

# Streamlining Government of Indonesia Plans as a Pathway to Achieve Net Zero Emissions Target



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# 1 Background

## I. Southeast Asia Energy Transition Partnership

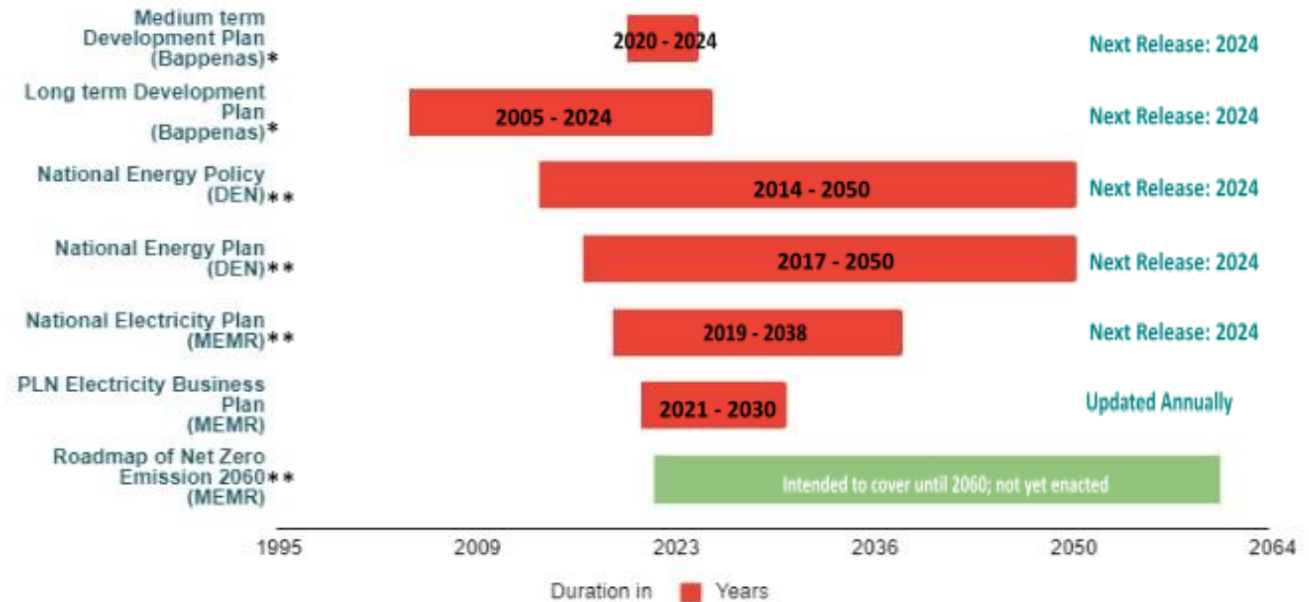
1. The Southeast Asia Energy Transition Partnership (ETP), is a five-year, multi-stakeholder platform that aims to accelerate the energy transition in Southeast Asia towards 2025. ETP program delivery is expected to contribute to the achievement of the UN's Sustainable Development Goals (SDGs) and the 2030 Paris climate goals by bringing together the Governments, Development Partners, and Philanthropies.
2. ETP aims to empower its partner countries towards an energy system that ensures environmental sustainability, economic growth, and energy security. To achieve this goal, ETP will mobilize and coordinate the necessary technical and financial resources to create an enabling environment and address impediments to renewable energy (RE), energy efficiency (EE), and sustainable infrastructures in the region.
3. ETP also aims to deliver joint action, improved coordination, and dialogue to accelerate the energy transition in the region through its four pillars, e.g., aligning policy with climate commitments, de-risking RE and EE investments, expanding sustainable and resilient infrastructures, and knowledge and capacity development.
4. ETP Members have come together to fund ETP to (1) support an improved delivery environment to accelerate the energy transition in Southeast Asia, (2) improve coordination between other relevant initiatives, including capital investments and technical assistance, and (3) to promote communication and knowledge sharing on energy transition among stakeholders in the region.
5. ETP is initially focusing on Indonesia, the Philippines and Vietnam, which are the countries in the region with the highest energy demand, a substantial pipeline for fossil fuel-based projects, and significant and cost-effective potential for renewable energy and energy efficiency. ETP provides High-Level Technical Advisory Support, Holistic Support to Governments on financing and technical needs, capacity and skill development, and facilitation of dialogues in all related areas.

## II. Project Background

6. In ensuring the delivery of national development plan objectives throughout the country, the Government of Indonesia (GOI) enacted the National Development Planning Law Number 25 Year 2004. The law provides the legal basis for the Long-term National Development Plan (RPJP) and the Mid-term National Development Plan (RPJM). These plans have 20 year and 5 year planning horizons respectively. Both plans are overseen by Bappenas and need to be referred to by the local governments in the preparation of the local plans to ensure alignment of plans between central and local entities..

7. Within the energy sector, the 2007 Energy Law and 2009 Electricity Law mandate the government to establish various plans which have various means of interaction. These are :
  - a. National Energy Policy (KEN),
  - b. National Energy Plan (RUEN),
  - c. National Electricity Plan (RUKN), and
  - d. Electricity Business Plan (RUPTL).
  
8. KEN, the National Energy Policy, must be referred to by RUEN, the National Energy Plan. The responsibility for the development and oversight of these documents is with the National Energy Council (DEN) and includes the target to reach 23% of Renewable Energy (RE) shares in the Total Primary Energy Supply (TPES) by 2025. The RUKN and RUPTL development responsibility lay with the MEMR, and must be developed to align and be congruent with both the RUEN and KEN
  
9. Referring to the energy sector plans, the GOI submitted its updated National Determined Contribution (NDC) in the 2021 COP26 meeting, emphasizing the commitment to reduce greenhouse gas (GHG) emissions 29% (unconditionally) or 41% (conditional) below the business-as-usual scenario by 2030 to meet the Paris Agreement objective. Along with the updated NDC, the GOI through the Ministry of Energy and Mineral Resources (MEMR) also announced the Roadmap targeting the Net Zero Emission (NZE) by 2060 (or earlier with international support), with a focus on the reduction of power plant emission by retiring the coal-fired power plants (CFPP) and increasing the utilization of RE power plant.
  
10. The map below shows that due to the time horizon of each plan and the challenges in reaching the Paris Agreement target, the GOI needs to review and prepare updated plans within the next two years to coincide with the incumbent government of 2024/2025.
  
11. In addition to the aforementioned plans, there exists a plethora of past and current support from various development partners including, USAID, GIZ, GGGI, etc. The support has been received by multiple different government agencies and targeted varying sectors. At present there is no overarching strategy to bring coherence and alignment to such development partner activities.

## 2022 Mapping of Indonesia Government Energy Related Plan



\*supporting development partners: the United States Agency for International Development (USAID), the Clean Affordable Secure Energy (CASE), Global Green Growth Institute (GGGI), World Resources Institute (WRI)

\*\*supporting development partners: USAID, CASE, International Energy Agency (IEA), Denmark

- Based on discussions with the MEMR and DEN technical teams responsible for preparing the energy model of Roadmap to NZE 2060, KEN/RUEN and RUKN, the unaligned plans lead to different results while the plans also need to have background studies taking inputs from the programs that GOI planned as the main drivers to change the future of the energy supply and demand scenario. Such programs include solar PV development integrated with its supply chain, electric vehicle development embedded with the battery industry and energy efficiency measures. Hence, MEMR and DEN have requested that ETP provide technical assistance in reviewing existing energy sector plans and development partner assistance with the objective to streamlining the processes. Such a technical assistance would provide technical recommendations for enhancing the processes, as well as be supported by a capacity-building program so the processes can be self-sustained going forward.

## 2 Project Details

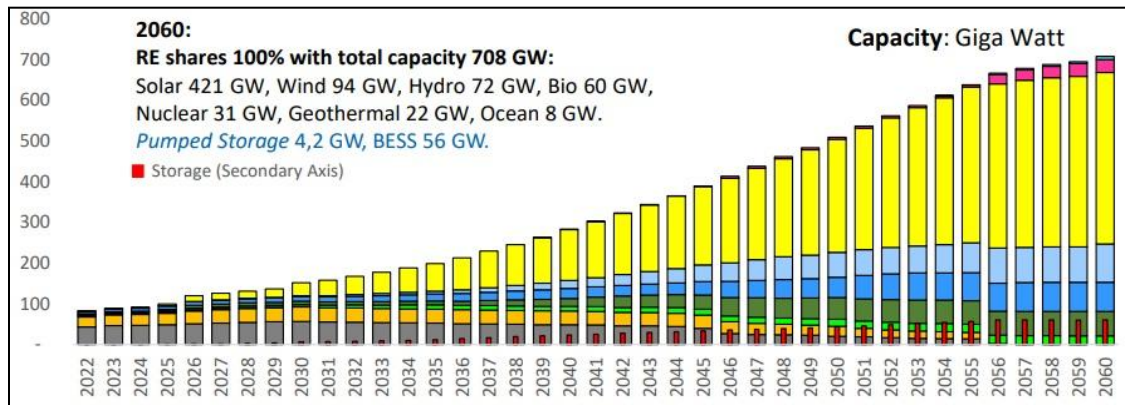
### III. Rationale for the Project

- The Government of Indonesia (GOI) has multiple roadmaps and plans for achieving emissions reductions. Each roadmap is built on different divergent assumptions and unaligned targets. This results in uncertainty and a lack of clear direction for project developers, financiers and other stakeholders. It also prevents the development of the physical infrastructure needed to progress with the energy transition. To assess these discrepancies and to drive at streamlining of these plans, ETP will work with the

stakeholders, ensuring alignment and cohesion among the plans, thus creating the foundations for attracting finance and investment.

14. The Roadmap to NZE 2060 (Graph 1) indicates ramping up the use of RE power plants starting from 2026 by adding up to around 14 GW solar PV, and from 2030 onwards, adding only RE power plants up to a total of 708 GW by 2060. The Roadmap to NZE 2060 also looks at the retirement of CFFP with proposed retirement of 1.1 GW in 2031, 30 GW in 2046, and 60 GW in 2060<sup>1</sup> based on lifetime estimates and PPA contract tenures.

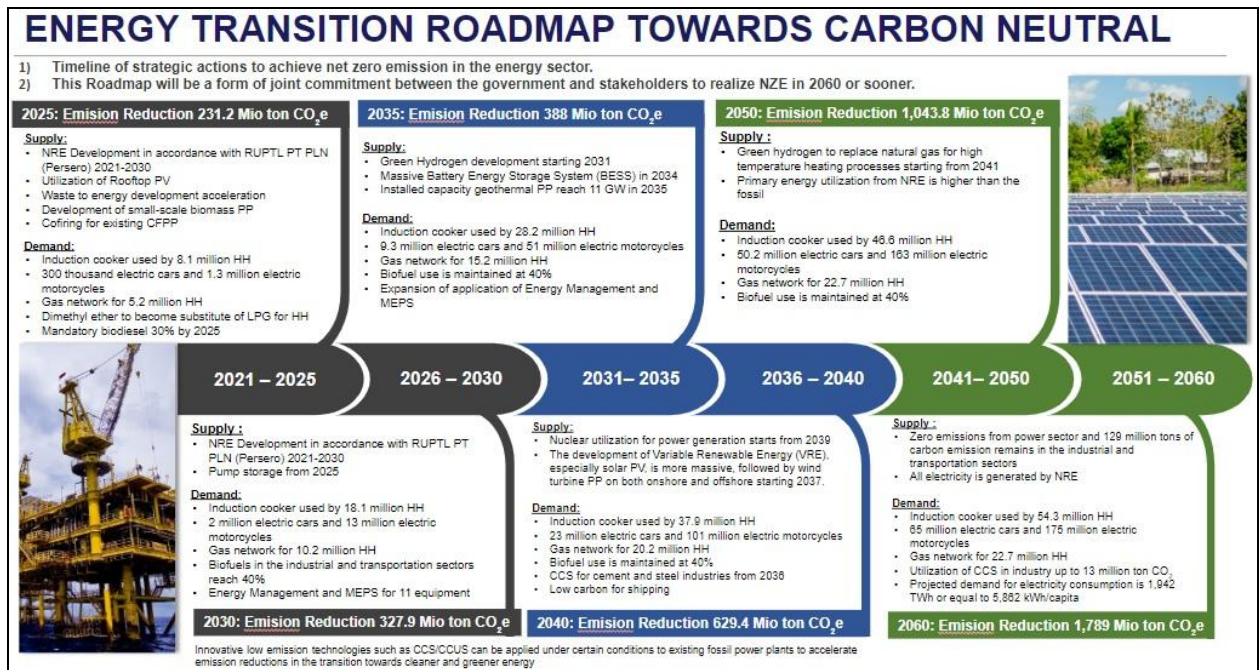
**Graph 1. Roadmap NZE 2060**



15. To reach these targets, in parallel, MEMR set out a five-year plan focusing on the program that will increase the uptake of RE and supporting energy efficiency (EE) measures., These plans include solar PV development and other RE power plants, electric vehicles use, switching LPG stove to induction stoves, etc. However, those programs are indicative only and without firm strategies. Therefore the assumptions for energy supply and demand forecasting model needs to be reviewed through careful assessment and policy alignment.

<sup>1</sup> Presented by DGE-MEMR at the 1st Meeting of Study Financial Implication on Early CFFP Retirement, 1 August 2022





**Image 1: Roadmap to Net-Zero Emissions (see Annex 1)**

16. In addition to the Roadmap to NZE 2060, there are two other government agencies preparing planning documents related to the energy transition: (1) The Low Carbon Development Initiative (LCDI) 2045 prepared by Bappenas, and (2) The Long Term Strategy-Low Carbon and Climate Resilience (LTS-LCCR) 2050 prepared by Ministry of Environment and Forestry (MOEF).
17. Bappenas LCDI 2045 targets RE penetration 30% in 2045, MOEF LTS-LCCR targets 32% RE in energy mix in 2050, and Roadmap to NZE 2060 targets 66% RE power plant in 2040. These plans are not formalized into a regulation, leading to concerns over their implementation and thus hampering the government's energy transition by incoherence of its sector plans with these divergent targets.

#### IV. Objectives of the Project

18. This project will assess the existing government plans guiding the energy transition, its challenges and opportunity, establish the streamlined approach to align the plans with climate commitment, providing related background studies on priority program, develop the communications strategy to build trust and consensus from the government and stakeholders, and prepare the mitigation measures to address the potential impediments of its implementation activities.
19. The project will provide a comprehensive methodology to reviewing the current government plans (related to energy transition) and propose a streamlined approach. The work will be complemented by priority background studies and result in deliverables that can be applied

by the GOI, as well as providing capacity building to ensure the sustainability of the outputs into the future.

## V. Deliverables under the Project

20. This assignment will include, but not be limited to, the following tasks:

**Inception Report:** The consultant prepares a detailed inception report detailing the project plans, ensuring the expectations of ETP are aligned with the understanding of the project from the consultant. The inception report should contain, as a minimum:

- a. Introduction and project background
- b. Scope of Services
- c. Methodology and Workplan, including approach, methodology and project gantt chart
- d. A detailed approach as to how each deliverable will be met and what each submission will contain
- e. Mapping of key stakeholders including outreach and communications plan
- f. A donor coordination strategy
- g. Project management inclusive of organizational chart detailing key personnel, their roles and responsibilities, as well as their locations (strong in country team and project management is expected)
- h. Risks, mitigations and assumptions
- i. Monitoring and Evaluation Framework, presented in the form of the ETP Results Based Monitoring Framework (RBMF) (see Section XI).

21. **Task 1: Conduct a stocktake assessment to identify all existing government plans guiding the energy transition programs**, the tools being used, the interaction processes, the progress implementation, the impediments and the strategies to ensure the program achievement within the timelines. Task 1 will also Identify the past and current support received by the government from development partners, assessing the methodology/approach used, and how the results are being utilized by the government so that it can determine further activity to be covered by this project.

**Task 2: Develop the communication and a donor coordination strategy to be implemented throughout the project.** There are multiple donors offering varying levels of support to the various plans. Therefore engagement and open dialogue and strategy development must involve both government and development partner stakeholders. A preliminary engagement strategy will be presented in the Inception Report. This task builds on this, giving a detailed breakdown of engagement strategies including a series of meetings with the government and development partner stakeholders. Communications will be through various platforms (in English and Bahasa) to build the engagement, the ownership, and the trust from the government and the integration of this work with ongoing activities with other development partners. Consultant engagement in existing Technical Working Groups, as well setting up project specific TWGs, will be required as well as presenting to various stakeholders upon the request of ETP. The engagement will continue beyond Task 5,



ensuring the necessary stakeholders are well equipped to continue project outputs and embed within their processes.

22. **Task 3: Assess and identify the projects and pathways planned by the government and how these projects will support reaching Roadmap to NZE 2060, highlighting policy and planning gaps in the attainment of the Roadmap to NZE.** In line with the Roadmap to NZE 2060, the government set out a five-year priority program (para 15) but the contained projects e.g. solar PV installation, EV development, electric stove, etc, are based on assumptions that could lead to NZE, but are not coherent with sector-wide plans. In this task, the consultant is expected to produce a background study on the RNZE 2060 to support the revise of KEN, assessing:
  - a. Assumptions made and policy and planning gaps as detailed in para 16
  - b. Recommendations and required next steps to bring the multiple plans inline with KEN
23. **Task 4: Prepare a literature review on emerging technologies proposed by the Government of Indonesia's long term planning, such as hydrogen, ammonia, nuclear and CCS.** The review should assess broadly the techno-economic feasibility of the technologies, possible market trends, and attempt to quantify the likelihood of the technologies reaching maturity in a timely fashion. The technologies should be assessed against the perspective of achieving decarbonisation and achieving net-zero goals.
24. **Task 5: Provide a streamlined approach/methodology that can ensure the coherence of government plans to pursue alignment with the climate commitment.** This will require a comprehensive understanding of the government planning process and regulatory framework so it will foresee the challenges and opportunities ahead. This task will involve an analysis of all current short, mid and long term plans used across the energy sector by the various government agencies, and seek a methodology to streamline the processes, leading to coherency in the planning process. Recommendations are to be made as to where donor support is most beneficial, and to ensure the alignment of such donor activity across the various planning processes and government agencies.
25. **Task 6: Communications and Stakeholder Engagement.** This Task tracks Task 2, and requires the consultant to periodically update the Communications Plan and report on communications and engagement activities through the sharing of minutes of meeting, powerpoints, summary reports and other forms of documentation. The consultant should also manage a knowledge library on the ETP website under the TWG(s), in order that information can be retrieved from stakeholders as and when required.
26. **Task 7: Capacity Building Program:** To support the government (officers) in following the analytic process, the consultant is required to provide the training program for the government and related stakeholders so it can develop the understanding of the analysis activities that are conducted throughout the project. The proposal should contain provision for 4 two-day workshops. The exact scope and duration of the training, however, will be determined in consultation with the various government stakeholders.

## VI. Beneficiaries and Impact

27. Dewan Energi Nasional-DEN (National Energy Council), is the 1st main beneficiary, as this study/project will assist DEN to provide appropriate guidance in the process of reviewing and revising National Energy Policy (KEN) and National Energy Plan (RUEN).
28. Ministry of Energy and Mineral Resources (MEMR), is the 2nd main beneficiary, as this study/project will assist MEMR to provide appropriate guidance in the process of reviewing and monitoring the preparation of National Electricity Plan (RUKN) dan the Roadmap of Net Zero Emission (Roadmap to NZE) 2060.
29. The Ministry of National Development Planning (Bappenas), is the 3rd main beneficiary, as this study/project will assist Bappenas to provide appropriate guidance in the process of reviewing and revising the National Medium and Long-term Development Plan (RPJM and RPJP).
30. Local governments will use the result of central government plans as the reference to prepare the regional plans on energy and electricity.
31. State-owned Electricity Company (PLN), will use the result of central government plans to determine the electricity business plan (RUPTL) in achieving the government objectives on electricity sector
32. Business entities in the energy sectors (e.g. IPP) as the implementing actor in the energy sector, will use the study as a basis to design business investment on renewable energy and energy conservation

## VII. Existing Support and Programs

33. **USAID** currently provides support for developing the background study and modeling work of Low Carbon Development Initiative (LCDI) 2045 in Bappenas. USAID also facilitated MEMR in disseminating the National Electricity Plan (RUKN) draft to the stakeholders. In the past, USAID provided capacity building for DEN and local governments in preparing the regional energy plan (RUED).
34. **CASE** currently provides support for developing the background study and modeling work of Low Carbon Development Initiative (LCDI) 2045 in Bappenas.
35. **Denmark**, currently provides technical assistance support for MEMR in developing the RUKN model and leads the Technical Working Group on long term planning under FIRE Dialogue. In the past, Denmark provided a capacity building program for DEN on modeling work.
36. **IEA**, currently the counterpart of the MEMR team in developing the Roadmap to NZE 2060 and active in enhancing the MEMR energy statistics and data reliability.
37. **GGGI**, currently provides support for developing the background study of RPJM and RPJP in Bappenas.

38. **World Resource Institute**, currently provides support for developing the background study of RPJM and RPJP in Bappenas.
39. **UK-Mentari**, currently provides support for MEMR in developing the Roadmap to NZE 2060

## VIII. Sustainability & Gender Diversity

40. The Project is committed to the promotion, enhancement and development of gender sensitivity of its implementation activities. For cause-oriented groups, the Project shall be inclusive of the invited stakeholders during the consultation, more particularly women's groups. The Project shall also seek gender balance among the officials designated into the working groups. Emphasis shall be given to policy measures that shall not discriminate or marginalise any personalities and groups based on gender.

# 3 Implementation and Timeline

## IX. Implementation Arrangement

41. The consultant team is expected to have a strong in-country presence throughout the project implementation. Whilst it is understood overseas consultants will work on this project, the consultants team must have permanent representation in Indonesia throughout the project and be able to attend in-person stakeholder consultations and meetings. Ideally the Project Team Lead will be based in Jakarta.
42. The consultant team will be required to have a strong background and understanding of the Indonesian government's planning process and management. Additionally, the consultant should have an in-depth knowledge of global best practices in this area.
43. The consultant will also need to have the expertise on energy and economic data and modeling so as to be an active and knowledgeable counterpart for the government in developing the energy supply and demand forecasting, including to deliver the prioritized background studies to complement the plans.
44. The consultant is required to have technical expertise particularly in the areas of renewable energy generation, integration and smart grids in order that support can be given to the government in prioritizing a low carbon energy system.
45. The consultant is expected to have the experience in legal review and regulatory framework preparation of government policies. This will improve the alignment of existing regulations with the regulatory framework that will be prepared by the government to ensure the policies implementation.
46. The consultant is expected to be able to engage with relevant government agencies and other stakeholders to build the trust and provide the right communication strategy to promote public acceptance and to drive investment, yet, accelerating the achievement of energy transition objectives.

47. The procurement method of Request for Proposals (RFP) will be employed. This RFP will be published on the UN Global Marketplace website (UNGM) for a duration of 21 days, upon which an evaluation panel, including the required expertise, will review and select the related bids. After internal approval by the UNOPS contracts committee, the result of this process will be a contract for services to the selected bidder.

## X. Deliverables and Reporting Timeline

48. The outputs of the Tasks as detailed in paragraph 22 will be reported to ETP in the following formats:

**Inception Report:** The Inception Report needs to be delivered 1 month after contract signing.

**Milestone Report 1:** The first milestone report needs to be delivered after 2 months of contract signing and provides a narrative summary of the project progress to date, demonstrates completion of Tasks 1 and 2, and updates as to the status of the other Tasks.

- A summary, providing a narrative of the project progress to date, highlighting key achievements, challenges and next steps.
- Outputs from Task 1 and 2, as stand alone reports, attached as Annex.
- Update of the work plan and the Results Based Monitoring Framework (gender disaggregated).

**Milestone Report 2:** The second milestone report provides a narrative summary of the project progress to date, demonstrates completion of Tasks 3 and 4, and updates as to the status of the other Tasks.

- A summary, providing a narrative of the project progress to date, highlighting key achievements, challenges and next steps.
- Outputs from Task 3 and 4, as stand alone reports, attached as Annex
- Update of the work plan and the Results Based Monitoring Framework (gender disaggregated).

**Milestone Report 3:** The third milestone report provides a narrative summary of the project progress to date, demonstrates completion of Task 5, and updates as to the status of Tasks 6 and 7.

- A summary, providing a narrative of the project progress to date, highlighting key achievements, challenges and next steps.
- Outputs from Task 5, as a stand alone report, attached as an Annex
- Update of the work plan and the Results Based Monitoring Framework (gender disaggregated).

**Final Report:** The final report summarizes the whole project, integrating a narrative of the deliverables. This report details the key activities and outputs from each task. The report will be presented as a professional and publishable document that may

be widely disseminated. It includes a finalized version of the Results Based Monitoring Framework (gender disaggregated).

49. All reports will be first submitted in English. Final versions of each report will be required in English and Bahasa. Each deliverable will be submitted both in report format and with a catchy powerpoint.

50. Table 1 shows the anticipated timeline for the project. The actual project timeline will be presented from the consultant and agreed upon in the Inception Report

**Table 1. Proposed timeline for project activities**

Activities	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	M 13	M 14	M 15
<b>Inception report</b>	■														
<b>Milestone Report 1</b>		■													
Task 1: Stocktake and donor mapping	■	■													
Task 2: Comms Strategy	■	■													
<b>Milestone Report 2</b>					■										
Task 3: Background study on priority programs		■	■	■	■										
Task 4: Emerging technology review		■	■	■	■										
Task 5: Streamline strategy		■	■	■	■	■	■	■	■						
<b>Milestone Report 3</b>									■						
Task 6: Communication and Stakeholder Engagement	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Task 7: Capacity building										■	■				
<b>Final Report</b>														■	■



### XIII. Result-based Monitoring Framework

ETP Outcome	Project Output(s)	Indicator	Target	Data Source and Means of Verification
<b>Strategic Outcome 1. Strengthened RE and EE policy enabling environment</b>				
<b>Presence of an effective National-plan that is coherent among energy sector institutions for implementation by agency/institution</b>	Output 1: Streamlined approach/methodology that can ensure the coherence of government plans to achieve climate commitments	Indicator 1.1: # of existing energy transition related government plans reviewed  Indicator 1.2: # of policy recommendations  Indicator 1.3: # of methodologies proposed	Indicator 1.1: 5  Indicator 1.2: 35  Indicator 1.3: 1	Reports to be delivered as part of this project
<b>Improved dialogue among government ministries and departments for a coordinated response to Energy Transition</b>	Output 2: Review and establish project relevant technical working groups (TWG)	Indicator 2.1: # of technical working groups established  Indicator 2.2: # of TWG or coordination meetings	Indicator 2.1: 1  Indicator 2.2: 10	Reports to be delivered as part of this project  Minutes of the TWG to be submitted to ETP
<b>Strategic Outcome 4. Increased development of and accessibility to RE/EE knowledge</b>				
<b>Number of studies, research, new evidence gathered and published, for raising awareness, improving knowledge base, driving decisions, and dissemination</b>	Output 3: Publishable literature review on emerging technologies.	Indicator 3.1: # of publications	Indicator 3.1: 1	Reports to be delivered as part of this project  Literature review published on the ETP website
<b>Number of trainings, knowledge sharing events, and/or awareness workshops organized at national and regional levels building institutional capacity and knowledge networks</b>	Output 4: Communications and donor engagement strategy  Output 5: Develop and deliver a bespoke and relevant capacity building program	Indicator 4.1: # of methodologies proposed  Indicator 5.1: # of capacity building/training programs developed and delivered  Indicator 5.2: # of people trained (gender disaggregated)	Indicator 4.1: 1  Indicator 5.1: 1  Indicator 5.2: 100	Reports to be delivered as part of this project  Communications strategy shared with ETP  Delivery of training program and relevant training materials  Training participants list