

Published by





## ASEAN Cooling: Energy Efficiency and Climate Mitigation in Sectors with High Cooling Demand

## **Background**

The ASEAN region represents around 650 million people and an economic region with an annual growth rate of approximately 5%. This growth is accompanied by a continuous increase in greenhouse gas (GHG) emissions, mainly due to the high consumption of electricity that is growing by 6% annually. For a region with rapid urbanization and a warm tropical climate, the demand for cooling is so high that in summer about half of the electricity consumption is attributable to the use of cooling technology. The large, fast-growing member states Indonesia, the Philippines, Thailand, Vietnam and Malaysia are particularly significant here.

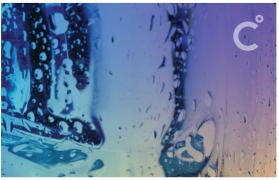
Improving energy efficiency of the cooling systems is key to supporting the ASEAN Member States to meet their soaring electricity demand. However, important conditions for increasing energy efficiency and reducing greenhouse gas emissions in sectors with high cooling demand are not yet in place in ASEAN Member States. Industries and companies with high cooling demand offer great potential for the implementation of energy efficiency measures and the use of climate-friendly cooling technologies.

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH received funding from BMZ to implement the project ASEAN Cooling: Energy Efficiency and Climate Mitigation in Sectors with High Cooling Demand with the objective of supporting ASEAN and its member states in mitigating GHG emissions in sectors with high cooling demand in the region, which include food and beverage and data centres.

Project name	ASEAN Cooling: Energy Efficiency and Climate Mitigation in sectors with high cooling demand
Commisioned by	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ)
Project region	ASEAN region with pilot measures in Indonesia, the Philippines, Thailand and Vietnam
Lead executing agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Duration	December 2024 – November 2028

The project collaborates the Energy and Minerals Division (EMD) of the ASEAN Secretariat (ASEC), who serves as the project's main partner and works with the ASEAN Centre for Energy (ACE), relevant national public institutions and private sector associations to bring about the desired results, driving the region's sustainable energy transition.





ASEAN Cooling: Energy Efficiency and Climate Mitigation in Sectors with High Cooling Demand



Siriporn Parvikam **Project Director** siriporn.parvikam@giz.de

## **Objectives**

The project aims to improve the political, regulatory, and entrepreneurial conditions for enhancing energy efficiency and reducing greenhouse gas emissions in sectors with high cooling demand across ASEAN Member States, aligning with the goals of the ASEAN Plan of Action for Energy Cooperation (APAEC).

## Our approach

The project will support public and private actors, including the EMD of ASEC and ACE, in activities related to the following areas:

- · Development of regional strategies and knowledge exchange among public institutions on measures for improving the framework conditions to foster investments in energy efficiency, climate-friendly cooling technology and photovoltaic systems that (partially) cover their electricity consumption.
- · Support to national institutions for improving the framework conditions for GHG mitigation measures in sectors with high cooling demand in selected mem-ber states.

- Support to the private sector for the implementation of GHG mitigation measures in sectors with high cooling demand in selected member states.
- · Regional exchange and knowledge dissemination of GHG mitigation measures in sectors with high cooling demand for the private sector.

To this end, the project supports the ASEAN Member States in implementing selected measures of the APAEC, the ASEAN strategy for carbon neutrality, and national energy policy strategies and national climate targets (Nationally Determined Contributions: NDC).

Published by Deutsche Gesellschaft für

Internationale Zusammenarbeit (GIZ) GmbH

Registered offices Bonn and Eschborn, Germany

ASEAN Cooling: Energy Efficiency and Climate Mitigation in Sectors with High Cooling Demand

GIZ Energy Office

193/140 Lake Rajada Office Complex, 35th Fl, New Ratchadapisek-Rama IV Road, Klongtoey,

Bangkok, 10110, Thailand giz-thailand@giz.de www.giz.de/

Author(s) Siriporn Parvikam

Phoossarapha Thongjumrool

Layout Natcha Pattanatananon

As at August 2025

GIZ is responsible for the content of this publication.

In cooperation with



On behalf of

Federal Ministry for Economic Cooperation and Development (BMZ)

Division

Energy & Minerals Division

Addresses of the BMZ offices BMZ Bonn Dahlmannstraße 4 53113 Bonn, Germany T+49 (0)228 99 535-0 F +49 (0)228 99 535-3500

BMZ Berlin Stresemannstraße 94 10963 Berlin, Germany T +49 (0)30 18 535-0 F +49 (0)30 18 535-2501

poststelle@bmz.bund.de www hmz de