ASIA CLEAN ENERGY FORUM 2025

EMPOWERING THE FUTURE: CLEAN ENERGY INNOVATIONS, REGIONAL COOPERATION AND INTEGRATION, AND FINANCING SOLUTIONS.

ADB

ADB Experience in Efficient Cooling Dissemination

Session 3.4: Scaling up ESCOs and Cooling Efficiency

Alfredo Baño Leal

Senior Energy Specialist, ADB

Challenges for Efficient Cooling Mainstreaming

Despite the clear benefits of efficient cooling, there are several barriers hindering the widespread adoption of energy efficient solutions.

Weak Policies and Regulatory Gaps

- **Barrier**: Inadequate standards and regulatory incentives, and lack of enforcement mechanisms.
- **Solution**: Stronger minimum energy performance standards, integration into urban development plans, and environmental, climate, and energy policies.

Affordability and Short-Term Focus

- **Barrier**: Most efficient cooling technologies require a higher initial investment compared to conventional systems.
- **Solution**: Financial incentives, partial subsidies, and innovative financing models like pay-as-you-save or leasing.

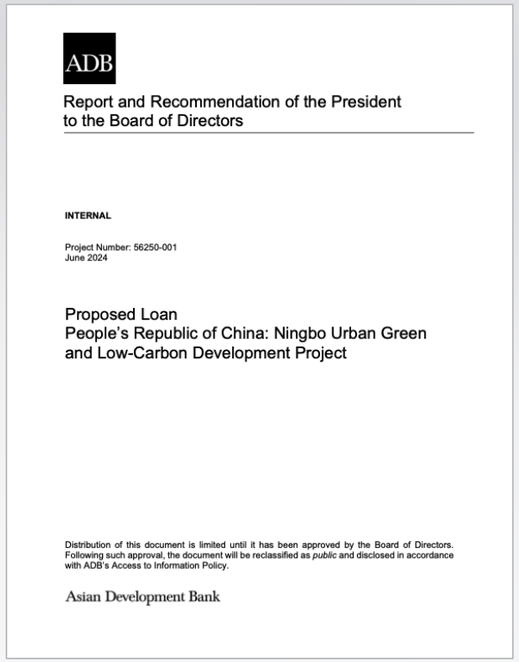
Lack of Awareness

- **Barrier**: Consumers, developers, and policymakers often lack knowledge about affordable efficient cooling options.
- **Solution**: Public awareness campaigns, training programs for technicians, clear energy labeling, etc.

Business Barriers and Technical Capacity

- **Barrier:** Shortage of skilled professionals, and businesses focused on product sales rather than the life-cycle performance.
- **Solution:** Training programs, enabling environment to support efficient cooling.

ADB Lending and Technical Assistance Activities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Report and Recommendation of the President to the Board of Directors

INTERNAL

Project Number: 56250-001
June 2024

Proposed Loan
People's Republic of China: Ningbo Urban Green and Low-Carbon Development Project

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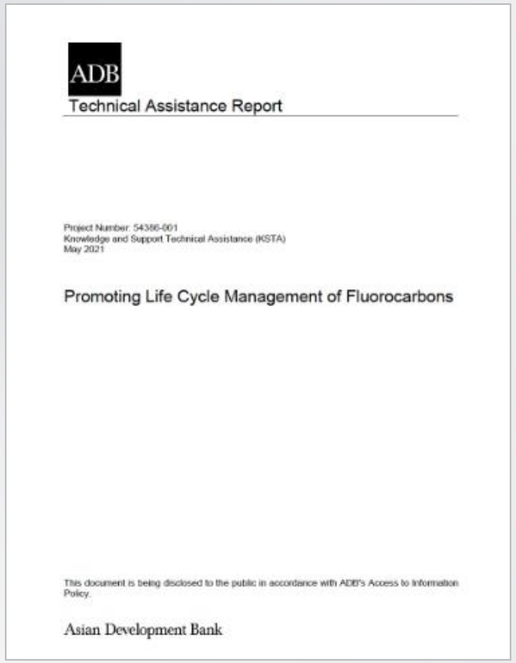
Asian Development Bank

Sovereign Loan

PRC: Ningbo Urban Green and Low Carbon Development Project.
Output 2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Technical Assistance Report

Project Number: 54386-001
Knowledge and Support Technical Assistance (KSTA)
May 2021

Promoting Life Cycle Management of Fluorocarbons

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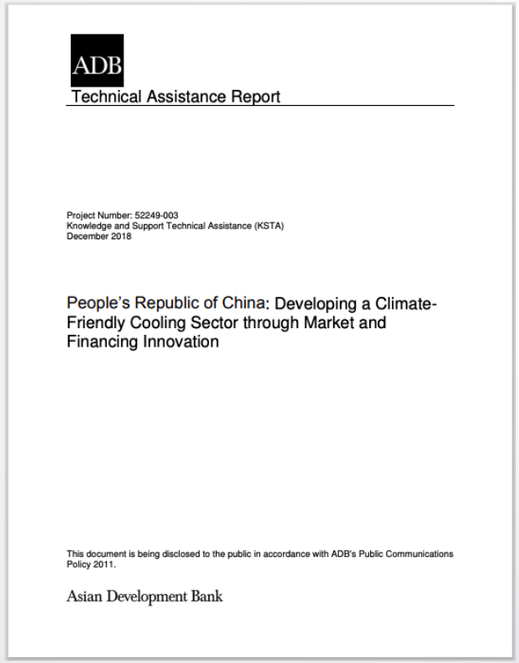
Asian Development Bank

Technical Assistance

Regional: Promoting Life Cycle Management of Fluorocarbons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Technical Assistance Report

Project Number: 52249-003
Knowledge and Support Technical Assistance (KSTA)
December 2018

People's Republic of China: Developing a Climate-Friendly Cooling Sector through Market and Financing Innovation

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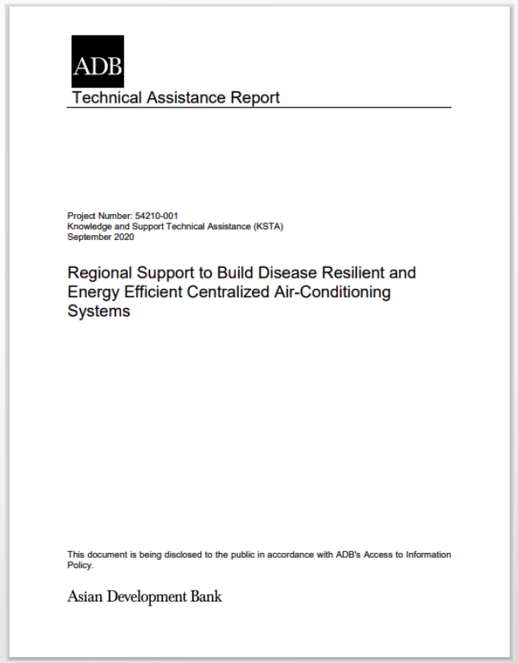
Asian Development Bank

Technical Assistance

PRC: Developing a Climate-friendly Cooling Sector through Market and Financing Innovation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Technical Assistance Report

Project Number: 54210-001
Knowledge and Support Technical Assistance (KSTA)
September 2020

Regional Support to Build Disease Resilient and Energy Efficient Centralized Air-Conditioning Systems

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Asian Development Bank

Technical Assistance

Regional Support to Build Disease Resilient and Energy Efficient Centralized Air Conditioning

ADB Support to EESL’s Super Efficient AC Program

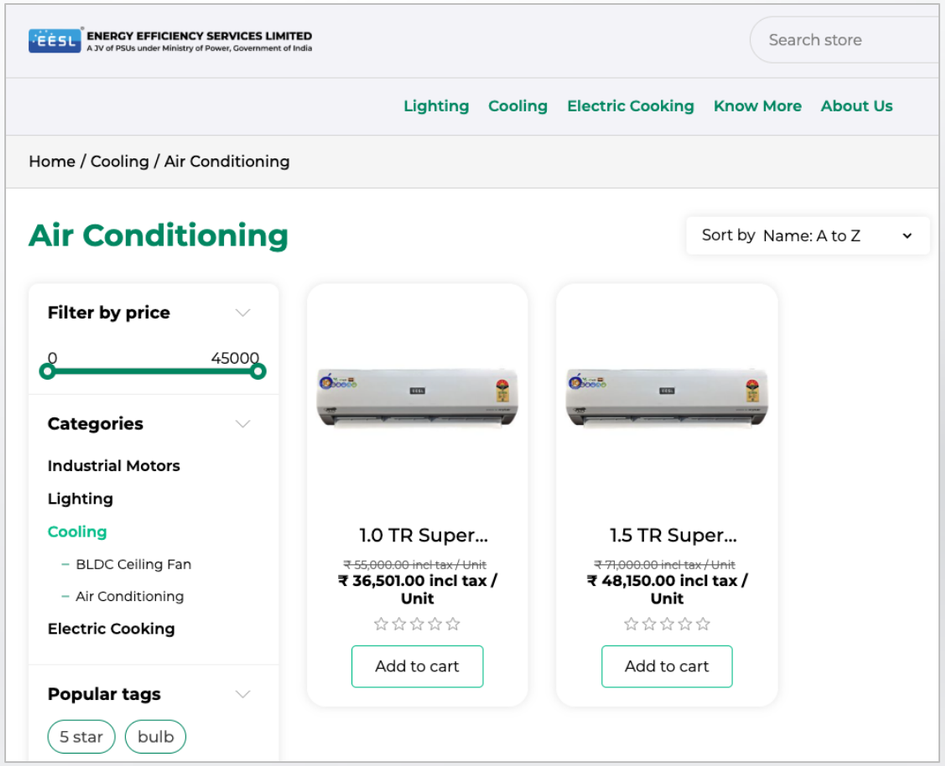
India’s Super ESCO **Energy Efficiency Services Limited (EESL)** pioneered the innovative **Super Efficient Air Conditioning Program (SEAC)** aimed at transforming India's cooling sector by promoting highly energy-efficient air conditioners, about 40% more efficient that standard 3-star rated models in the market.

SEAC piloted **bulk procurement** of highly efficient units and deployed 50,000 units for government buildings, reimbursed in a Pay As You Save system.

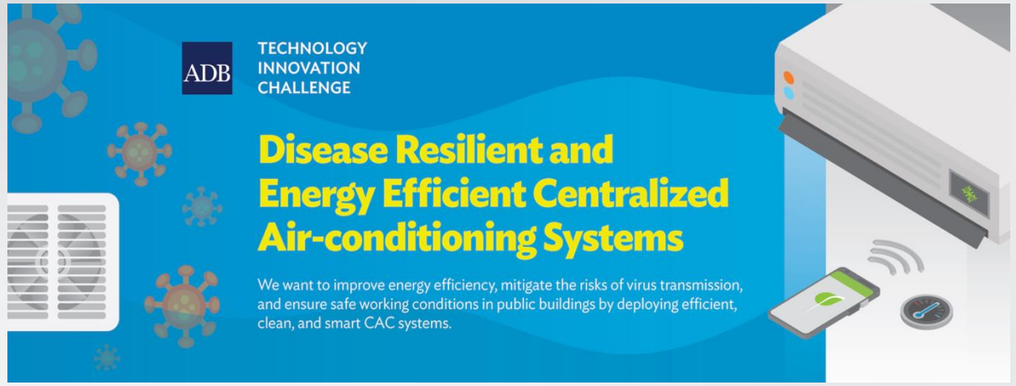
Later EESL, in partnership with BSES Rajdhani Power Limited, developed an online platform to make super efficient AC units available to private customers.

Under TA 9081-IND: Demand-Side Energy Efficiency Investment Project, **ADB raised grant financing** from the Global Environment Facility and the Clean Energy Fund to support the kickstart of the program.

ADB also collaborated with UNEP and KfW to support bulk procurement of super-efficient ACs during implementation.



ADB Technology Innovation Challenges (TIC)



In 2021: $295,000 Grant

- To identify and pilot smart centralized air-conditioning (CAC) systems that are both disease-resilient and energy-efficient.
- Awarded to ***Parivartan – Transformation (India)***
- In partnership with the Sri Lanka Ministry of Power and Energy and the Sri Lanka Sustainable Energy Authority, ADB deployed this pilot program in three public buildings in Colombo

In 2024: $500,000 Grant

- To create innovative cooling solutions to empower rural women, advance food security, and strengthen resilience to extreme heat.
- Awarded to ***Cooling Cambodia's Pepper*** **by NGO People In Need (UK)**

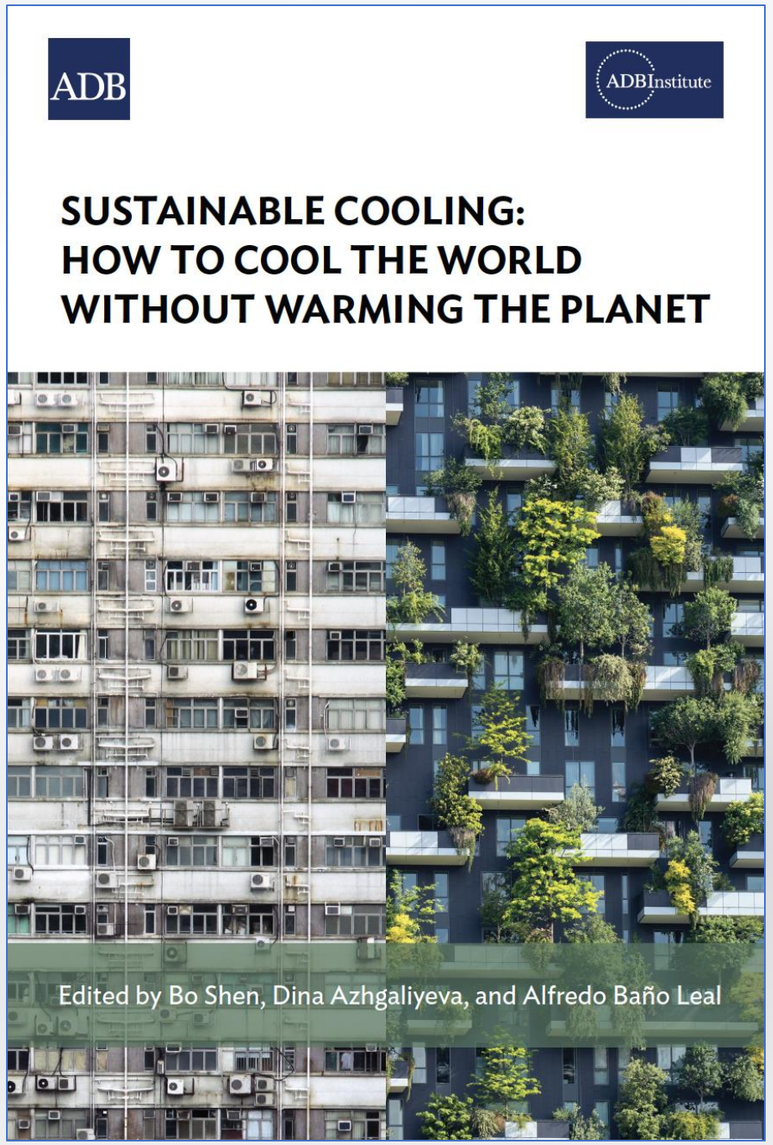
More information at: challenges.adb.org

ADB Publications - Book

Sustainable Cooling:
How to Cool the World Without Warming the Planet

Discover the the impact, opportunities and challenges of cooling technologies and their potential to shape a sustainable future. This insightful book explores key aspects of low carbon cooling technologies, policies and financial instruments, offering a comprehensive guide for policymakers.

Available for download at:



ADB Institute E-Training: Low Carbon Cooling

Course Objectives

This course examines some low-carbon cooling solutions and highlights innovative policy and financial measures for enabling low-carbon cooling and investment.

Course Structure

- ❑ Unit 1: The Need for Low-Carbon Cooling
- ❑ Unit 2: Solutions for Low-Carbon Cooling: Green Buildings and Green Bonds
- ❑ Unit 3: Financing Low-Carbon Cooling
- ❑ Unit 4: The Role of Government Policies

elearning-adbi.org/courses/low-carbon-cooling

Thank You!

Thank you for joining us today on this journey towards efficient cooling technologies.