Terms of reference (ToR) for the procurement of services: Updating local energy plan for South Sumatra and local energy planning training for South Sumatra and East Kalimantan

giz

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1. General information

a. Brief information on the project

In Indonesia, GIZ is implementing various energy projects under the umbrella of the Energy Programme Indonesia/ASEAN / Energy Transition Cluster. These projects are commissioned mainly by the German government, represented by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the German Federal Ministry for Economic Affairs and Climate Action (BMWK).

As part of the Energy Programme, with financial support from International Climate Initiative (IKI) of BMWK, GIZ leads the consortia of six organisations to implement the global project "Innovation Regions for a Just Energy Transition (IKI-JET)"[1]. The project contributes to a just transition of the energy sector in selected developing countries and emerging economies, including Indonesia, for which GIZ partners with the Indonesian Ministry for National Development Planning (BAPPENAS). The project's Indonesian component supports the local governments and other stakeholders in two coal-dependent regions (i.e., East Kalimantan and South Sumatra) to transition towards more sustainable economies fairly by achieving the following results:

- Informed social dialogue and stakeholder engagement on just energy transition in coal regions takes place in Regional Consultation Forums;
- Policy advice to improve the policy framework for just energy transition, including gender aspects, is fed into respective policy processes;
- Transformational measures to support the JET on coal regions are rolled out.

b. Context

[1] The members of the consortium comprise of Climate Action Network (CAN), International Institute for Sustainable Development (IISD), International Labour Organisation (ILO), International Trade Union Confederation (ITUC)/Just Transition Centre, and Wuppertal Institute für Klima, Umwelt, Energie gGmbH

The national and global initiatives to reduce coal usage are set to catalyse a structural transformation in the local economies of South Sumatra and East Kalimantan. As outlined in the Glasgow Climate Pact, the global community commits to scaling up clean power generation and expediting efforts to phase down unabated coal power. In alignment with this agreement, under the framework of the Just Transition Partnership (JETP), the Indonesian Government aims to phase down both on and off-grid coal power generation, achieving a 34% share of renewable energy (RE) in total power generation by 2030, while simultaneously peaking power emissions.

According to a projection from the Indonesian Ministry of Energy and Mineral Resources, the decline in coal use in the PLN system is anticipated to commence in 2031, reaching zero by 2058. Assuming all countries with net-zero pledges meet their targets, the IEA projects a significant reduction in global coal consumption—20% by 2030 and over 70% by 2050 compared to 2021 levels. This substantial reduction in coal demand, coupled with other factors such as the new capital development in East Kalimantan, infrastructure development, and industrial estate establishment in South Sumatra, will reshape the structure of the local economies in these regions.

In light of these changes, the IKI JET cooperation, supported by GIZ, is assisting the two coal regions in developing a plan for a just and sustainable economic transformation. This includes strategies to expand renewables in the local economies.

The local energy plans of the two provinces need an update due to potential shifts in the direction of future local economic development. East Kalimantan and South Sumatra enacted their local energy plans (Rencana Energi Daerah/RUED) in 2019 and 2020, respectively. These plans were created before the endorsement of the global and national coal phasedown commitments in 2021-2022 and the Indonesian Government's decision on the new capital development in East Kalimantan through Law 3/2022. Additionally, the South Sumatra local energy plan does not account for the impacts of national strategic projects in the form of infrastructure and industrial estate developments.

The change in structural direction will influence assumptions in the projection of future energy demand and services. An update to the energy demand projection necessitates a review of the energy supply projection, providing an opportunity to reassess the technical and economic potential of renewable energy resources in the two regions.

c. Objective
   The objective of the assignment is to support South Sumatra Province Government in updating its local energy plan and improving the competence of the local government officers in East Kalimantan and South Sumatra for energy planning.

d. GIZ shall hire the contractor for the anticipated contract term, from **December 2023** to **28 June 2024**

e. The contractor shall provide the following service:

   Review and update local energy plan of **South Sumatra**.

   The report should be in English (25-40 pages) excluding annexes.

   The report's details should contain the following information, - any change or development of the outline report can be made based on the consultant inputs and

should be discussed with the project through the regional economic transformation advisor.

- Executive summary (between 3-6 pages) containing the background and scope of the study, the methodology and timeline, the main findings and recommendations.
- The methodology, elaborating the approaches in data collection, processing, and analysis including the spatially explicit economic potential of renewable resources and the projection of energy demand and supply. Also, it must describe the stepwise of the process and the timeline.
- The main parts:
    - **Summary the existing plans** (i.e., the local energy plan/RUED and the PLN's business plan/RUPTL relevant to South Sumatra):
        - The status and projection of energy demand and supply: data, sources, and methodologies (e.g., for surveys and projections)
        - Renewable energy resource assessment (the sources of data and assessment methodology of renewable energy resources employed in the the plan)
    - Assessment of **the status of energy consumption, supply, access and efficiency** in South Sumatra:
        - Existing energy consumption (2015-2022):
            - By consumer categories: household, industrial, commercial, others.
            - By energy services, covering, for example, industrial machinaries, transport, cooking, lighting, air conditioner, refrigerator/chilling, electronics, washing, water pump.
            - By energy forms, covering direct uses of electricity, oil fuels, LPG, CNG, biogas, coal, biomas, others.
            - By primary energy resources, covering the total use of coal, crude oil, natural gas, hydro, geothermal, biogas, biomass, biofuel, solar, wind, others.
        - Existing energy supply (2015-2022):
            - By regions: domestically in South Sumatra, import from other regions.
            - By energy technologies, covering, for example, combustion, geothermal system, hydro system, gasification, digestion, photovoltaic, others.
            - By energy forms: electricity, oil fuels, LPG, CNG.
            - By primary energy resources: coal, crude oil, natural gas, hydro, geothermal, biogas, biomass, biofuel, solar, wind, others.
        - Energy access and efficiency (2015-2022)
            - Existing policies and measures implemented in the region
            - Assessment of energy access (electrication ratio, consumption per capita)
            - Assessment of energy intensity (total energy consumption per unit of provincial GDP)
    - Assessment of **spatially explicit energy resources** in South Sumatra:
        - **Renewables**: technical **and** economical potentials of renewable energy resources, covering solar, hydro, biogas, biomas, geothermal, wind (optional).
        - **Fossils**: fossil energy resources and "clean" technology options.
    - **Projection and transition analysis**:

- Assessment of potential changes in the local economy, population, technologies, infrastructure, and preferred policies of the energy sector and other relevant sectros and their impacts to the future energy demand/services and supply[2].
- Identification of potential energy transition scenarios and impacts (consequences, actors, and indicators) according to the stakeholders' preferences.
- Projection of energy demand and supply 2023-2045.
    - Energy demand projection: by primary energy sources and by consumer categories/energy services.
    - Energy supply projection: by
- Evalaute and select energy transition scenario by appraising potential impacts of the transition scenarios based on the approved indicators (quantification of the consequences and identification of actors enjoy or suffer from them)

▪ **Road map** towards the preferfed scenario: Proposal of stage-wise program, policy, and investment plan (including required supporting policies at the national level) to realise the preferred scenario and to help all affected actors, particularly the vulnerables ones, in improving their wellbeing in the transition.

- Conclusion and recommendations: the main findings, the limitations, and recommendation of the next steps for revising the RUED by using the result of this study.
- Annexes
    - List of references
    - Detailed tables of energy demand supply and their projections.
    - Maps of spatially explicit renewable energy potentials.

The methodology of the study shall include desk study, interview with experts and other forms of consultations, including group discussions.

Energy planning training for East Kalimantan and South Sumatra

The contractor shall conduct energy planning training for the local government officers, especially Bappeda and the energy agency, in the two regions . The training should be completed within a span of 3-5 days to improve the knowledge and skill of the participants on the following topics:

- Projection of energy demand and supply;
- Just transition in scenario planning.
- Assessment of spatially explicit technical and economical potential of renewable energy resources (optional).

The contractor shall prepare the documentation of the training consisting of participants, target competencies and pre-post assessment to measure the immediate impacts of the training.

During the assignment, the contractor shall:

- Manage costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ.

[2] The contractor may receive input from another consultant working on the economic diversification study about the potential changes in the local economy and population. As for the prerefed policies, the contractor shall assess them through consultation with the stakeholders.

- Work in close coordination with the GIZ team

At the end of the assignment the contractor shall have provided the following **deliverables**:
- The final version of the energy plan update for South Sumatra.
- The training documentation.

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

Milestone	**Deadline**
Kick-off meeting: agreed work plan and timeframe concept	December 2023
Inception report containing summaries of the preliminary findings, including draft scenarios and impact indicators.	March 2024
Training on energy planning is delivered	April 2024
Presentation of the final version of the energy plan update	May 2024
The final version of the deliverables are submitted	June 2024

To meet the milestones, GIZ commits to review documents within 7 working days.

2. Tender requirements

2.1. Qualifications of proposed staff

Lead expert
- Education: university degree (Phd/German 'Diplom'/Master) in energy system, energy planning/modelling or other relevant fields .
- Language: B2-level language proficiency in English.
- General professional experience: 7 years of professional experience in energy system planning including renewable energy resource assessment.
- Leadership/management experience: 1 year of management/leadership experience as project team leader or manager in organisations.
- Regional experience : 1 year of experience in projects advising local governments South Sumatra on energy-related topics.

Spatial analyst
- Education: university degree (bachelor) in geography or other relevant fields .
- Language: B2-level language proficiency in English.
- General professional experience: 7 years of professional experience in spatial analysis.
- Regional experience : 4 year of experience in projects advising local governments in South Sumatra on involving spatial analysis.

2.2. Appropriateness of proposed concept

In the tender, the tenderer is required to show how the objectives defined in General Information sub-chapterd c-e are to be achieved, if applicable under consideration of further method-related requirements.

Strategy: presents and justifies the explicit strategy with which it intends to provide the services and produce the deliverables.

Processes: The tenderer is required to describe the key **processes** for the services for which it is responsible and create a **work plan** that describes how the services according to Chapter 1 c-e.

2.3. Specification of inputs

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.

The market for carbon credits is made up of a large number of providers, each with different claims as to their climate impact. The Development and Climate Alliance has published a list of standards. GIZ recommends using the standards specified there.

Fee days	**Number of experts**	**Number of days per expert**	**Comments**
• Lead expert	**1**	**60**	
• Spatial analyst	**1**	**22**	
Travel expenses	**Number of experts**	**Number of days/nights per experts**	**Comments**
• Per-diem allowance in country of assignment	**1**	**15**	The priority is for the lead expert
• Overnight allowance in country of assignment	**1**	**16**	
• Travel costs (car rental)	**1**	**5**	
Flights	**Number of experts**	**Number of flights per experts**	**Comments**
• Domestic flights	**1**	2	Return flight
• CO_2 compensation for air travel • *Guidance for GIZ service providers on avoiding, reducing and offsetting GHG emissions (giz.de)*	**1**	**2**	A budget is earmarked for settling carbon offsets against evidence.
Other costs	**Number of experts**	**Amount per experts**	**Comments**
Material	2	2	packages

Calculate your financial bid exactly *in line with the quantitative requirements of the specification of inputs above. There is no contractual right to use up the full days/travel or workshops or budgets. The number of days/travel/workshops and the budgets will be contractually agreed as* ***maximum amounts****. The regulations on pricing are contained in the price schedule.*

4 Requirements on the format of the tender

The CV submitted for the expert can have a maximum of four pages. The **concept** should not exceed **five pages**. 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.

Note:
GIZ Indonesia and ASEAN have been granted by the Government of Indonesia to have **VAT Exemption** for all transactions which occur in Indonesia. If you (the tenderer) are an Indonesian entity with an Indonesian tax number and have the tax status to collect Indonesian VAT, GIZ will process all invoices with VAT exemption and not VAT restitution. Please bear this in mind when you are participating in our tender.