



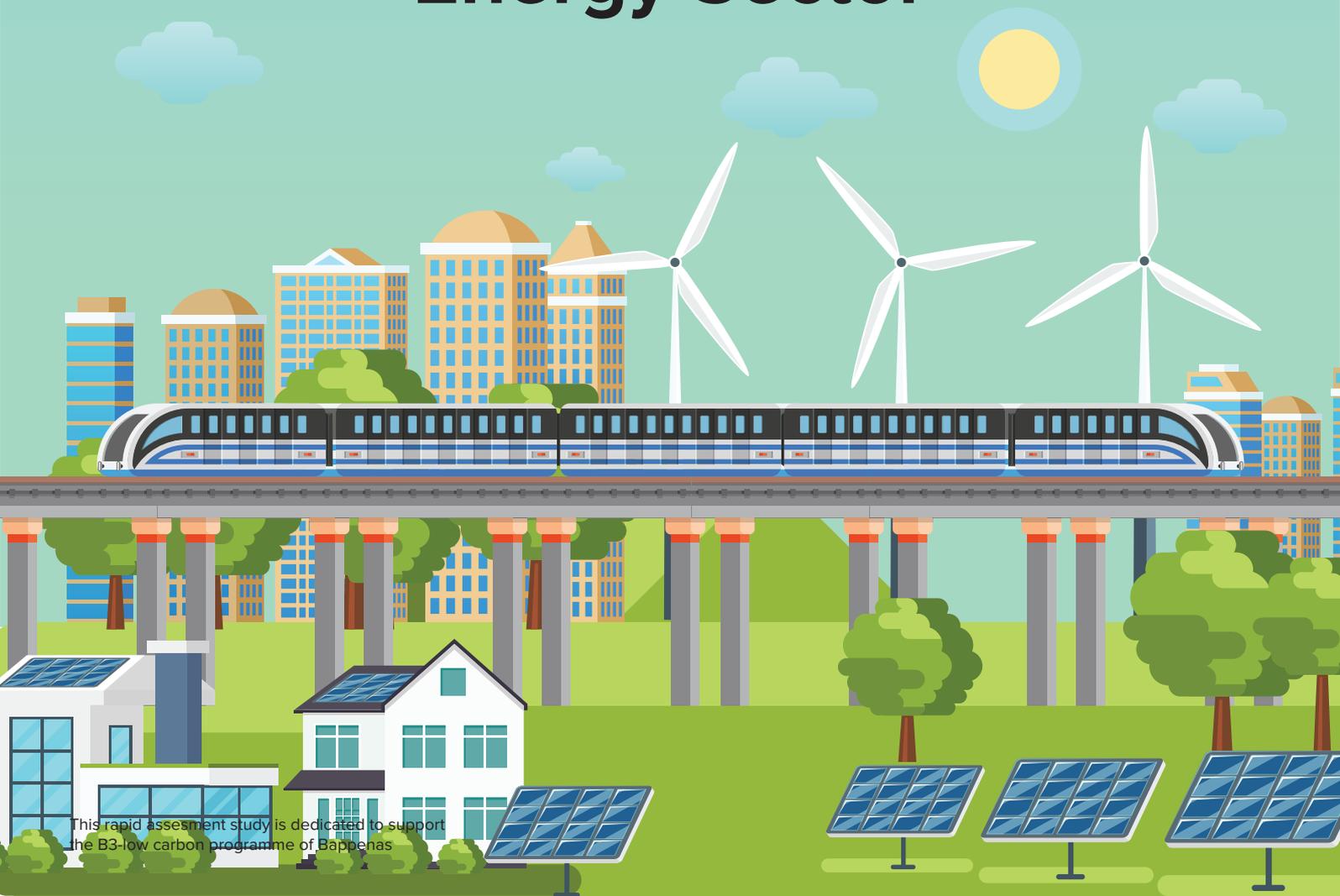
PAGE PARTNERSHIP FOR ACTION
ON GREEN ECONOMY



Executive Summary

Green Stimulus Package for National Economic Recovery

Energy Sector



This rapid assessment study is dedicated to support
the B3-low carbon programme of Bappenas

Executive Summary

The Government of Indonesia has accommodated low-carbon development in its 2020 - 2024 National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional/RPJM*) which has been stipulated in Presidential Regulation No. 18 of 2020. As a follow-up to the stipulation of the RPJM, the Ministry of Energy and Mineral Resources (MEMR) has established a Strategic Plan through the Minister of Energy and Mineral Resources Regulation No. 16 of 2020. The following is a summary of the targets set in the two Regulations regarding the development of low-carbon energy sector:

Target	2024
Portion of NRE in the National energy mix.	19.5%
NRE installed capacity (GW)	19.2
Biofuel utilization for domestic use (million kL)	17.4
Primary energy intensity (BOE/billion IDR)	133.8
Final energy intensity reduction (BOE/billion IDR)	0.8
GHG emissions reduction	27.3%
GHG emissions intensity reduction	24%

Table 1 RPJM Targets and the Strategic Plan of the Ministry of Energy and Mineral

It is feared that the renewable energy target in the energy mix of 19.5% by 2024 will be difficult to achieve if there are no significant changes in policies and regulations, renewable energy procurement patterns, and the provision of fiscal incentives, so that renewable energy can compete with fossil-based power plants, considering that until 2019 new and renewable energy reaches 9.15% in the energy mix with an installed capacity of 10.16 GW.

The government has provided various fiscal incentives for the energy sector, such as tax allowances, tax holidays, exemption from import duties, and reduction of gas prices for power plants. The ones that benefit most from this fiscal incentive are projects with large investment values. Meanwhile, the majority of renewable energy projects that will be built are projects with a relatively small investment value, so that they cannot take full advantage of the fiscal incentive facilities, especially for tax holidays. On the other hand, many project financing proposals (including their supporting documents) submitted to the Financial Institutions/Banks do not meet the quality required to provide financing. Meanwhile, a lack of understanding of the risks of renewable energy investment causes the Financial Institutions/Banks to require the provision of collateral in the form of assets when providing funding for renewable energy investments.

Increasing efficiency in energy utilization is a potential that has not been fully maximized, although many activities can actually be carried out without costs or at low cost. Some of the main obstacles to increasing efficiency are mainly related to the relatively cheap energy price, unavailable energy efficiency funding, and the lack of fiscal incentives provided by the government to encourage energy efficiency investment.

The government needs to provide various stimuli that can be utilized by business actors to encourage the achievement of the targets set in the 2020-2024 RPJM and the 2020-2024 MEMR Strategic Plan. The following are proposed stimuli that will encourage the use of renewable energy and increase energy efficiency in order to achieve the targets set in the 2020-2024 RPJM and the 2020-2024 MEMR Strategic Plan:

Stimuli	Budget allocation	Number of supported projects	Annual reduction in tCO2 GHG emissions	Employment (people)	Remarks
Tax holiday	The total investment value is approximately USD 20.5 billion	About 400 projects, depending on capacity per project	34.450.991 tCO2 per year	641,750 people during the construction period and 29,772 people during the operation period	
Tax allowance for 10 years					
Import duty exemption					
Non-collected VAT					The value of non-collected VAT is USD 1,333 million
Loan guarantee (USD)	111 million				Assuming the guarantee premium is 1.5% of the loan value, the premium is paid 50% each by the developing government
RE development fund (IDR)	300 billion	100	1,226,400 - 3,985,800	10,000 - 30,000	
Rooftop photovoltaic system (PLTS Atap) development fund (IDR)	3 trillion	200,000	204,400	1,000,000	Require 5 people for the construction of each Rooftop system (PLTS Atap)
Dana efisiensi energi (IDR)	300 billion	600			

Table 2 Summary of proposed stimuli

The provision of these stimuli will contribute to:

1. Economic recovery through various development activities in the renewable energy sector and energy efficiency;
2. New employment opportunities, especially in areas where renewable energy development and energy efficiency activities are carried out;
3. Increasing the regional economy with development activities as a side effect of developing renewable energy and energy efficiency, among others:
 - a. Provision of building materials for construction from the area around the renewable energy project location;
 - b. Provision of lodging, food and beverages, the needs of workers in the construction of renewable energy plants;
 - c. Community activities as a form of CSR commitment from the company;
4. Reduction in GHG emissions.

Fiscal incentives for renewable energy development

The government provides fiscal incentives for developing renewable energy based on existing regulations or expanded regulations, in particular in the form of:

1. Tax holiday of at least 10 years without being limited by the amount of investment;
2. Non-collected VAT for domestic procurement of goods and services. Provision of this facility will reduce the investment burden borne by renewable energy investors. To realize the renewable energy development plan with an installed capacity of up to 9,050.30 MW, it is proposed not to collect VAT for the procurement of domestic services and goods (Domestic Component Level/TKDN) of USD 1,333 million, as described in the following table

Power Plant	Target MW	Investment / MW (Million USD)	Total investment (Million USD)	Domestic Component Level (TKDN)	Non-collected VAT (Million USD)
Hydroelectric power plant (PLTA)	3,909.80	2.3	8,993	75%	674
Geothermal Power Plant (PLTP)	1,027.00	5	5,135	65%	334
Photovoltaic system (PLTS)	2,089.40	1	2,089	40%	84

Power Plant	Target MW	Investment / MW (Million USD)	Total investment (Million USD)	Domestic Component Level (TKDN)	Non-collected VAT (Million USD)
Wind Power Plant (PLTB)	729.00	2.3	1,677	20%	34
Bioenergy	1,295.10	2	2,590	80%	207
Total	9,050.30		20,484		1,333

Table 3 The proposed non-collected VAT stimulus for the 2022 Government Work Plan (*Rencana Kerja Pemerintah/RKP*)

3. Exemption from import duty for capital goods and spare parts is implemented based on current policies, however, the policy should be expanded so that the spare parts required during the operation of renewable energy-based power plants can take advantage of this facility;
4. Tax allowance in the form of income tax reduction, acceleration of depreciation and amortization, reduction of income tax for investor dividends, is implemented based on existing regulations.

Renewable energy development fund

Provision of renewable energy development funds is aimed at improving the quality of RE project development documents so that Financial Institutions/Banks are willing to provide funding for the renewable energy development. The funds are expected to be accessible to renewable energy developers who already have a feasibility study document and are included in the List of Selected Developers (*Daftar Pengembang Terpilih/DPT*) at PLN. The funds provided will be used to improve the quality of project documents, particularly the Feasibility Study (FS), Detailed Engineering Design (DED), environmental documents, data acquisition needed to complete the preparation of the FS and DED. With better document quality, the Financial Institutions/Banks can provide the funding required to develop renewable energy projects.

It is recommended that in 2022 the Government will provide a fund of IDR 300 billion for 100 renewable energy projects with a target installed capacity of 1,000 MW. These funds will be managed by a Fund Management Institution appointed by the Government.



Figure 1 The process of applying for the Renewable Energy Development Fund

If all the projects are built, they will potentially reduce GHG emissions between 1,226,400 tCO₂ per year (PLTS) to 3,985,800 tCO₂ per year (PLTA). As compensation for the reduction in GHG emissions generated by the funded project, the developer will submit to the government emission reduction certificates to a maximum of 60,000 certificates (equivalent to an emission reduction of 60,000 tCO₂).

Loan guarantee for renewable energy development

The provision of loan guarantees combined with improving the quality of renewable energy development documents can encourage loan provision by domestic financial institutions/banks. With a total investment of USD 20.5 billion required to build 9,050.80 MW, the Government is expected to provide a guarantee fund of USD 108 million to pay 50% of the guarantee premium (assuming the premium is 1.5% of the loan value).

Power Plant	Target MW	Investment / MW (Million USD)	Total investment (Million USD)	Guarantee (Million USD)
Hydroelectric power plant (PLTA)	3,909.80	2.3	8,993	47
Geothermal Power Plant (PLTP)	1,027.00	5	5,135	27
Photovoltaic system (PLTS)	2,089.40	1	2,089	11
Wind Power Plant (PLTB)	729.00	2.3	1,677	9
Bioenergy	1,295.10	2	2,590	14
Total	9,050.30		20,484	108

Table 4 Proposal for the provision of guarantees for the 2022 RKP

The government can reduce the amount of guarantee with the assumption that guarantees for PLTP are not needed, only about 40% of the PLTA development will use domestic funding, likewise for PLTS and PLTB, it is assumed that only 30% each will use domestic funding. Thus, the Government only needs to provide funds to pay the guarantee premium of USD 38 million or around IDR 557.01 billion.

Power Plant	Target MW	Investment / MW	Total investment (Million USD)	Guarantee (Million USD)
Hydroelectric power plant (PLTA)	1,563.92	2.3	3,597	19
Geothermal Power Plant (PLTP)	-	5	-	-
Photovoltaic system (PLTS)	626.82	1	627	3
Wind Power Plant (PLTB)	218.70	2.3	503	3
Bioenergy	1,295.10	2	2,590	14
Total	3,704.54		7,317	38

Table 5 Guarantee options for renewable energy

Revolving fund for the installation of Rooftop Photovoltaic System (PLTS Atap)

The government can provide funds of IDR 3,000,000,000,000 for the installation of 200 MWp Rooftop PV System for PLN consumers in areas with high Cost of Generation Provision (*Biaya Pokok Penyediaan/ BPP*), such as in Nias, Mentawai, Wamena, Sarma, etc. With the Rooftop PV System, the energy supplied by PLN to these customers will be reduced, thus reducing the burden of Government subsidies. This program will reduce greenhouse gas emissions by up to 204,400 tCO₂ per year.

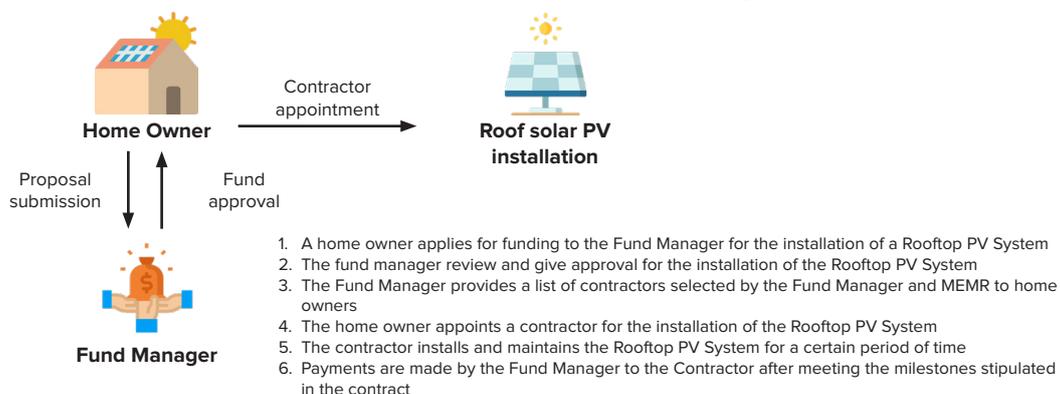


Figure 2 The process of Application for the Rooftop PV System Installation Fund

Funding for energy efficiency improvements for SMEs through People's Business Credit (*Kredit Usaha Rakyat/KUR*)

SMEs are one of the many business actors affected by the pandemic. Many SMEs face difficulties due to reduced income, making the ability to pay for operating costs more difficult. To ease the burden on SMEs, the Government can provide loans through People's Business Credit (*Kredit Usaha Rakyat/KUR*) with an interest rate of 6%, which includes guarantees by the Government-owned Guarantee Agency.

The amount of KUR that can be provided for each company is a maximum of IDR 500 million, in accordance with the limits that can be provided by banks. Provision of funding for energy efficiency activities can be integrated with the stimulus provided by the Government as part of the National Economic Recovery.

Job creation through provision of stimulus

The provision of various stimuli will be an enabler to low-carbon development, particularly the development of renewable energy and the implementation of energy efficiency activities. Not only for achieving the targets of RPJMN and Strategic Plan of Ministry of Energy and Mineral Resources, it will also create new jobs.

The provision of fiscal incentives in the form of tax holidays, non-collected VAT, provision of tax allowances and combined with provision of loan guarantees will be able to improve the economics of renewable energy plants so that they can compete with fossil-based power plants.

Power Plant	Manpower during the construction (People)	Manpower during the construction (People/MW)	Manpower during the operation (People)	Manpower during the operation (People/MW)	TK masa operasi (Orang/MW)
Hydroelectric power plant (PLTA)	3,909.80	262,000	67	6,550	1.7
Geothermal Power Plant (PLTP)	1,027.00	266,000	5,135,259	2,850	2.8
Photovoltaic system (PLTS)	2,089.40	15,750	8	1,575	0.8
Wind Power Plant (PLTB)	729.00	33,000	45	600	0.8
Bioenergy	1,295.10	65,000	50	18,200	14.1
Total	9,050.30	641,750		29,775	

Table 24 – Job creation

Meanwhile, the provision of renewable energy development funds for 100 projects can create jobs for 10,000 people - 30,000 people, assuming that these funds are used for the development of PLTS or Minihidro Power Plant (PLTM) with a capacity of up to 10 MW. It is estimated that the PLTS construction will require around 100 people during the construction period (1 - 1.5 years), while the PLTM construction will require around 300 people during the construction period (2 - 3 years).

Provision of funds for the construction of Rooftop PV System with an installed capacity of up to 200 MWp can create up to 1,000,000 jobs, assuming 200,000 Rooftop PV Systems will be installed, where the installation of each Rooftop PV System involves around 5 people for logistical and installation work.