

Terms of reference (ToR) for the procurement of services below the EU threshold

Support to promote the adoption and scaling-up of Artificial Intelligence-driven Energy Management Systems for enhanced industrial energy efficiency and system optimisation in ASEAN	Project number/ cost centre: 20.2023.8-003.00
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0. List of abbreviations

AEC	ASEAN Economic Community
AG	Commissioning party
AI	Artificial Intelligence
AMS	ASEAN Member States
AN	Contractor
APAEC	ASEAN Plan of Action for Energy Cooperation
ASEAN	Association of Southeast Asia Nations
AVB	General Terms and Conditions of Contract for supplying services and work
CAP	ASEAN EU-German Climate Action Program
EE	Energy Efficiency
EEN	Energy Efficiency Network
EnMS	Energy Management Systems
EU	European Union
GHG	Greenhouse Gases
IoT	Internet-of-Things
M&E	Monitoring and Evaluation
NDC	Nationally Determined Contributions
RE	Renewable Energy
ToRs	Terms of reference
WP	Work Package

1. Context

The ASEAN region is undergoing rapid economic growth, leading to a significant rise in energy demand. To enhance energy security, meet climate commitments, and support sustainable industrial development, ASEAN Member States (AMS) are prioritizing improvements in energy efficiency (EE), particularly in industrial processes. The ASEAN Plan of Action for Energy Cooperation (APAEC) Phase II: 2021–2025 has set ambitious targets, including a 32 % reduction in energy intensity by 2025 (compared to 2005 levels) and increased energy efficiency investments across key sectors. Looking ahead to 2026-2030, the new APAEC cycle raises the ambition further — aiming for a 40 % reduction in energy intensity (from 2005 levels) by 2030, alongside broader goals to scale renewables and accelerate decarbonisation.

Industrial processes represent a major share of ASEAN's total energy consumption, and optimising energy use through digitalisation is critical to achieving further efficiency gains. According to the 7th and 8th ASEAN Energy Outlooks (by ACE), the industrial sector is the most energy-intensive sector in ASEAN. In the 8th Outlook, ACE notes that the region experienced a 15.2 % annual rise in energy consumption in 2022 reflecting post-COVID recovery dynamics. From the IEA's demand-side energy data, the industry sector in Southeast Asia relies on coal for 34 % of its energy needs, with electricity accounting for some 29 %, natural gas 22 %, oil 11 %, heat 6 %, and biofuels & waste 8 %. These fuel mixes reflect the diversity of industrial energy use across the region.

Energy Management Systems (EnMS) - increasingly enhanced by Artificial Intelligence (AI) - offer a powerful means to monitor, analyse, and optimise industrial energy performance. These AI-driven EnMS can enable predictive control, automated decision-making, and real-time optimisation, thereby improving both energy efficiency and industrial productivity. However, the adoption and integration of AI-driven EnMS across ASEAN remain limited, constrained by barriers such as high upfront costs, limited awareness, insufficient technical capacity, and gaps in policy or regulation.

In this context, GIZ will support ASEAN in promoting the adoption and scaling-up of AI-driven EnMS for enhanced industrial energy efficiency (EE) and system optimisation. The support will begin with an assessment of the current utilisation of EnMS in key industrial sectors across ASEAN, including the extent to which AI components are already applied. The study will identify barriers, capacity needs, and enabling factors required to promote broader adoption of AI-enhanced EnMS. It will also capture good practices and success cases demonstrating how AI can improve energy management, predictive maintenance, and process optimisation.

Based on these findings, GIZ and partners will formulate policy recommendations and practical measures aimed at accelerating the deployment and scaling-up of AI-driven EnMS, supporting capacity building, addressing investment barriers, and fostering stronger regional cooperation. By doing so, the initiative aims to contribute to higher industrial energy efficiency, improved productivity, and advancement of ASEAN's broader energy transition and digitalisation goals.

ASEAN EU-German Climate Action Programme (CAP)

In line with the ASEAN Economic Community's energy goals, CAP supports the implementation of Nationally Determined Contributions (NDCs) and addresses challenges in meeting high energy demands while transitioning to low-carbon technologies. The project contributes to the APAEC, particularly in areas of Energy Efficiency and Conservation

(programme area 4), Renewable Energy (5), and Regional Energy Policy and Planning (6). It is backed by the EU through the EU-ASEAN-Green Initiative, which supports GHG emission reduction, the EU-ASEAN partnership, and the development of energy policies favoring renewable energy and energy efficiency. This effort is also in harmony with the ASEAN Strategy for Carbon Neutrality and the Framework for Circular Economy for the ASEAN Economic Community (AEC), which outlines a vision for a circular economy and identifies priority areas and enablers to expedite its realisation in the ASEAN region.

Particularly for this assessment, the study aims to bridge the gap energy efficiency and digitalisation in industrial processes. More specifically, it seeks to enhance regional knowledge and build capacity for effectively identifying best practices for energy efficiency in industrial processes through digital solution within the ASEAN region to enhance adoption in its Member States.

2. Tasks to be performed by the contractor

Objectives of this assignment

The main objective of this assignment is to promote regional cooperation to accelerate the adoption and scaling-up of Artificial Intelligence (AI)-driven Energy Management Systems (EnMS) for enhanced industrial energy efficiency and system optimisation across the ASEAN region.

The assignment aims to assess the current utilisation and maturity level of EnMS in key industrial sectors, including the extent to which AI technologies are already being applied. It will further identify barriers, challenges, and enabling conditions for scaling up AI integration within EnMS, while ensuring alignment with ASEAN's energy efficiency and digitalisation policies, as reflected in the ASEAN Plan of Action for Energy Cooperation (APAEC).

More specifically, the study will:

- Evaluate the current adoption and potential of AI-driven EnMS in improving industrial energy performance and productivity across ASEAN Member States (AMS);
- Assess technological readiness and digital capabilities relevant to the implementation of AI-based EnMS;
- Identify policy, regulatory, and institutional frameworks that support or hinder the deployment of AI-enabled energy management solutions;
- Document good practices and success stories from AMS and international contexts to inform regional replication; and
- Formulate actionable recommendations and policy guidance to accelerate the deployment, optimisation, and regional harmonisation of AI-driven EnMS.

Through these activities, the study will provide evidence-based insights and strategic recommendations to strengthen regional coordination, foster knowledge exchange, and support ASEAN's collective efforts to achieve a more energy-efficient, digitally advanced, and competitive industrial sector.

1. Working package 1: Baseline Assessment of Energy Management Systems (EnMS) and AI Readiness in ASEAN's Industrial Sector*

Objective:

To establish a comprehensive baseline on the current adoption, utilisation, and performance of Energy Management Systems (EnMS) across ASEAN Member States (AMS), including existing use cases of AI-driven EnMS. The assessment will evaluate the technological, institutional, and human capacity readiness for integrating Artificial Intelligence into EnMS and identify barriers and opportunities for scaling such integration..

1.1. Key activities:

- Conduct desk research and data collection by reviewing national and regional documents, reports, and datasets on industrial energy management and digitalisation trends.
- Map EnMS practices across ASEAN Member States, categorising them by sector*, industrial size, and maturity level.
- Assess the level of digitalisation by evaluating data management, sensorisation, automation, and digital monitoring tools currently used in industrial facilities.
- Identify existing or pilot AI-based EnMS projects and analyse their impacts on energy performance and operational efficiency.
- Organise stakeholder consultations through interviews or surveys with policymakers, industry representatives, and technology providers to validate findings.
- Assess the energy savings and system optimisation potentials through AI-driven EnMS in the industrial sector
- Analyse institutional, technological, and human capacity gaps hindering AI adoption and identify enabling factors for scaling.;

1.2. This working package is expected to deliver:

- A baseline assessment report covering digital adoption, readiness, potentials and barriers across countries and sectors.
- A presentation summarizing the main findings.

*Industrial sectors with high energy demand and GHG mitigation potential are to be prioritized and may be defined by GIZ or its partners at the beginning of the implementation of this service.

2. Working package 2: Identification of Best Practices and Innovative Technologies

Objectives:

To identify and analyse best practices, innovative technologies, and business models related to AI-driven EnMS that can enhance energy efficiency, productivity, and competitiveness in ASEAN's industrial sector.

2.1. Key activities:

- Review successful AI-based EnMS applications both in ASEAN and globally to identify transferable models.
- Benchmark technologies by comparing functionalities, scalability, and integration requirements of existing AI-enabled EnMS tools and platforms.
- Analyse cost-benefit outcomes and performance improvements achieved by early adopters.

- Assess enabling conditions such as data management structures, interoperability standards, cybersecurity measures, and digital skill requirements.
- Document case studies and lessons learned to highlight good practices for replication within ASEAN.
- Present draft findings to stakeholders for validation and contextual adaptation.

2.2. This working package is expected to deliver:

- A report summarizing best practices, innovative technologies, applicable to ASEAN industries;
- A brief report on enabling and success factors for AI-driven EnMS deployment;
- A presentation summarizing the main findings.

3. Working package 3: Policy and Regulatory Framework Analysis

Objective:

To analyse existing policy, regulatory, and institutional frameworks governing energy efficiency, digitalisation, and industrial innovation in AMS, and identify opportunities to foster the uptake of AI-enabled EnMS.

3.1. Key activities:

- Map and review policies, regulations, and standards related to EnMS, AI, and industrial digitalisation across ASEAN.
- Assess institutional coordination among energy, digital, and industrial authorities in implementing these policies.
- Identify gaps, overlaps, and barriers within policy frameworks that hinder AI integration in energy management.
- Benchmark ASEAN frameworks against international best practices and lessons from leading digitalised industrial economies.
- Formulate actionable policy recommendations to strengthen governance, harmonisation, and incentive mechanisms.
- Conduct consultation workshops with policymakers and regional bodies to validate findings and gather feedback.

3.2. This working package is expected to deliver:

- A policy and regulatory analysis report including key findings and recommendations;
- A policy brief summarising options to support AI-driven EnMS adoption and alignment with ASEAN energy and digitalisation strategies;
- A presentation summarizing the main findings.

4. Working package 4: Capacity Development and Stakeholder Engagement

Objectives:

To enhance awareness, technical capacity, and collaboration among stakeholders—including industry, policymakers, and technology providers—on the benefits and implementation of AI-driven EnMS.

4.1. Capacity Needs Assessment and Design

The contractor shall collect data, gather information, and conduct an assessment, including but not limited to:

- Identify stakeholder groups (e.g., industry energy managers, policymakers, technical regulators) for capacity development.
- Conduct a knowledge and capacity gap assessment on digitalisation (including machine learning/AI) and industrial process optimization, and analyze the associated workforce/skills gap.
- Analyse labour market potentials and training needs for AI and digital EnMS roles .
- Identify and design training outline covering technical aspects of AI-enabled digital EnMS solutions and policy/regulatory design.
- Align capacity-building efforts with ongoing initiatives such as the Energy Efficiency Network (EEN)

4.2. Stakeholder Engagement

The contractor is then requested to highlight/analyze barriers and drivers, including but not limited to:

- Provide inputs for regional workshops and dialogues with AMS stakeholders to share findings and gather feedback;
- Conduct targeted capacity-building sessions on AI applications in EnMS and data-driven energy management;
- Facilitate exchanges between leading AMS institutions, industries, and technology developers;
- Promote regional collaboration through knowledge-sharing platforms.
- Provide targeted technical input to utilize for the Energy Efficiency Network (EEN)* approach in ASEAN, including AI and digitalisation case study integration, peer-learning formats, and structured knowledge-sharing.

This working package is expected to deliver:

- A capacity-building plan and training materials tailored to key stakeholder groups;
- Workshop reports and a summary of stakeholder feedback on AI-driven EnMS adoption;
- A communication brief to raise awareness of opportunities and benefits.

* CAP is currently working with external experts on the EEN topic. The contractor will be requested to work closely with those experts.

5. Working package 5: Development of a Strategic Roadmap and Implementation Recommendations

Objectives:

To consolidate findings from previous work packages into a strategic roadmap and actionable recommendations that guide AMS and regional/sectoral bodies in accelerating the deployment of AI-driven EnMS.

Key activities:

- Synthesising insights from WPs 1–4 into an integrated analysis.

- Identify policy and technologic synergies across countries and sectors.
- Draft a comprehensive strategic roadmap with short-, medium-, and long-term actions to scale AI and digital EnMS in ASEAN.
- Provide sector-specific and country-sensitive recommendations, and propose enabling policy and financing frameworks to operationalize the roadmap.
- Propose financing and incentive mechanisms to support roadmap implementation through public-private or regional initiatives.
- Establish a monitoring, reporting, and verification (MRV) framework with indicators to track progress on digitalisation and AI integration.
- Recommend pilot or demonstration projects that showcase practical applications of AI-driven EnMS.
- Present the draft roadmap in a regional validation workshop to refine and finalise the strategic direction

This working package is expected to deliver:

- A strategic roadmap for industrial energy efficiency and digitalisation, with short-, medium-, and long-term actions, including linkages to EEN.
- A final synthesis report incorporating key findings from all work packages.
- A presentation summarizing the strategic recommendations and the role of EEN.

Expected results

The results of this work are expected to contribute to CAP's indicators. More specifically to the:

- Outcome Indicator 1: Initiatives to promote energy efficiency in industries with high energy demand are implemented in AMS
- Output Indicator 1.1: Relevant energy sector institutions from all AMS participated in regional/ international exchange events on energy topics with high climate adaptation or mitigation potential (40% of participants women) (through Work Package 5)
- Follow-up activities on regional cooperation and knowledge transfer have been implemented in 4 AMS (through Work Package 5)
- Studies and guidelines on RE, EE and energy-climate nexus have been finalised and disseminated (through Work Packages 1-3)
- Relevant energy sector institutions from all AMS participated in regional trainings on energy topics with high climate adaptation or mitigation potential (40% of participants women) (through Work Package 4)

GIZ shall cover the event organisation cost of the consultation workshop. The target participants are to be determined with GIZ after the assignment starts. Inputs and feedback from the capacity development activities shall be accommodated to the final report and presentation slides.

Other tasks include:

- The contractor is responsible for selecting, preparing, training and steering all the experts assigned to perform the tasks,
- The contractor is responsible for coordinating with the projects partners and experts intervening in similar topics or approaches
- The contractor manages costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ,
- The contractor reports regularly to GIZ in accordance with the current AVB of GIZ

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

Milestones/partial works	Deadline/place	Criteria for acceptance
1. (Working package 1) A written report and presentation.	1 months after contract start/ homebased	<ul style="list-style-type: none"> - A written report and presentation of the working package 1 is shared to GIZ - The report must detail information of mentioned points of the working package 1, - The progress of assessment is presented and discussed with GIZ through a virtual meeting.
2. (Working package 2) A written report and presentation.	2 months after contract start/ homebased	<ul style="list-style-type: none"> - A written report and presentation of the working package 2 is shared to GIZ - The report must detail, information of points of the working package 2, - The progress of assessment is presented and discussed with GIZ through a virtual meeting.
3. (Working package 3) A written report and presentation	3 months after contract start/ homebased	<ul style="list-style-type: none"> - A written report and presentation of the working package 3 is shared to GIZ, - The report must detail information of the working package 3, - The progress of assessment is presented and discussed with GIZ through a virtual meeting.
4. (Working package 4) Capacity development and dissemination materials and activities; a written report and presentation of the capacity development activities	Validation capacity development activities ^{a)} ; Q1/2 2026 (<i>tbc</i>) The activities will be in the selected ASEAN countries	<ul style="list-style-type: none"> - Capacity development materials which contain findings of working packages 1-3 are reflected and shared with GIZ, - Acting as trainers or resource persons for the capacity development activities - A written report and presentation of the capacity development activities is shared - Preparation of the activities are presented and discussed with GIZ through a virtual meeting.
5. *Working package 5) Development of a Strategic Roadmap and Implementation Recommendations	3 months after contract start/ homebased	<ul style="list-style-type: none"> - A written report and presentation of the working package 5 is shared to GIZ, - The report must detail information of the working package 5, - The progress of assessment is presented and discussed with GIZ through a virtual meeting.
6. A final report contains: - An executive summary of study findings - Compilation of the study results, capacity development activities and a recap of all recommendations provided	6 months after contract start/ homebased	<ul style="list-style-type: none"> - An executive summary and a full report of project activities are shared and presented to GIZ and relevant ASEAN stakeholder.

^a to be confirmed upon decision, schedule, and availability of the events and ASEAN Member States

Period of assignment: from **15 January** to **31 October 2026**. It includes revising inputs based on the feedback received from the relevant ASEAN stakeholders. The period of assignment is expected to be extended til Q3 2026, once the project is extended. The place of delivery is Indonesia, in consequence the bidders are requested to draft their financial offer accordingly (flights, accommodation and per-diem allowances). The place of delivery is subject to change, in which case the allowances would be revised as the payments are done against evidence.

Overview of the timeline for the activities to be implemented (subject to change):

No	Activities	Timeline							
		2025		2026					
		Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3
	Study and Guideline Development								
1	Baseline Assessment of AI-driven Energy Management Systems for Energy Efficiency in ASEAN's Industrial Sector								
2	Identification of Best Practices and Innovative Technologies								
3	Policy and Regulatory Framework Analysis								
4	Capacity Development and Stakeholder Engagement								
5	Development of a Strategic Roadmap and Implementation Recommendations								
	Capacity development and dissemination activities								
1	Capacity Development activity ^{b)}								
3	International/ Regional Workshop ^{b)}								
5	Study dissemination event ^{b)}								

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1 Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation (1.2)** with them.

^b the format and dates of capacity development activities and regional workshops are to follow according to the needs of ASEAN and/or based on the preliminary results from the study and guideline.

The tenderer is required to present and explain its approach to **steering** the measures with the project partners (1.3.1) and its contribution to the **results-based monitoring system** (1.3.2).

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 2 (Tasks to be performed) (1.4.2).

The tenderer is required to describe its contribution to knowledge management for the partner (1.5.1) and GIZ and to promote scaling-up effects (1.5.2) under **learning and innovation**.

Project management of the contractor (1.6)

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 2 (Tasks to be performed by the contractor) must be explained in detail. Bearing in mind that the contractor works in close coordination with the project staff responsible for the activity. For this purpose, regular meetings (in person and/or online) take place. The contractor provides all products and materials developed as well as received in the context of this assignment to the project for future use.

The tenderer is required to draw **up a personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert months) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

Further requirements (1.7)

The tenderer is a legal entity that must possess the following experience:

- A minimum of 5 years of consultancy experience in conducting similar works or reference projects with experience related to energy efficiency in the industrial sector together with digital technologies in the ASEAN region.

4. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

Key Expert 1: Energy Systems and Industrial (Team Leader)

Tasks of the team leader

- Detail of the tasks are defined in Chapter 2
- Overall responsibility for the advisory packages of the contractor (quality and deadlines).
- Coordinating and ensuring communication with GIZ, partners, and others involved in the project.
- Personnel management, and integrating the outputs from the other Key Experts.

- Regular reporting in accordance with deadlines.
- Lead Work Package 1 (Baseline Assessment) and Work Package 5 (Strategic Roadmap), leveraging expertise in industrial energy systems and strategic formulation.
- Analyse industrial energy consumption patterns and system-level optimisation opportunities, contributing to the baseline assessment (WP1).
- Evaluate the impacts of AI-driven EnMS on energy performance, demand-side management, and system integration, drawing on industrial context.
- Co-design and deliver capacity-building sessions for industry representatives, utilities, and energy service providers on energy systems optimisation and EnMS implementation.
- Prepare training materials and technical guidance notes based on analytical results and industrial pilot examples.
- Present study findings and technical insights (especially the strategic roadmap and industrial perspectives) during ASEAN dialogue events and dissemination workshops.
- Support synthesis of outputs into the final roadmap and knowledge products, ensuring technical accuracy, integration of industrial sector priorities, and alignment with ASEAN and APAEC objectives.
- Coordinate with ASEAN partners and GIZ on workshop planning, facilitation, and communication of technical results.

Qualifications of the team leader

- Education/training (2.1.1): Master degree in Energy Engineering, Mechanical Engineering, Sustainable Energy, or a related field.
- Language (2.1.2): C1-level language proficiency in English
- General professional experience (2.1.3): 8 years of professional experience in energy efficiency, demand-side management, and sustainable energy solutions.
- Specific professional experience (2.1.4): 6 years of experience in n industrial energy audits, energy efficiency assessments, and implementing energy-saving measures in industrial processes.
- Leadership/management experience (2.1.5): 6 years of management/leadership experience as project team leader or manager in a company
- Regional experience (2.1.6): 3 years of experience in projects in ASEAN/ Southeast Asia (region)
- Development cooperation (DC) experience (2.1.7): 5 years of experience in DC projects
- Other (2.1.8):
 - o Experience with capacity development and training outline design on digital energy solutions.

Key Expert 2: Energy Management Systems and AI

Tasks of the Key Expert 2

- Detail of the tasks are defined in Chapter 2.
- Lead Work Package 2 (Best Practices and Technologies), focusing on AI and digital solutions.
- Support Work Package 1 (Baseline Assessment) and Work Package 5 (Strategic Roadmap) with specific technical input on digitalisation and AI integration.
- Develop and deliver technical training modules on AI-driven EnMS, digitalisation, and industrial applications during regional workshops.
- Contribute to the design of training materials, case studies, and toolkits targeted at industry practitioners and technical agencies.
- Present technical insights (especially on digitalisation and AI technology) during ASEAN dialogue events and dissemination workshops.

- Contribute to the synthesis of outputs into the final roadmap and knowledge products, ensuring technical accuracy on EnMS/AI and alignment with ASEAN and APAEC objectives.
- Provide technical support to the Team Leader on workshop planning, facilitation, and communication of technical results.
- Evaluate the feasibility and impact of integrating AI and digital technologies into industrial energy systems.
- Analyse industrial energy consumption patterns and system-level optimisation opportunities.
- Evaluate the impacts of AI-driven EnMS on energy performance, demand-side management, and system integration.
- Co-design and deliver capacity-building sessions for industry representatives, utilities, and energy service providers on energy systems optimisation and EnMS implementation.
- Prepare training materials and technical guidance notes based on analytical results and pilot examples.
- Participate in regional peer-learning and dissemination events, presenting industrial perspectives and technical case studies.
- Support synthesis of results and formulation of recommendations for the regional roadmap, ensuring integration of industrial sector priorities.
- Ensure consistency of the findings with ASEAN's energy transition goals and APAEC targets.

Qualifications of the Key Expert 2

- Education/training (2.2.1): PhD degree in Energy Engineering, Mechanical Engineering, Sustainable Energy, or a related field.
- Language (2.2.2): C1-level language proficiency in English
- General professional experience (2.2.3): 10 years of professional experience in energy management
- Specific professional experience (2.2.4): 7 years of experience in digitalisation or AI applications in industrial or energy contexts.
- Regional experience (2.2.6): 3 years of experience in projects in Southeast Asia (region)
- Development cooperation (DC) experience (2.2.7): 3 years of experience in DC projects
- Other (2.2.8):
 - o Experience with capacity development and training implementation on EE topics
 - o Knowledge of financing mechanisms and business models to promote EE investments.
 - o Experience supporting EEN or similar industry cooperation platform.

Key Expert 3: Industry Policy and Governance

Tasks of the Key Expert 3

- Detail of the tasks are defined in Chapter 2
- Lead Work Package 3 (Policy and Regulatory Framework Analysis) and contribute to Work Package 5 (Roadmap).
- Assess enabling and hindering policy environments for AI and EnMS adoption.
- Identify policy and institutional gaps, and propose governance models for regional cooperation.
- Design and moderate policy-oriented training and dialogue sessions for AMS policymakers and regulators.
- Develop training materials and briefing notes translating technical findings into actionable policy insights.

- Lead coordination with ASEAN bodies to ensure study outcomes feed into regional energy policy discussions.
- Contribute to synthesis, quality assurance, and preparation of communication products (policy briefs, infographics, summary decks) for dissemination.
- Facilitate stakeholder engagement and contribute to capacity development activities under Work Package 4.

Qualifications of the Key Expert 3

- Education/training (2.3.1): University degree Public Policy, Energy Economics, Industrial Policy, Environmental Management, or a related field
- Language (2.3.2): C1-level language proficiency in English
- General professional experience (2.3.3): 7 years of professional experience in energy, industry, or climate policy development and implementation
- Specific professional experience (2.3.4): 7 years of experience in policy analysis, regulatory framework assessment, or institutional capacity development in the energy or industrial sector
- Regional experience (2.3.6): 6 years of experience in projects in Southeast Asia (region)
- Development cooperation (DC) experience (2.3.7): 3 years of experience in DC projects
- Other (2.2.8):
 - o Experience in stakeholder engagement and facilitation of policy dialogues.
 - o Demonstrated ability to integrate cross-cutting issues such as digitalisation, innovation, and sustainability in policy frameworks.
 - o Experience contributing to capacity development activities, including training design or workshop facilitation for policymakers or industry representatives

Please note that good business language skill in English (equal with C1-level in the Common European framework of reference for language) is a minimum requirement for being eligible candidates for all team leader and members to participate in the tender.

The tenderer must provide a clear overview of all proposed experts, short-term experts, and their individual qualifications.

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills
- Socio-cultural skills
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

5. Costing requirements

Assignment of personnel and travel expenses

Per-diem and overnight accommodation allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable at <https://www.bundesfinanzministerium.de>).

Accommodation costs which exceed this up to a reasonable amount and the cost of flights and other main forms of transport can be reimbursed against evidence.

All business travel must be agreed in advance by the officer responsible for the project.

Sustainability aspects for travel

GIZ would like to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

If they cannot be avoided, CO₂ emissions caused by air travel should be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

Fee days	Number of experts	Number of days per expert	Total	Comments
Key Expert 1 - Energy Systems and Industrial (Team Leader)	1	60	60	
Key Expert 2 – Energy Management Systems and AI	1	65	65	
Key Expert 3 – Industry Policy and Governance	1	45	45	
Travel expenses	Number of experts	Quantity per expert	Total	Comments
Per-diem allowance in country of assignment	3	9	27	Allowance to be calculated for Indonesia. Location subject to change to another major city in ASEAN, cost might change accordingly. If bidder is based in Jakarta, no allowance will be paid for work conducted in Jakarta. For work conducted in another country,

				payment is against evidence
Overnight allowance in country of assignment	3	9	27	Allowance to be calculated for Indonesia. Location subject to change to another major city in ASEAN, cost might change accordingly. If bidder is based in Jakarta, no allowance will be paid for work conducted in Jakarta. For work conducted in another country, payment is against evidence
Transport	Number of experts	Quantity per expert	Total	Comments
International flights	3	3	9	Round-trip travel (economy class) to the place of service delivery: Indonesia. Subject to change to another major city in ASEAN, cost might change accordingly. If bidder is based in Jakarta, no allowance will be paid for work conducted in Jakarta. For work conducted in another country, payment is against evidence
CO₂ compensation for air travel Link to working aid and table for determining the budget and Guidance for GIZ service providers on avoiding, reducing and offsetting GHG emissions on setting the budget.	9 single flights (= 3 roundtrips)	40 EUR	360	A fixed budget of EUR 80 per roundtrip per person, totalling to EUR 360 , is earmarked for settling carbon offsets. Final amount will depend on location of the bidder. Against evidence.
Travel expenses • Taxi	3	6	18	Travel within the country of assignment, transfer to/from airport and from the hotel to the venue location. Against evidence.

6. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 10 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in English (language).

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and the budgets will be contractually agreed as **maximum limits**. The specifications for pricing are defined in the price schedule.