TGC EMC

THAI-GERMAN COOPERATION ON ENERGY, MOBILITY AND CLIMATE

CONTEXT

At COP26, Thailand announced its commitment to achieving carbon neutrality by 2050 and net-zero emission target by 2065. To achieve these ambitious goals, Thailand needs to decarbonise its power, transport, and industrial sectors, which are still dominated by fossil fuels, and increase variable renewable energy (vRE) generation, which remains far below its full potential.

Focusing on the power and transport sectors, the two crucial contributors to emissions, TGC EMC will support the operationalisation of their transition through technology and knowledge transfer, as well as policy, regulatory, and business model development. The programme will emphasise sector coupling to encourage the tackling of key barriers that are slowing down the energy transition. This cross-sector support will translate into demonstration of hands-on solutions to showcase the feasibility of cross-sector transformation for replication and upscaling of best-practices in urban contexts throughout Thailand.

In the so-called **City Lab**, the TGC EMC will support the implementation of innovative technologies through piloting in real life conditions. Since the project supports ambitious mitigation and decarbonisation efforts, another working area of the programme is to enable partner organisations to monitor future greenhouse gas (GHG) reduction in the energy, transport, industry, and biomass sectors. TGC EMC will provide trainings on Measurement, Reporting, and Verification (MRV) to enable partner organisations in updating relevant sector Nationally Determined Contribution (NDC) roadmaps towards decarbonisation pathways.

Finally, the project will provide significant support in the field of climate finance. The Thai Climate Initiative (ThaiCI) will provide seed funding to a number of local projects along with capacity development to both funding managers and potential recipients. Setting up the ThaiCI as a new climate financing scheme under the Environment Fund of ONEP will moreover enhance climate action at sub-national level and strengthen capacities to finance and develop climate projects and to leverage additional domestic and international resources.

To gain acceptance and facilitate smooth implementation of measures in all target sectors, stakeholder dialogues with a broad range of representatives from public institutions, private sector, civil society, and academia are an integral part of TGC EMC planned activities. The project will therefore set up a cross sectoral national stakeholder platform to engage relevant actors in the discussion and inform decision makers on issues related to climate-neutral energy system, sector transition, and decarbonisation.

OBJECTIVE

Key actors in Thailand become empowered in the planning and implementation of transformative activities in the energy, transport, and industry sectors, in line with the Government's 2050 carbon neutrality objective.

APPROACHES

The project supports Thailand's efforts to reach carbon neutrality by 2050, focusing on integration and decarbonisation of the energy, transport, industry, and biomass sectors.

TECHNICAL KNOWLEDGE

Promoting the power and transport transition through technology and knowledge transfer, such as strategic planning for transition to clean energy and development of Smart Grid infrastructure to support renewable energy in the future.

POLICIES & REGULATIONS

Providing advice on the development or improvement of policies, regulations, and market frameworks that lead to transitioning to clean and sustainable energy for both producer and consumer sectors, including power, transport, and industrial.

PILOT SOLUTIONS

Testing guidelines from the project's technical studies in a City Lab context, a pilot area connecting sectors from electricity production, transport, industry to agriculture.

FINANCING

Providing financial support through the Thai Climate Initiative or ThaiCI, a seed funding financial mechanism established to support climate change projects as well as capacity building for GHG reduction and climate change adaptation projects.

OUTPUTS

OUTPUT 1: TECHNICAL KNOWLEDGE

Technology options to decarbonise the power, transport, and industry sectors are further developed and relevant stakeholders are empowered to utilise them.

OUTPUT 2: POLICIES & REGULATIONS

Recommendations for new or improved policy, market, and regulatory framework that support accelerated system transformation in the energy, transport, and industry sectors are developed.

OUTPUT 3: PILOT SOLUTIONS

Pilot solutions accelerating change towards carbon neutrality in energy, transport and industry sectors are successfully tested in the City Lab.

OUTPUT 4: FINANCING

Thai Climate Initiative (ThaiCI) serves as financial mechanism to promote and enhance subnational climate actions in Thailand.

BENEFICIARIES

- Key decision makers and technical staff of relevant ministries and agencies
- Operators and companies from the power and transport sectors
- Industries in food and beverage, chemical, paper, and cement subsectors
- Farmers, group of farmers, and biomass power plants
- City administrations, universities, institutions, companies, and civil society groups engaged in the City Lab
- Government agencies, local administrative authorities, public organisations, academic institutes, non-governmental organisations (NGOs), and private sectors are the target group of ThaiCI

COMPONENTS OF TGC EMC

RENEWABLE ENERGY

Facilitate the energy transition by supporting the transformation of the energy system into one that is more flexible, capable of integrating complex cross-sector demands, and able to achieving ambitious greenhouse gas (GHG) mitigation targets.

TRANSPORT

Improve framework conditions for enhancing EV investment, electrifying public transport fleets, and advancing sharing business models. This includes enhancing policies, regulations, incentive schemes, knowledge, awareness, technology, and innovation.

DECARBONISATION IN INDUSTRY

Energy efficiency (EE) contributes clearly to strategies for energy security (through demand side management) and mitigation actions by defining and promoting energy efficiency measures in key industries through enhanced technical and policy framework to achieve the goal of decarbonisation.

BIOMASS

Biomass to energy contributes to a sustainable energy transition in Thailand, which aligns with the country's carbon neutrality by 2050 vision and its Bio-Circular-Green Economy (BCG) concept. In addition, biomass to energy contributes to better air quality management and improving incomes of small-scale farmers.

CLIMATE FINANCE

A new climate financing scheme is set up to implement actions supporting NDC, NAP, and the Climate Change Master Plan at the sub-national level. Concurrently, capacities are being strengthened to develop and finance climate projects and to raise additional domestic and international resources for climate actions.

PROJECT PARTNERS

Supported by:

Federal Ministry for Economic Affairs and Climate Action

IKI INTERNATIONAL CLIMATE INITIATIVE

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

on the basis of a decision by the German Bundestag

In cooperation with

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สำนักงานนโยบายและแผนพลังงาน กระทรวงพลังงาน

สนข สำนักงานนโยบายและแผนการขนส่งและจราจร

Consortium partners

King Mongkut's University of Technology Thonburi

SGtech

Agora Energiewende

Agora Verkehrswende

Fraunhofer IEG

Fraunhofer ISI

EVAT ELECTRIC VEHICLE ASSOCIATION OF THAILAND

RE100 THAI RENEWABLE ENERGY (TREA) ASSOCIATION

PROJECT DURATION

01/2023 – 12/2027

FINANCED BY

The International Climate Initiative (IKI) under the Ministry for Economic Affairs and Climate Action of Germany (BMWK)

COUNTRY

THAILAND

MORE INFORMATION

www.thai-german-cooperation.info

CONTACT INFORMATION

Dr Dominika Kalinowska
Project Director
dominika.kalinowska@giz.de