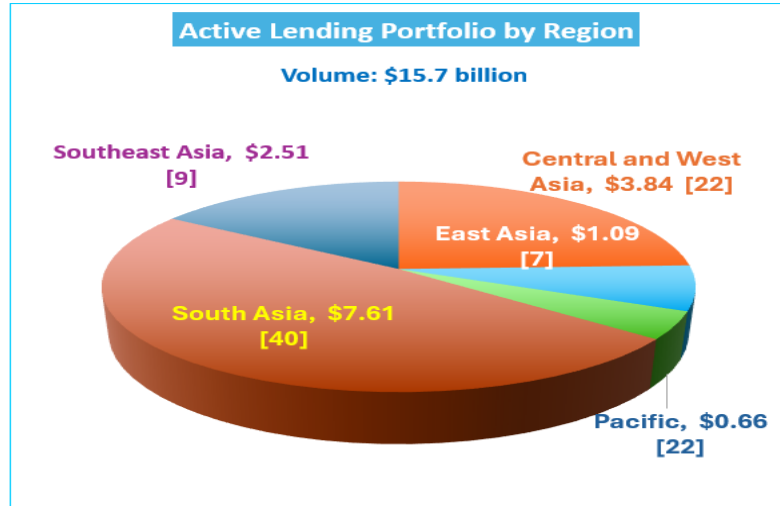
ADB Energy Policy 2021

Energy Landscape	Global Commitments	ADB's Commitment
<p>Profound changes in Asia and the Pacific:</p> <ul style="list-style-type: none"> • Falling cost of renewable energy vs. conventional energy • Emerging new and innovative low-carbon energy technologies 	<p>Global commitments to universal access and climate action:</p> <ul style="list-style-type: none"> • Sustainable Development Goal 7: Universal Energy Access by 2030 • Paris Agreement: Nationally Determined Contributions (NDCs) 	<ul style="list-style-type: none"> • \$100 billion of cumulative climate finance from 2019 to 2030 • 100% Paris Agreement alignment on sovereign operations from 1 July 2023, non-sovereign operations from 1 July 2025

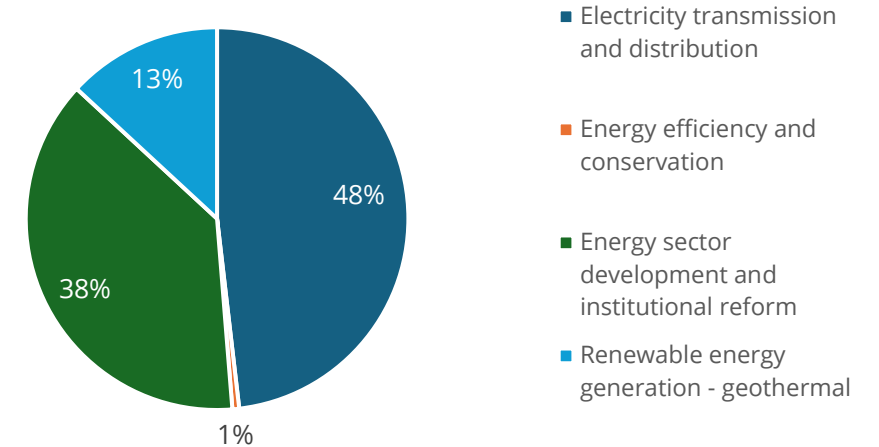
Principle 1	Principle 2	Principle 3	Principle 4	Principle 5
<p>Securing Energy for a Prosperous and Inclusive Asia and the Pacific</p>	<p>Building a Sustainable and Resilient Energy Future</p>	<p>Supporting Institutions, Private Sector Participation, and Good Governance</p>	<p>Promoting Regional Cooperation and Integration</p>	<p>Integrated Cross-Sector Operations to Maximum Development Impact</p>

ADB Energy Sector Lending Portfolio and Pipeline

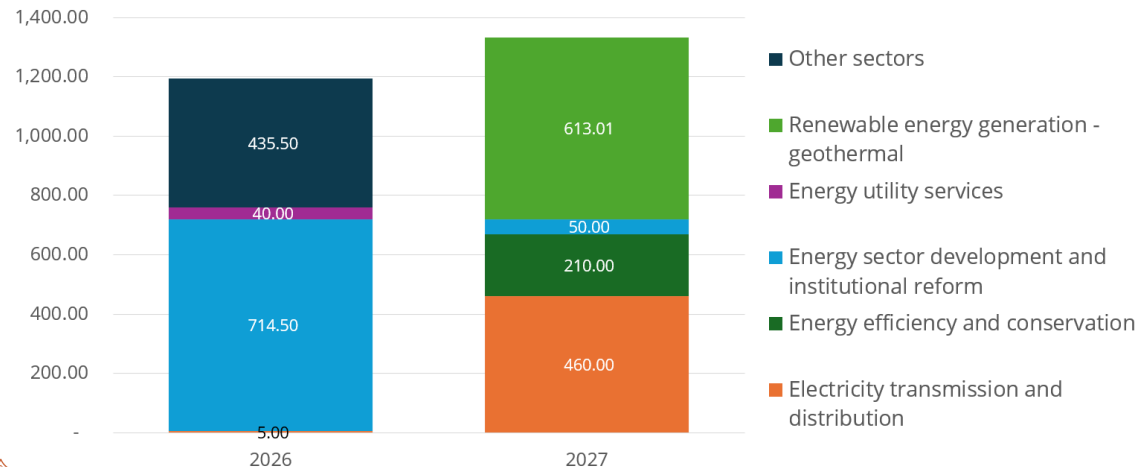
as of 31 December 2025



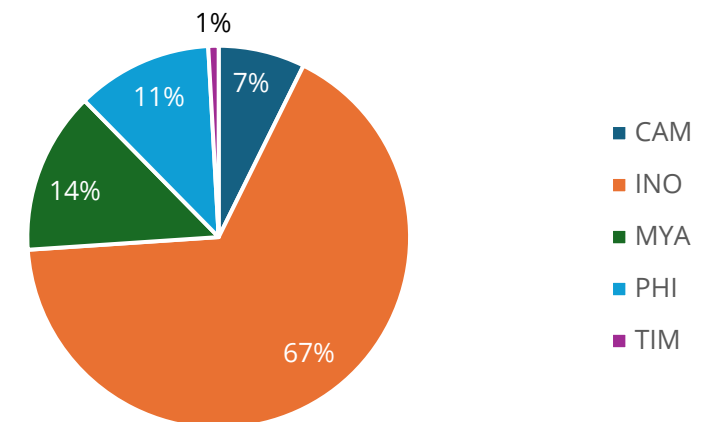
Southeast Asia Loans & Grants Portfolio by Subsector



Southeast Asia Project Pipeline, 2026-2027

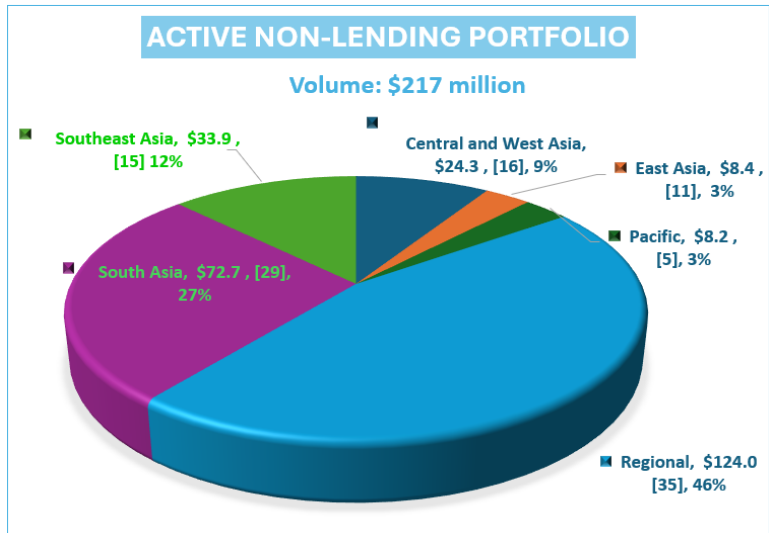


Southeast Asia Loans & Grants Portfolio by DMC

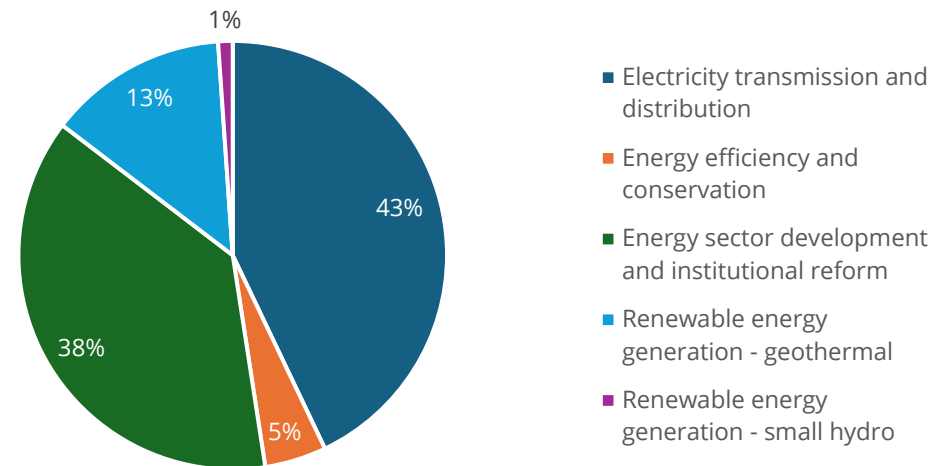


ADB Energy Sector TA Portfolio and Pipeline

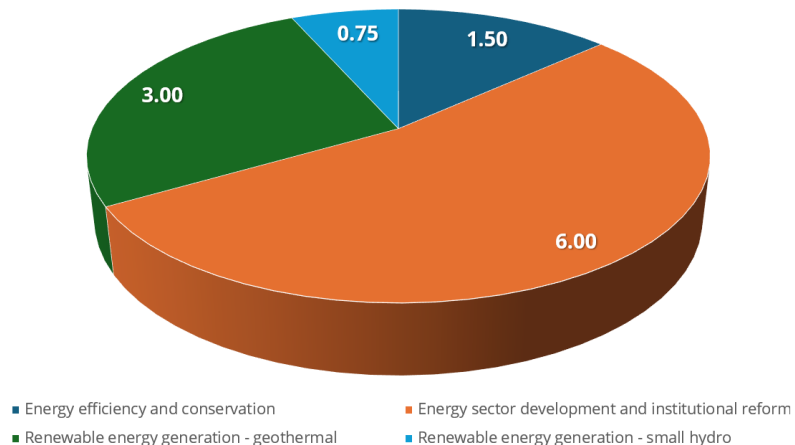
as of 31 December 2025



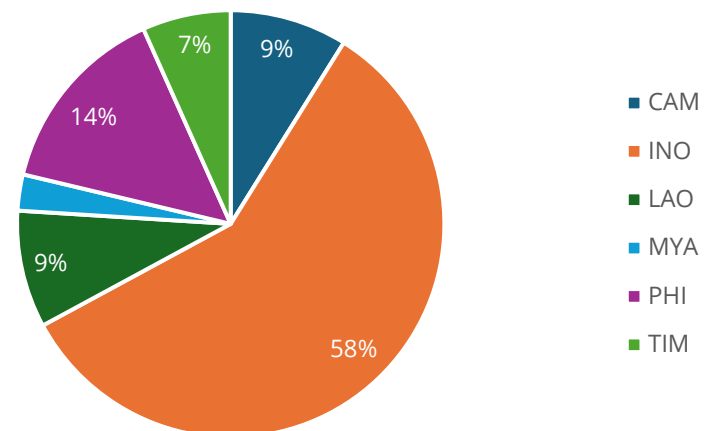
Southeast Asia TA Portfolio by Subsector



Southeast Asia TA Pipeline, 2026



Southeast Asia TA Portfolio by DMC



Energy Transition Today in the ASEAN

One goal, various pathways' approach

Essential to deliver energy transition projects at scale across ASEAN with a focus on the three key investment themes

Key investment themes

Scaling up renewables

Continued focus on maximising adoption of zero emission



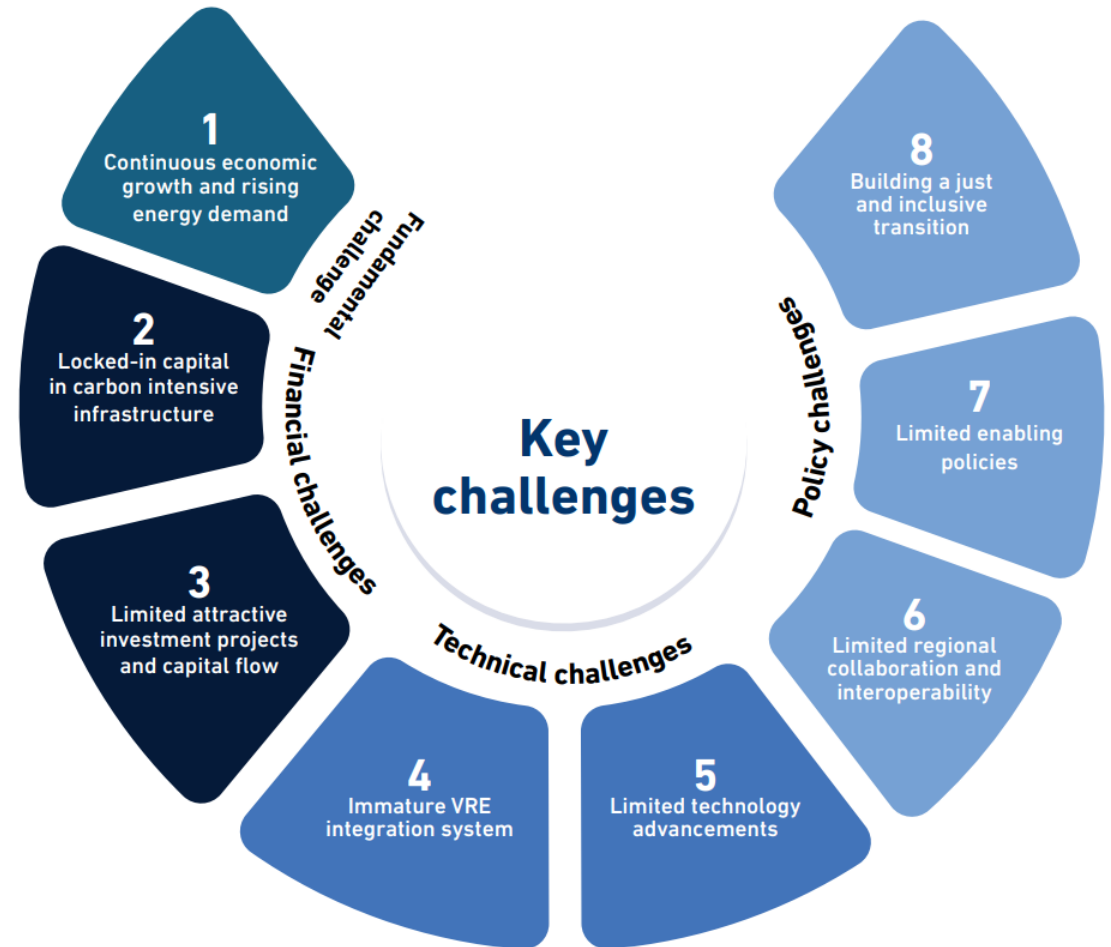
Building green-enabling infrastructure

Building critical infrastructure and storage for sustainable growth and energy security



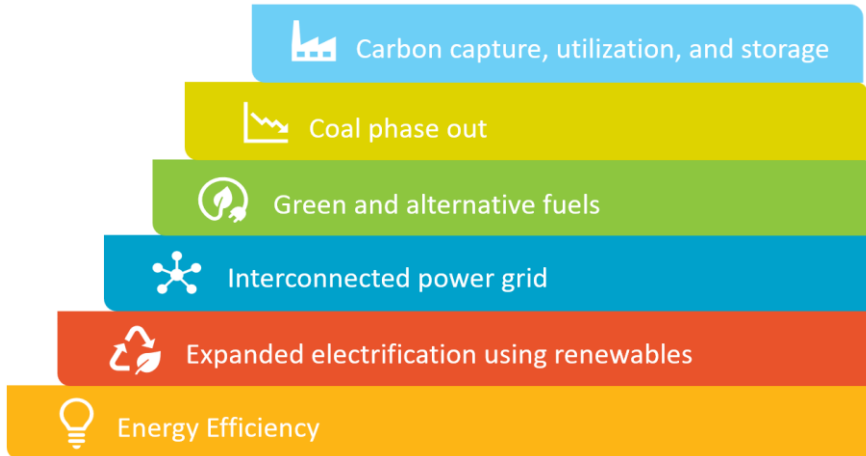
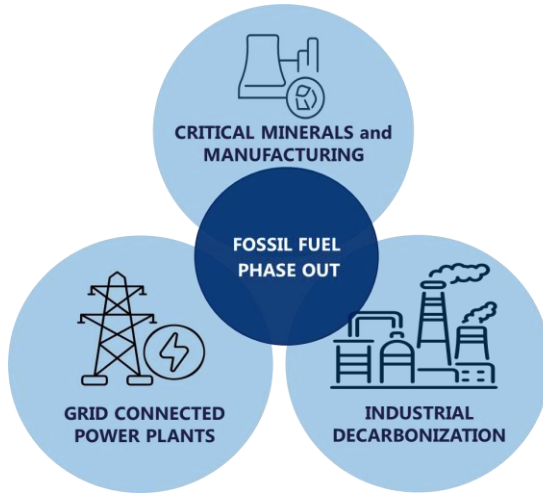
Decarbonising hard-to-abate & high-emitting assets

Supporting the transition to low-carbon operations for high-emitting assets across Power and Industry



Source: ADB & ERIA, Decarbonising Southeast Asia's Hard-to-Abate and High-Emitting Sectors: Transition Finance, Technologies, and Policy Approaches

Integrated Solutions for ASEAN's Energy Transition



Planet- environmental sustainability and climate actions

Low-carbon energy transition for GHG emissions and pollutants reduction.



Prosperity- sustainable economic growth

Determine fit-for-purpose clean energy solutions utilizing domestic energy resources, including responsive and resilient value chains, to decrease fossil fuels imports and improve energy security.



People- improved public health

Reduce harmful emissions and pollutants from industrial and power/heat generation facilities, improving air and water quality, and public health for local communities.



CO₂, SO₂, CH₄, NO_x, VOCs, PM, other emissions



People- new jobs and better livelihoods

Engages with workers, communities, and businesses who depend on fossil-fueled industries to help address their employment, skills, and livelihood needs during the transition process.

Case in PRC- Air Quality Improvement in the Greater BTH Region

S.N	Year	Project name	ADB loan (\$mil)	Loan modality
1	2015	L3356- Beijing-Tianjin-Hebei Air Quality Improvement-Hebei Policy Reforms	300	PBL
2	2016	L3504- Air Quality Improvement in the Greater BTH Region—China National Investment and Guaranty Corporation's Green Financing Platform Project	500	FIL
3	2017	L3629-Air Quality Improvement in the Greater BTH Region— Regional Emission-Reduction and Pollution-Control Facility	500	FIL
4	2018	L3765-Air Quality Improvement in the Greater BTH Region— Shandong Clean Heating and Cooling	400	Project Loan
5	2019	L3824- Shandong Green Fund Development Project	200	FIL
6	2019	L3879-Air Quality Improvement in the Greater BTH Region—Henan Cleaner Fuel Switch Investment Program	300	RBL
7	2020	L3999- Bank of Xingtai Green Finance Development Project	200	FIL
8	2020	L4023-Air Quality Improvement in the Greater BTH Region— Green Financing Scale up Project	150	FIL

Case in PRC- Air Quality Improvement in the Greater BTH Region

1

Clean Energy

- Energy Storage
- Coal to Electricity/Gas
- Wind Energy
- Solar Energy



2

Industry and buildings

- Cooling System Retrofit
- Central Heating and waste heat utilization
- Desulfurization, denitration
- Energy efficiency improvement in industry, buildings



3

Transport

- Charging/battery switching station
- L/CNG Filling Station
- Electric Vehicle



4

Agriculture

- Biomass power
- Agriculture waste/ kitchen waste to green gas or green fuels

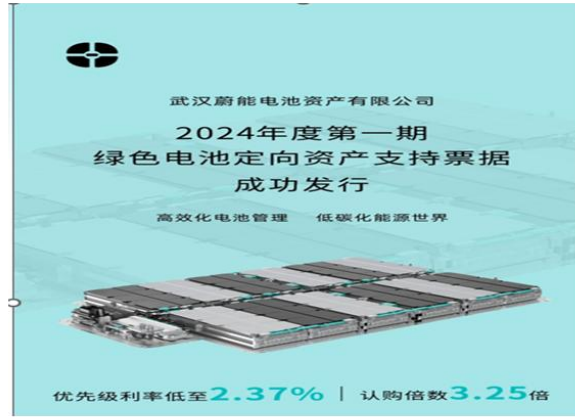


Case in PRC- Air Quality Improvement in the Greater BTH Region

1

Financial products

Sub/entrusted loan
Guarantee (ABN)
Credit enhance
Equity



2

Business model



Roof-top solar guarantee
Shangshui corn stalks to green gas
Energy service contract

3

Advance technology

Virtual power plant
Smart cooling & heating
BAAS
EGIB



4

Partnership



ADB sovereign, Non-sovereign collaboration
DPs, banks, financial leasing
Carbon X

Case in PRC- Air Quality Improvement in the Greater BTH Region



Shangshui Biogas Plant- a biomass dry fermentation production line for natural gas and co-production of solid fertilizer in Henan Province. The production line has been in operation for 2.5 year,.

\$81,000,000
Investment

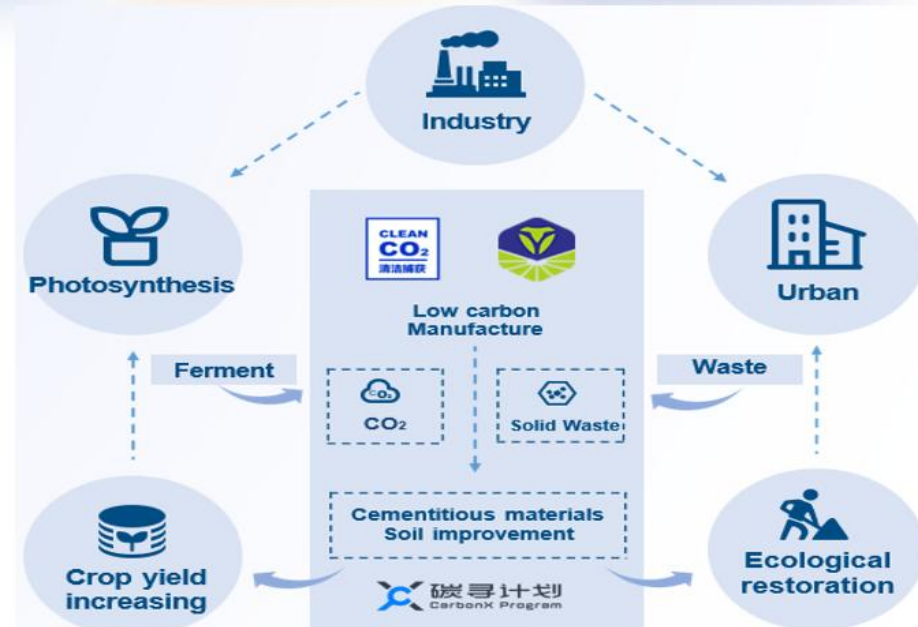
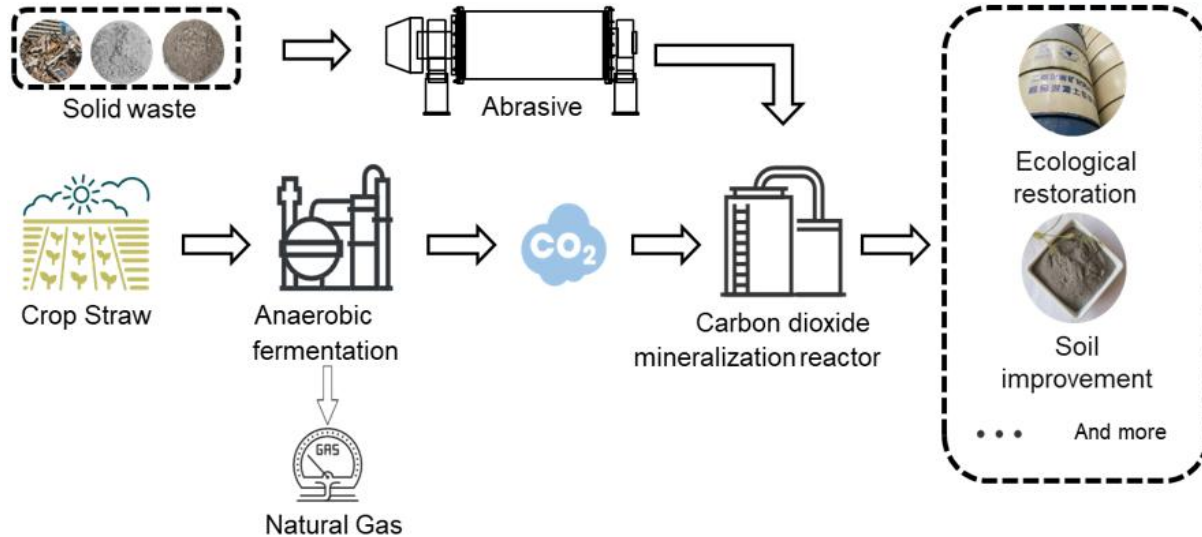
200,000 t/y
Corn stalks

18.78 MNm³/y
Natural Gas

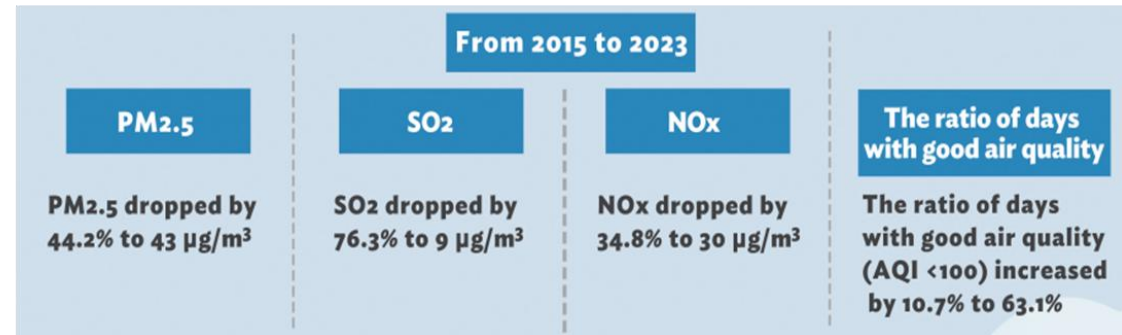
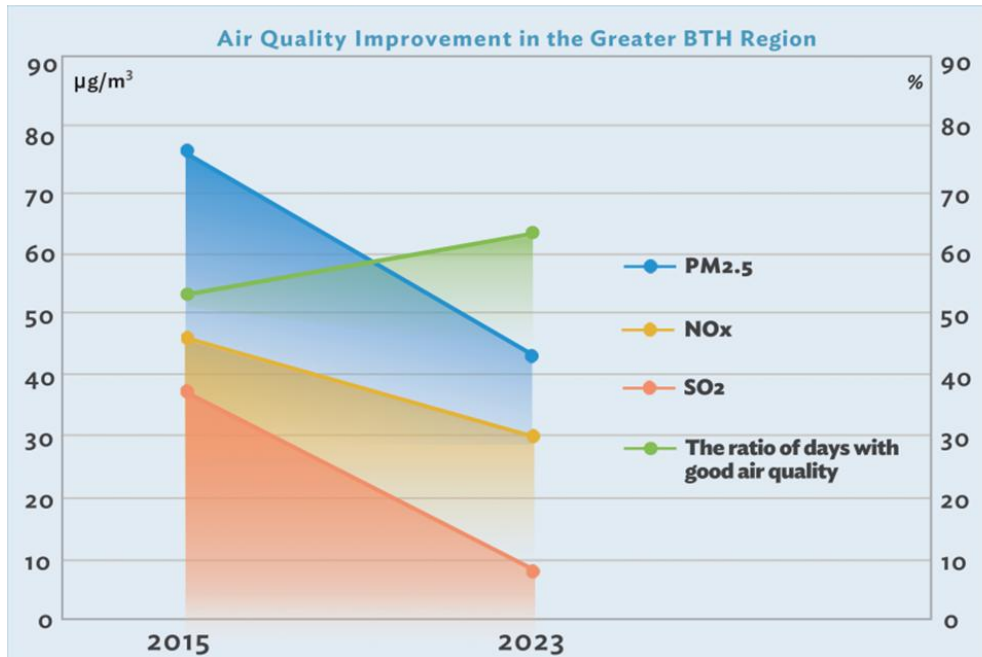
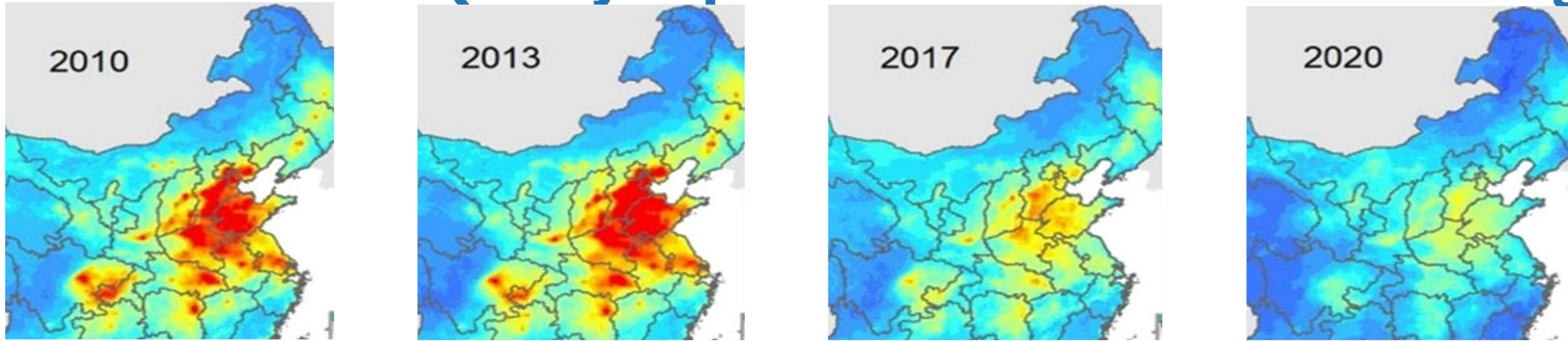
75,000 t/y
Fertilizer

20,000
tCO₂/y

4.2M \$/y
Net profit



Case in PRC: Air Quality Improvement in the Greater BTH Region



BAQ 2026

BETTER AIR QUALITY
CONFERENCE 11-13 MAR • BANGKOK

