



Technical Assistance Subproject Report

Project Number: 46380-023
Knowledge and Support Technical Assistance (C-KSTA)
March 2018

Republic of Indonesia: Sustainable Infrastructure Assistance Program

(Financed by the Government of Australia)

Subproject 14: Indonesia Energy Sector Assessment and Priorities, 2020–2024

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 21 March 2018)

| | | |
|---------------|---|-------------|
| Currency unit | – | Rupiah (Rp) |
| Rp1.00 | = | \$0.000073 |
| \$1.00 | = | Rp13,760 |

ABBREVIATIONS

| | | |
|---------|---|---|
| ADB | – | Asian Development Bank |
| DEN | – | Dewan Energi Nasional (National Energy Council) |
| PLN | – | Perusahaan Listrik Negara (State Electricity Corporation) |
| RPJMN | – | Rencana Pembangunan Jangka Menengah Nasional (National Medium-Term Development Plan) |
| RPJMN15 | – | RPJMN 2015–2019 |
| RPJMN20 | – | RPJMN 2020–2024 |
| SIAP | – | Sustainable Infrastructure Assistance Program |
| TA | – | technical assistance |

NOTES

In this report, "\$" refers to United States dollars.

| | |
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KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

| | | |
|--|--|---|
| 1. Basic Data | | Project Number: 46380-023 |
| Project Name | Sustainable Infrastructure Assistance Program - Indonesia Energy Sector Assessment and Priorities 2020–2024 (Subproject 14) | Department/Division SERD/SEEN |
| Nature of Activity | Policy Advice | Executing Agency National Development Planning Agency (BAPPENAS) |
| Modality | Subproject | |
| Country | Indonesia | |
| 2. Sector | Subsector(s) | Financing (\$ million) |
| Energy | Energy sector development and institutional reform | 1.00 |
| | Total | 1.00 |
| 3. Strategic Agenda | Subcomponents | Climate Change Information |
| Inclusive economic growth (IEG) Environmentally sustainable growth (ESG) | Pillar 1: Economic opportunities, including jobs, created and expanded Eco-efficiency | Climate Change impact on the Project Low |
| 4. Drivers of Change | Components | Gender Equity and Mainstreaming |
| Governance and capacity development (GCD) Knowledge solutions (KNS) Partnerships (PAR) | Institutional development Institutional systems and political economy Organizational development Knowledge sharing activities Bilateral institutions (not client government) Implementation International finance institutions (IFI) Official cofinancing Conducive policy and institutional environment | Some gender elements (SGE) ✓ |
| 5. Poverty and SDG Targeting | | Location Impact |
| Geographic Targeting Household Targeting SDG Targeting SDG Goals | No No Yes SDG7 | Not Applicable |
| 6. Risk Categorization | Risk Categorization does not apply | |
| 7. Safeguard Categorization | Safeguard Policy Statement does not apply | |
| 8. Financing | | |
| Modality and Sources | | Amount (\$ million) |
| ADB | | 0.00 |
| None | | 0.00 |
| Cofinancing | | 1.00 |
| Government of Australia (Full ADB Administration) | | 1.00 |
| Counterpart | | 0.00 |
| None | | 0.00 |
| Total | | 1.00 |

KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

I. THE TECHNICAL ASSISTANCE SUBPROJECT

A. Overall Progress of the TA cluster

1. The Technical Assistance Cluster (C–TA) for Sustainable Infrastructure Assistance Program (SIAP) is financed by the Government of Australia through the Department of Foreign Affairs and Trade and administered by Asian Development Bank (ADB). SIAP was approved on 17 June 2013 and is due to close on 30 June 2019. As of 19 January 2018, total commitments are \$11,108,237 (75% of total approvals against time elapsed of 75%), and disbursements are \$7,306,652 (66% of commitments). Fifteen subprojects have been approved. Three of these are now closed. Two other subprojects were endorsed by the SIAP Steering Committee on 13 June 2017. This technical assistance proposal is one of those subprojects. Two additional subprojects, which includes this technical assistance proposal, were endorsed by the SIAP Steering Committee on 13 June 2017. The SIAP Steering Committee also approved additional financing for two existing subprojects for a total value of \$2.435 million. SIAP is on track to meet its outcome and outputs. SIAP has contributed to the preparation and implementation of approved projects and programs of more than \$5 billion. As of 19 January 2018, C–TA 0013–INO: SIAP has an available balance of \$3,045,777, including the ADB management fee and foreign exchange reservations.

B. Subproject Outcome

2. The TA subproject will have the following outcome: priorities and strategies for a sustainable, affordable, and secure energy sector are included in the National Medium-Term Development Plan 2020–2024 (RPJMN20).

3. The TA subproject is consistent with the Indonesia country partnership strategy 2016–2019 priority of improved infrastructure service. It directly responds to the sub-priority areas of clean energy, reforms to accelerate investment and growth, and policy and institutional reform. It also addresses the cross-cutting area of climate change and environment focus on sustainable infrastructure.

4. The TA subproject responds to the country partnership strategy's Indonesia Country Knowledge Plan 2016–2019, which guides ADB's engagement in the preparation and provision of knowledge products and services to Indonesia. The TA subproject also responds to a government request and is timed to coincide with the preparation of the government's RPJMN20. It is based on the ADB's ongoing policy-based lending in the energy-sector under the Sustainable and Inclusive Energy Program and the lessons-learned from the ongoing investment lending operations in the electricity and gas sectors maximize operational knowledge.

5. The TA subproject will contribute to the outcome of the overall TA cluster to improve project readiness and development of a set of bankable projects in the energy services sector by supporting the government in refining its medium-term strategy for energy infrastructure and identifying key bottlenecks for private sector investment in energy infrastructure delivery until 2024.

C. Subproject Outputs, Methods, and Activities

6. The TA subproject will provide support to the drafting of the RPJMN20 and link it to the objectives and guiding principles of the National Energy Policy, the General Energy Plan, the

General Electricity Development Plan, and other energy-related government plans and hence coordinate with the Ministry of Energy and Mineral Resources, the National Energy Council (DEN), and the State Electricity Corporation (PLN). The TA subproject will contribute to ADB's new country partnership strategy 2020–2024. It will facilitate discussions and identify strategic pillars and actions to continue the sustainable transformation of Indonesia's energy sector. It aims at addressing regulatory and financial bottlenecks to increase Indonesia's energy security, provide energy access for all, and ensure the financial viability of clean energy production and consumption in the country. In doing so, it will contribute to further the achievement of the United Nation's Sustainable Development Goals in the energy sector for which the ADB has taken the lead in Southeast Asia.

7. **Output: Provide policy advice for energy sector planning in Indonesia.** The TA subproject will provide substantial analytical support to key issues for Indonesia's sustainable and inclusive energy sector development and support a comprehensive assessment of energy supply and demand in Indonesia. Key focus areas will be the electricity sector, with increased focus on renewable energy, sustainable energy pricing and supply cost, and the identification of financial mechanisms to support renewable energy development. The TA subproject will highlight the opportunities from energy efficiency measures, and identify technological and regulatory innovation, for example for the newly identified Special Economic Zones, to help the government address the energy trilemma of security, sustainability and affordability. The TA subproject will support the government in reviewing its results indicators under the RPJMN20 to better assess achievements towards inclusive and sustainable growth under its energy targets.

8. **Activity 1: Assessment of achievements under RPJMN 2015–2019 and annotated table of contents for the white paper.** The TA subproject will assess the state, progress and achievements of energy-sector related policies and investments under the 3rd RPJMN 2015–2019 (RPJMN15), which was based on the guiding principles to reduce greenhouse gas emissions while strengthening national energy security, and which was supported by the ADB via a previous White Paper. Sector-wise, the TA subproject will look at all energy-subsectors with special focus on electricity, energy efficiency, downstream gas, and energy infrastructure as well as the assessment indicators. The TA subproject will assess the goals of the RPJMN15: (i) strengthening the availability of primary energy through oil production, supported by gas and coal production; (ii) increasing the domestic use of primary energy resources; and (iii) achieving a 96.6% electrification ratio and with renewable energy reaching 10%–15% of the energy mix. The TA subproject will use the RPJMN15 energy sector goals as benchmarks. It will also assess ADB's contribution to the targets under the RPJMN15 and evaluate the role of the key central and regional government, state-owned, and private sector players in this process. A key focus will be the review of the RPJMN15's energy related indicators. The TA subproject will also address energy pricing and other financial incentives and barriers to increase the sustainability of the energy sector. This will include a review of all underlying policy, regulatory, and financial documents available.

9. **Activity 2: First draft of the white paper and key RPJMN 2020–2024 recommendations for discussion with government officials and stakeholders.** Based on this prior assessment of achievements, the TA subproject will evaluate Indonesia's expected energy sector development per sub-sector for both supply and demand based on existing energy modeling by the ADB, the International Energy Agency, the Association of Southeast Asian Nations Centre for Energy, the Ministry for Energy and Mineral Resources, the DEN, and others. Electricity and renewable energy provision will be key areas for the TA subproject. The supply/demand analysis will focus on the inter-related trilemma of ensuring energy security while increasing sustainability and assuring the affordability and cost-reflection of energy prices, with a

view to improving the financial and operational situation of key energy-related state-owned enterprises. Based on the existing indicators for the RPJMN15 the TA subproject will provide suggestions on how to better break down and focus key indicators such as electricity consumption per capita to allow for better tracking of actual progress. This will include focus group discussions with energy and industry officials and development partners. Special attention will be given to identifying the heterogeneity of energy access in Indonesia's main island clusters as well as to innovative energy options to support Indonesia's digital and industrial transition. This should include an analysis of the adequate regulatory frameworks for large and small islands, energy storage options to increase renewables in small islands, and in general the enhancement of supply and demand-side efficiency. The analysis will take into full account Indonesia's existing commitments under its Nationally Determined Contribution under the Paris Agreement.

10. Activity 3: Second and final draft report and key RPJMN 2020–2024 recommendations for discussion with government officials. Part 3 of the TA subproject will discuss and identify the policy and regulatory developments and investments needed to support Indonesia's transition to a sustainable, secure, and affordable energy sector and focus on energy production and consumption pricing, infrastructure development regulations, private sector participation, and technical standard setting. This activity will include focus group discussions with officials from the energy-related Ministries and non-governmental representatives which form part of the DEN and non-governmental organizations. It will be supported by a public survey to assess the priorities and challenges on energy production and consumption of Indonesia's citizens. Public support to, and understanding of energy sector reforms is deemed critical for the continuation of the government's reform process from 2019 onwards.

11. Activity 4: Final dissemination conference at Minister level. The final Energy Sector White Paper will provide recommendations to the government to establish a medium-term development agenda for the energy sector. This should include special attention to increasing modern energy options, financing, and digital innovation, as well as decentralization options critical to develop Indonesia's remote provinces and localities. It will be publicly available and inform the national and international debate and strategy to enhance the sustainable transformation of Indonesia's energy sector.

12. Activity 5: High-quality analytical sector thought-papers. The main part of the TA subproject, the White Paper, will be supported by several thought-papers that will provide selected inputs to the National Development Planning Agency, PLN, and other government entities. These will include an analysis of the cost of generation including procurement cost under different scenarios for state-owned enterprises, clean energy technology de-risking and cost, and third-party access to transmission networks among others. This will also help extract the ADB's operational knowledge from past and ongoing investment projects and translate the findings into analytical advice for the government.

D. Subproject Cost and Financing

13. The TA is estimated to cost \$1,050,000 of which \$1,000,000 will be financed from the C-TA 0013-INO: SIAP on a grant basis by the Government of Australia and administered by ADB. The government will provide in-kind contributions in the form of counterpart staff, office space, secretarial assistance and other in-kind contributions. The detailed cost estimates and financing plan are shown in Appendix 2.

E. Subproject Implementation Arrangements

14. The Energy Division of the Southeast Asia Department will select, supervise, and evaluate consultants. The government, in coordination with ADB, will organize and conduct the workshops.¹

Table 1: Subproject Implementation Arrangements

| Aspects | Arrangements | | |
|----------------------------------|--|--------------------|-----------|
| Indicative implementation period | April 2018–June 2019 | | |
| Executing agency | National Development Planning Agency (BAPPENAS) | | |
| Implementing agencies | | | |
| Consultants | To be selected and engaged by ADB | | |
| | Quality- and cost-based selection | 40 person-months | \$638,000 |
| | Survey | | \$100,000 |
| | Individual Consultant Selection | 26.6 person-months | \$210,000 |
| Disbursement | The TA resources will be disbursed following ADB's <i>Technical Assistance Disbursement Handbook</i> (2010, as amended from time to time). | | |

15. **Consulting services.** ADB will engage consulting firms and individual consultants in accordance with ADB Procurement Policy (2017, as amended from time to time) and the associated Project Administration Instructions/Technical Assistance Staff Instructions.² The main body of work will be undertaken by a consulting firm. In addition, individual consultants will be hired by the ADB to supplement the analysis of the consulting firm. The consulting firm will need to have experience in energy policy and sector consulting in Indonesia and be able to field international and local experts on energy policy, electricity networks and supply (with a focus on renewable energy), oil and gas upstream, oil and gas downstream, energy efficiency and climate change mitigation, coal, digital energy systems (grids) and decentralization, financial and insurance aspects of energy infrastructure, Indonesia's legal system and policy-making as needed. The core consultant team will consist of an International and a National Energy Lead Specialist and work with the National Development Planning Agency drawing on additional sub-sector expertise where necessary, and coordinate with the Ministry of Energy and Mineral Resources, DEN, and PLN. The consultant will procure the necessary packages to hold three major roundtables and at least 30–50 sector-specific discussions. Quality-cost ratio is being established at 90:10 under a simplified technical proposal. The TA subproject envisages 17 international consultant person-months and up to 50 national consultant person-months.

16. A survey will be contracted by the consulting firm from local companies in Indonesia to undertake a public survey on energy development, priorities, affordability, and other pertinent questions relevant for production, usage, demand, prices, support, and priorities. The individual consultants will be hired on basis of specific global sector knowledge and/or local on the ground experience with Indonesia energy sector to be able to support the process on specific sectoral issues. An ADB in-country program analyst will be hired to help with back office support. Key

¹ Output-based contracts and lumpsum out-of-pocket expense payments will be considered, as appropriate.

² Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 3).

expertise would include electricity supply cost and pricing, clean energy finance and insurance, networks, digital systems, and decentralization, and others on needs basis.

17. **Social media and websites.** The consulting firm is expected to establish a OneDrive document and information repository that is accessible by all consultants / knowledge partners and can be used to make information available to future ADB teams that may continue such analytical work in the future. All consultants are expected to store their materials there for future use. The relevant OneDrive will be closed after TA completion and all materials will be transferred to ADB for internal backup.

SUBPROJECT DESIGN AND MONITORING FRAMEWORK

| Impacts the TA subproject is aligned with: | | | |
|---|--|---|--|
| (i) the Government's energy-related analysis under RPJMN 2020–2024 is strengthened; and (ii) the energy-sector planning of BAPPENAS and other key government actors is strengthened | | | |
| Results Chain | Performance Indicators with Targets and Baselines | Data Sources and Reporting Mechanisms | Risks |
| Outcome Priorities and strategies for a sustainable, affordable, and secure energy sector included in the National Medium-Term Development Plan (RPJMN) 2020–2024 | By 2021: The identified priority areas for Indonesia's energy sector development under the RPJMN are included in the RPJMN20 (2018 baseline: N/A) | Published RPJMN | New government completely changes energy sector strategy New Ministers do not approve the White Paper |
| Output Policy advice for energy sector planning in Indonesia provided | By 2019: 1. High quality Draft White Paper including policy recommendations and power-point submitted to BAPPENAS (2018 baseline: N/A) By 2019: 2. High quality sector-specific analyses published (2018 baseline: N/A) | 1. Draft report and accompanying power-point presentation 2. Copies of the reports and reviews of quality from ADB experts | Lack of communication among relevant agencies Government disagrees with the numbers included |
| Activities with Milestones <ol style="list-style-type: none"> 1. Assess achievements under RPJMN 2015–2019 and annotated table of contents for the white paper <ol style="list-style-type: none"> 1.1 Analyze of state of Indonesia's energy sector, outlook, indicators, RPJMN15 achievements (June 2018) 1.2 Prepare annotated table of contents (July 2018) 1.3 Arrange first-level senior official discussion (July 2018) 1.4 Prepare first draft of the white paper and key RPJMN 2020–2024 recommendations for discussion with government officials and stakeholders 1.5 Sector-level roundtables (August/September 2018) 1.6 Present policy, regulatory, indicator draft targets (October 2018) 1.7 Undertake public Opinion survey (October 2018) 1.8 Organize Roundtable discussion of 2nd level outcomes and targets (November/December 2018) 1.9 Finalize second and final draft report and key RPJMN 2020–2024 recommendations for discussion with government officials 1.10 Follow-up deep-dive sector discussions on priority topics (January/February 2019) 1.11 Present capacity and financial investment targets (January 2019) 1.12 Deepen policy and regulatory proposals (April–June 2019) 1.13 Organize final dissemination conference at Minister-level (June 2019) 1.14 Produce high-quality sector thought-papers (March 2019) | | | |

Inputs

Government of Australia: \$1,000,000

Note: The government will provide counterpart support in the form of counterpart staff, office space, secretarial assistance, and other in-kind contributions.

Assumptions for Partner Financing

N/A

ADB = Asian Development Bank, BAPPENAS = Badan Perencanaan dan Pembangunan Nasional (National Development Planning Agency), RPJMN = Rencana Pembangunan Jangka Menengah Nasional (National Medium-Term Development Plan), RPJMN15 = RPJMN 2015–2019, RPJMN20 = RPJMN 2020–2024.

Source: Asian Development Bank.

SUBPROJECT COST ESTIMATES AND FINANCING PLAN
(\$'000)

| Item | Amount |
|---|----------------|
| A. Government of Australia^a | |
| 1. Consultants | |
| a. Remuneration and per diem | |
| i. International consultants | 500.0 |
| ii. National consultants | 210.0 |
| b. Out-of-pocket expenditures | |
| i. International and local travel | 100.0 |
| ii. Training, seminars, and conferences | 20.0 |
| iii. Reports and communications | 10.0 |
| iv. Printed external publications | 3.0 |
| v. Miscellaneous administration and support costs | 5.0 |
| 2. Survey | 100.0 |
| 3. Contingencies | 52.0 |
| Total | 1,000.0 |

Note: The TA subproject is estimated to cost \$1,050,000 of which contributions amounting to \$1,000,000 from the cluster technical assistance on Sustainable Infrastructure Assistance Program (C-TA 0013-INO) funded by the Government of Australia through the Department of Foreign Affairs and Trade are presented in the table above. The government will provide counterpart support in the form of counterpart staff, office space, secretarial assistance, and other in-kind contributions. The value of government contribution is estimated to account for 5% of the total TA cost.

^a Administered by the Asian Development Bank.

Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=46380-023-TARreport>

1. Terms of Reference for Consultants