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Focus Group Meeting on Scenario Setting for Long-term Energy Planning towards Carbon Neutrality

12th Floor, Ratchadamri Room
Eastin Grand Hotel Sathorn Bangkok

10th October 2024, 08.30-13.30 Hrs.

Background and Objective

Thailand has committed to achieving its second unconditional NDC target by 2030, alongside its long-term goals of carbon neutrality by 2050 and net-zero emissions by 2065, as outlined in the revised Long-term Low Emissions Development Strategy (LT-LEDS). As of 2024, key energy agencies have revised plans to transition Thailand's energy systems towards these goals. However, given the increasing urgency for climate action, growing evidence of climate-induced natural disasters, and current global energy trends (e.g. electrification, decarbonisation, long-term benefits of energy transition, etc.), debates persist about whether **these plans can effectively shape long-term energy planning for a successful transition to sustainable energy systems aligned with the Paris Agreement.**

Moreover, current national long-term energy scenarios, while recognising similar drivers of energy demand growth, falls short on incorporating the implications of current global energy trends. Many studies use national climate commitments (carbon neutrality by 2050 and net zero by 2065) as benchmark over a current-policies baseline. However, **only a few energy scenarios focus on sector-coupling strategies** such as electrification and Vehicle-to-Grid (V2G), demand-side flexibility, fuel switching, and other strategies aimed at complete decarbonisation. Such a sector-coupling strategy have the potential to enhance energy systems flexibility, allowing for greater integration of renewables towards the achievement of national climate commitments.

Key issues arising from these observations include:

1. The current energy-related plans share a planning horizon only up to 2037, necessitating an extension to cover the 2037–2050 period.
2. The pathways outlined in current plans may not be rigorous enough to meet the anticipated clean electricity demands of the industries expected to be promoted in the near future.
3. Sector-coupling has many advantages, for instance, increasing the share of renewable energy across sectors and thus mitigating energy-related emissions, replacing petrol and diesel in transport, or replacing fossil fuel for industrial heat process.

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4. The prolonged reliance on LNG imports could jeopardise Thailand's energy security due to price fluctuations and geopolitical risks.
5. Energy system costs could be further optimised through a judicious selection of clean technology options and optimisation tools.
6. The macro-economic and health impacts of the resulting energy systems should be evaluated using credible models to justify the chosen pathways.

In response to these challenges, the Thai-German Cooperation on Energy, Mobility and Climate (TGC EMC) programme, in partnership with King Mongkut's University of Technology Thonburi (KMUTT), is spearheading collaborative research to conduct integrated energy systems modelling to address those issues under various future scenarios. This research aims to support the programme's political partner, Energy Policy and Planning Office of Ministry of Energy (EPPO), in defining integrated long-term energy planning and emission reduction pathways. The focus will be on identifying appropriate technologies and policy measures in line with LT-LEDS. A **focus group meeting** is being organised to bring together key stakeholders to brainstorm and collectively refine the scenarios and technology pathways tailored to Thailand's context.

Target Participants (40-50 participants)

Policymakers, planners, analysts, experts and consultants from:

Ministry of Energy

- Energy Policy and Planning Office (EPPO)
- Department of Alternative Energy Development and Efficiency (DEDE)
- Electricity Generating Authority of Thailand (EGAT)
- Energy Regulatory Commission (ERC)

Ministry of Interior

- Bangkok Metropolitan Administration (BMA)
- Metropolitan Electricity Authority (MEA)
- Provincial Electricity Authority (PEA)

Ministry of Natural Resources and Environment

- Department of Climate Change and the Environment (DCCE)

Ministry of Transport

- The Office of Transport and Traffic Policy and Planning (OTP)

Ministry of Industry

- Department of Industrial Works (DIW)

Ministry of Agriculture and Cooperatives

- Office of Agricultural Economics (OAE)

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National experts and consultants

- Electric Vehicles Association of Thailand (EVAT)
- IEEE Power & Energy Society - Thailand (IEEE PES)
- Thailand Development Research Institute (TDRI)
- Thailand Facilities Management Association (TFMA)
- Thai Renewable Energy Association, Federation of Thai Industries (RE100)

Tentative Program

Time (Hrs.)	Programmes	Remarks
08.30 – 09.00	Registration	
09.00 – 09.20	Opening remarks <ul style="list-style-type: none"> • Representatives from EPPO (TBC) • Dr. Dominika Kalinowska, Programme Director of TGC EMC, GIZ Thailand 	
09.20 – 10.00	<ul style="list-style-type: none"> • Introduction of TGC EMC Thachatat Kuvarakul, Renewable Energy Component Lead of TGC EMC, GIZ Thailand • Introduction to energy modelling including background and objective Phat Pumchawsaun, Project Manager of TGC EMC – Renewable Energy Technology and Policy, GIZ Thailand • Scenarios setting including narrative, key assumptions, and discussing approach Assoc. Prof. Dr. Bundit Fungtammasan and Dr. Nattapong Chayawatto, Research Lead of TGC EMC, KMUTT 	
10.00 – 10.20	Coffee break	
10.20 – 11.50	Breakout sessions: Discussion on assumptions including key parameters and technological choices sector by sector: <ul style="list-style-type: none"> • Residential and Commercial • Industry • Power • Transport • Biomass 	Five (5) breakout groups for each sector will be conducted and led by GIZ Thailand and KMUTT
11.50 – 12.10	Wrap-up by sectors GIZ Thailand and KMUTT	
12.10 – 12.15	Next step and closing remarks Dr. Dominika Kalinowska, Programme Director of TGC EMC, GIZ Thailand	
12.15 – 13.15	Lunch	

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