

# Indonesia's Energy Policy Briefing

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As part of its work on energy policy and sustainable development in Indonesia, the Global Subsidies Initiative (GSI) of the International Institute for Sustainable Development (IISD) publishes a regular briefing on issues related to energy subsidies. For more information, contact Lucky Lontoh at [lucky.lontoh@iisd.org](mailto:lucky.lontoh@iisd.org) and Lourdes Sanchez at [lsanchez@iisd.org](mailto:lsanchez@iisd.org).

This policy brief presents a summary of the most recent energy policy developments in Indonesia.

### Highlights

- Indonesia entered a recession in the third quarter of 2020, a year in which GDP contracted by 2.07% compared to 2019. The Ministry of Finance optimistically estimates that GDP growth will reach 5% in 2021, although with a budget deficit of 5.7% against the GDP. This shift in assumption affects energy planning projections for upcoming years.
- Fuel subsidies. Subsidy on transport fuel fell by 41%, from IDR 30.06 trillion in 2019 to IDR 17.70 trillion in 2020, mostly due to a decline in both consumption and international oil prices. The plan to abolish the sale of RON 88 premium in Java, Bali, and Madura will likely increase government's revenue from selling a higher-quality fuel.
- The liquefied petroleum gas (LPG) subsidy dropped by 56%, from IDR 54.15 trillion in 2019 to IDR 23.50 trillion in 2020, also due to low international prices. The LPG subsidy is expected to surge to IDR 54.3 trillion in 2021 as demand and oil prices pick up. Government discussions to reform LPG subsidies have yet to materialize.
- Coal continues to receive more fiscal and non-fiscal incentives, especially for the development of coal derivatives such as dimethyl ether (DME), promoted as an alternative fuel to reduce LPG imports and subsidies.
- The recovered global price of coal has diverted a large share of production for export, leaving the power sector struggling to meet coal demand. No significant changes are observed in terms of the share of coal in the fuel mix. While a lot



of other countries are using the COVID-19 pandemic as a spur toward green recovery/green transition, Indonesia seems to be heading in the opposite direction.

- Out of the 75 power purchase agreements (PPAs) in renewable energy signed between 2017 and 2018, 36% have not reached financial closing, and close to 7% were terminated. In fact, between 2018 and 2020, only a total of 564.89 gigawatts (GW) from 13 projects (an average of 188.3 megawatts [MW]) per year have signed PPAs, far lower than previous yearly average of 500 MW per year.
- Floating solar photovoltaic (PV) projects played a role as a lever of renewable energy generation, eliminating the biggest hurdle in project development—land acquisition. PV projects also hit the lowest bid price in the country's history of USD 3.68 cents/kWh.
- Renewable energy investors have been waiting too long for regulatory certainty. A few projects that have been included in the 2019–2028 Electricity Procurement Plan (RUPTL) have not proceeded to the tendering phase. The long-awaiting Presidential Regulation on the Purchase Price of Electricity from Renewable Energy Sources is yet to be finalized pending the Ministry of Finance's approval on the incentive types and schemes (Mulyana, 2021).

## 1.0 Macroeconomic Overview

In 2020, Indonesia's economic growth stalled at -2.07% compared to 2019 due to the COVID-19 crisis (Badan Pusat Statistik, 2021). However, The Minister of Finance, Sri Mulyani predicted a strong rebound in 2021, citing economic growth of 4.5%–5.5 % (CNN Indonesia, 2021). This prediction is based on a recovery trend in the second quarter of 2020, although a complete assessment of the third and fourth quarters of 2020 has not been completed. The government's prediction is in line with the assessment made by several key economic agencies, such as the IMF and the World Bank, which estimate a contraction of -0.3% for 2020 and a rebound to 6.1% in 2021 (Tempo, 2020). At the same time, the rollout of COVID-19 vaccines began in early 2021, starting gradually with frontline medical sector staff and public service personnel, with a coming drive to vaccinate the entire Indonesian population.

**Table 1. Indonesia's macroeconomic indicators 2018–2021**

	2018	2019	Anggaran Pendapatan dan Belanja Negara (State Budget) (APBN) 2020	Outlook 2020 <sup>1</sup>	APBN 2021 <sup>2</sup>
GDP growth (%)	5.17	5.02	5.30	-1.7 – -0.6	5.0
Inflation (%)	3.13	2.72	3.10	1.5	3
Exchange rate (IDR/USD)	14,247	14,146	14,400	14,650	14,600
Indonesia Crude Price (USD/ barrel)	67.5	62	63	39	45
Oil production (mbopd)	778	746	755	705	705
Gas production (mboepd)	1,145	1,057	1,191	992	1,007
Fuel subsidy (billion IDR) :					
Fuel subsidy (billion IDR)	38,871	30,059	19,900	17,700	16,639
LPG subsidy (billion IDR)	58,144	54,151	50,600	23,500	40,286
Electricity subsidy (billion IDR)	56,508	52,666	54,800	54,495	53,587
State budget (revenue) (IDR trillion) :	1,944	1,961	2,233	1,700	1,744
State budget (expenditure) (IDR trillion) :	2,213	2,309	2,540	2,739	2,750
Account balance (surplus- deficit/GDP) (%)	-1.8	-2.19	-1.76	-6.34	-5.5

Source: Ministry of Finance, 2020.

As reflected in Table 1, production from key sectors such as oil and gas in 2021 would be relatively similar to 2020, but the government still expects that an oil and gas price rebound will increase state's revenue in 2021. As a primary revenue source, non-tax state revenue (PNBP) from the oil and gas sector associated with government royalties is expected to rebound in 2021 but still come in lower than its pre-COVID record. In 2020, non-tax state revenue from the oil and gas sector dipped to IDR 53.3 trillion, down from IDR 121.1 trillion in 2019. It is expected to rise to IDR 75 trillion in 2021 as the recovery process continues.

Dividends from state companies will be lower as they stretch their resources to revive the economy and carry out recovery measures such as social protection and support for badly hit economic sectors.

<sup>1</sup> Outlook 2020 is the realization of State Budget as per October 2020. (Ministry of Finance, 2020).

<sup>2</sup> APBN (Anggaran Pendapatan dan Belanja Negara) or State Budget was defined on October 26, 2020 (Ministry of Finance, 2020).



Despite the pressure on the revenue side, government expenditure would still be the key driver in Indonesia's recovery plan. Budget allocations for ministries and government agencies in 2021 have increased by 23.1% from the previous year to IDR 1,032 trillion. Since government revenue is expected to fall by 13.3% in 2020, Indonesia will have a budget deficit of around 5.7% of GDP in 2020, nearly double its more recent rates well below 3%. As Table 1 shows, 2021 will be a recovery year for Indonesia, with many government incentives aimed at resuscitating the ailing economy.

The COVID 19 recovery budget (PEN/Pemulihan Ekonomi Nasional) for 2021 will be IDR 699.3 trillion (~USD 48.6 billion), broken down as follows: IDR 186.81 trillion for the corporate sector (including small and medium enterprises); IDR 176.30 trillion for the health sector; IDR 157.41 for social assistance; IDR 125.06 for priority programs; and IDR 53.86 trillion for business incentives. (Elena, 2021) The government predicts that COVID-19 has added 1.63 million people to the poverty bracket and resulted in an additional 1.76 million unemployed people in 2020 (Yovanda, 2020)

In the energy sector, the government has extended the duration of the electricity tariff relief which was started in April 2020. This policy removed the fees for 450 volt-ampere (VA)-consumers and offers a 50% discount for 900 VA-consumers until the end of December 2020 (KOMPAS, 2020; Yovanda, 2020). For transport fuel, the government continues to provide gasoline through PT Pertamina at a discounted price<sup>3</sup> to sustain the activities of critical transport services.

## 2.0 Energy Policy Overview

### 2.1 Transport Fuels

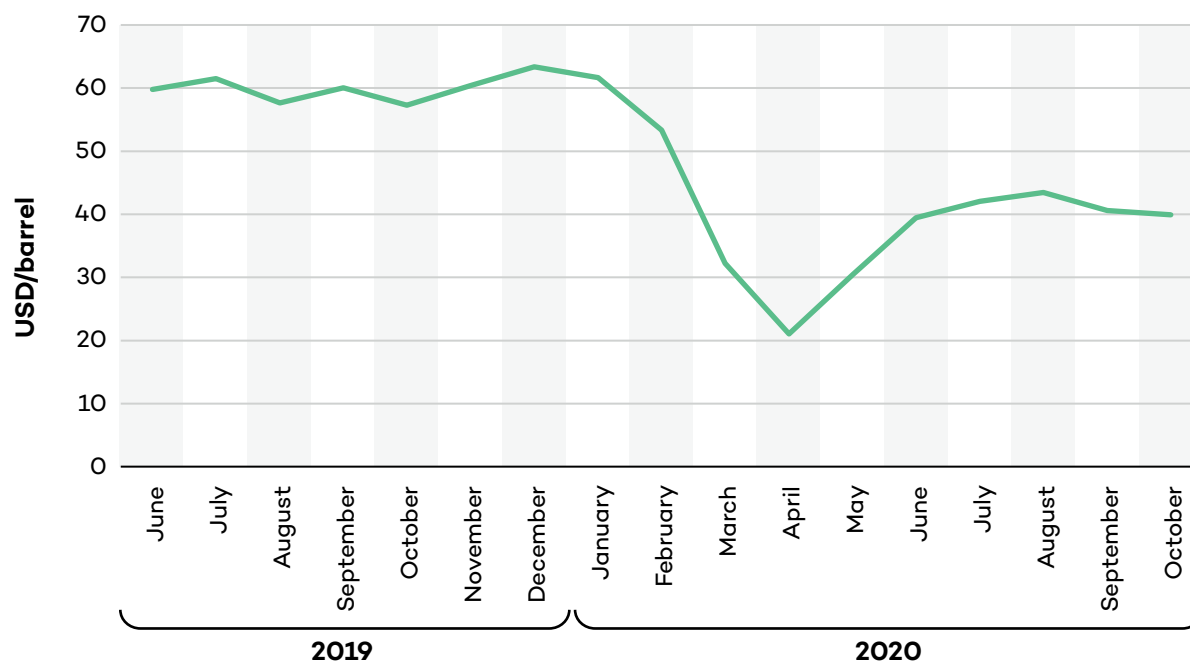
The drastic drop in the price of oil (see Figure 1) and lower domestic fuel consumption (due to travel restrictions and the economic slowdown) resulted in a decrease in the value of fuel subsidies in Indonesia in 2020. Subsidies for transport fuel fell 41%, from IDR 30.06 trillion in 2019 to IDR 17.70 trillion in 2020, while the LPG subsidy fell 56%, from IDR 54.15 trillion in 2019 to IDR 23.50 trillion in 2020.

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<sup>3</sup> PT Pertamina set up a cash-back promo on all gasoline products with its online application.



**Figure 1.** International oil price



Source: Indexmundi, 2020.

The pressure on PT Pertamina is not limited to plunging sales. Its (unaudited) financial report states that the company's revenue from upstream activities dropped by 20%. In the first months of 2020 following the pandemic, PT Pertamina had an average net loss of USD 500 million per month. It was not until May 2020 that the company was able to climb back and record an average net profit of USD 350 million until July 2020 (KOMPAS, 2020). See also (Suharsono & Lontoh, 2020)

A major step by PT Pertamina in this period has been creating incentives to make people switch to higher-quality, less-polluting fuels. From April 14 to June 12, 2020, the government provided a discount through PT Pertamina on subsidized gasoline by using the electronic payment app,<sup>4</sup> which enables drivers to receive a 50% discount on their purchases. This program was modified in July 2020, the discount was shifted to non-subsidized Peralite (RON 90) gasoline (KOMPAS, 2020). The discount on Peralite reduced its price to the level of the Premium (RON 88) price. This initiative is a part of a PT Pertamina campaign called the Blue Sky Program (*Program Langit Biru*) to encourage consumers to use higher-quality fuel that will improve air quality in Indonesia. A 30% discount was also provided on the purchase of higher-quality fuel such as Pertamina (RON 92), Pertamina Turbo (RON 98), Pertamina Dex (CN 53), and Dexlite (CN 51) using the digital payment app (KOMPAS, 2020). This initiative was aligned with PT Pertamina initial plans to encourage consumers in Java, Madura, and Bali, to switch to other non-subsidized products (Yovanda, 2020).

<sup>4</sup> PT Pertamina encourages the use of electronic payment for gasoline purchases, where consumers can settle the transaction via mobile application in advance and show their electronic receipts at the gas station, limiting physical contact during the transaction.



## 2.2 Liquefied Petroleum Gas

Indonesia's LPG subsidy is its largest current fuel subsidy component. Subsidized LPG in the country is mainly used for household cooking and is currently sold at around one-third of its market price.

The price of subsidized LPG in Indonesia has not been revised since the program was first introduced in 2007. In 2020, with the advent of the COVID-19 pandemic, the LPG subsidy fell by 56%, from IDR 54.15 trillion in 2019 to IDR 23.50 trillion in 2020. The value of the LPG subsidy is expected to rebound in 2021 and continue to grow as demand and the number of connections keep increasing. That estimation is a troubling figure for Indonesia, since the country relies on imports to fulfill its LPG domestic demand. In 2019, 5.71 million tons out of the total 7.76 million tons of LPG domestic sales came from imports (Ministry of Energy and Mineral Resources [MEMR], 2020a). A plan to limit the distribution of subsidized LPG only to the Indonesian poor has been devised but repeatedly postponed for various reasons (Kuehl et al., forthcoming).

Another government response to meet the rising demand for LPG in Indonesia is the development of alternative gas from coal (see Section 2.3). The contribution from domestically produced DME is expected to reduce LPG imports by IDR 8.7 billion per year, or IDR 24 trillion over the next 30 years (CNBC Indonesia, 2020).

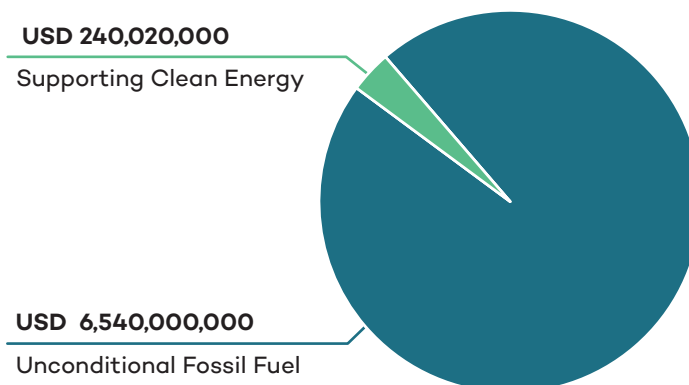
## 2.3 The Coal Sector

Coal experienced a downward trend in prices and export volume since 2019 and has seen a decline in exports and national consumption as a result of the global pandemic. The government has responded by including several incentives to expand the use of coal by transforming it and proposing some of its derivatives substitute for other fuels, notably LPG (see Section 2.2). However, both coal's price and export volume spiked suddenly in late 2020; they are predicted to follow this trend into 2021 (Ditjen Minerba, 2020). The beginning of 2021 has seen a recovery in the price of coal, mainly due to China's increasing demand and its bans on Australian coal. This raises questions as to whether the incentives given are still cost effective and justifiable.

On the other hand, the Omnibus Law's mandate to remove the value added tax (VAT) exemption of coal mining products will increase the price of coal. This might mean that coal is no longer the cheapest option, as is often the perception. Despite the elimination of the VAT exemption, the state electricity company Perusahaan Listrik Negara's (PLN's) existing contracts signed before 2020 force them to continue supplying the grid using coal and to maintain high proportion of coal in the fuel mix. The newest revision of RUPTL expects an increased coal share in PLN's long-term development plan (Perwitasari, 2021). Therefore, while a lot of other countries are using the COVID-19 pandemic to provide momentum toward green recovery/green transition, Indonesia seems to be heading in the opposite direction, as can be seen in Figure 2.



**Figure 2.** Fiscal incentives for the energy sector in response to the COVID-19 pandemic.



Source: Energy Policy Tracker, 2020.

To help the coal sector with the negative trends of 2020, the government has created a series of incentives with the ratification of the new Job Creation Law (Omnibus Law) and revision of the UU Minerba. In October 2020, President Joko Widodo also announced the country's priorities for the development of the coal derivative industry.<sup>5</sup> These schemes include coal gasification, coke making, underground coal gasification, coal liquefaction, coal quality improvement, briquette manufacturing, and coal slurry/coal water mixture (MEMR, 2020a). One of the main priorities is a program to use coal gasification to produce syngas and other products needed by the petrochemical industry, as well as an alternative fuel for LPG substitution. This will also reduce dependence on imported LPG. The President ordered all the related ministries to come up with a roadmap for the optimization of domestic coal using environmentally friendly technology and to determine the development strategy for the derivative products (Yolanda, 2020).

PT Bukit Asam and PT Kaltim Prima Coal, two of Indonesia's largest coal mining companies, are currently developing coal gasification projects as an effort to substitute LPG through DME. Both facilities are expected to become operational in 2023/2024, and the aim is to replace 30% of LPG imports (Endarwati, 2020; Lorenzo, 2020). In order to accelerate the coal derivatives industry, the government has prepared fiscal and non-fiscal incentives to make the projects more economical. The non-fiscal incentives provided include, among others, business permits for the life of the mine reserves (Kompas, 2020). This means that coal mining business permits are no longer limited to 20 years.

The development of the coal derivatives industry is further encouraged by the Job Creation Law—the latest version, 812 pages (Kementerian Sekretariat Negara, 2020)—which stated that coal producers who expand their business into the derivatives industry could be given preferential treatment in their state revenue obligations in the form of the imposition of a 0% royalty. MEMR claims this incentive is to “speed up the process.” Research from the Institute for Energy Economics and Financial Analysis (IEEFA) noted that during 2019 the Indonesian

<sup>5</sup> The Indonesian government uses the term “coal downstreaming” to refer to coal derivative industries such as gasification, liquefaction, etc. that result from processing raw coal into other more valuable products. In this document, we use the term “coal derivatives” as per international terminology.





government received royalties of between USD 1.1 billion and USD 1.2 billion from the taxes of 11 coal companies, which will be lost if this preferential treatment is applied. However, MEMR argued that the coal derivatives industry would create a double effect by creating employment which will compensate for the loss of state revenue (Thomas, 2020).

## 2.4 The Power Sector<sup>6</sup>

According to the state budget, PT PLN (Persero) received State Capital Participation (PMN) support of IDR 5 trillion for the 2020 Fiscal Year, compared to IDR 6.5 trillion in 2019 (Mulyana, 2020). Part of the PMN funds will be used to finance investment in the generation, transmission, and distribution of village electricity projects. The PMN allocation for power plants (99 MW of renewable energy) is IDR 1 trillion, IDR 3.8 trillion for 2,325 km of transmission lines and 9,320 MVA substations, and IDR 200 billion for village electricity distribution purposes (Mulyana, 2020). PLN, however, said that the actual investment requirement (estimated at IDR 15.19 trillion) is far above the PMN received (Indrawan, 2020b). PLN is budgeted to receive the same amount (IDR 5 trillion) for the 2021 fiscal year (Mulyana, 2020).

More recently, increase coal exports following the higher global price—coupled with the absence of sanctions of domestic market obligations (DMO)—has affected the stability of coal supply to the coal-fired power plants. Some of them are on the brink of rolling shutdowns due to the scarcity of the domestic supply of coal (Kesuma, 2021). This should be seen as an opportunity to focus on renewable energy.

As of August 2020, realization of the 35,000 MW electricity project had reached only 8,400 MW—the equivalent of 24% of the target. MEMR projects that this program will be completed only in 2028–2029. The additional capacity of 1,484 MW this year is largely met by coal and combined cycle gas and coal power plants. The President Director of PLN, Zulkifli Zaini, explained that based on PLN's 2019–2028 RUPTL, there will be an additional 56.4 GW of electricity. Figure 3 shows the currently installed capacity along with its projection up to 2028 based on RUPTL 2019–2028. It can be seen that, in general, PLN is accounting for more than a 30% reserve margin above projected peak demand. Coal power plants still dominate, with a 48% share, then gas-based plants (22%) and new and renewable energy (EBT)-based (30%). Apart from the 35,000 MW project, there is also a 7,000 MW program that is still running. As of July 2020, as many as 7,458 MW (94%) had commercial operation date (COD) commissioning, while 458 MW (6%) were still under construction (Kontan Industri, 2020).

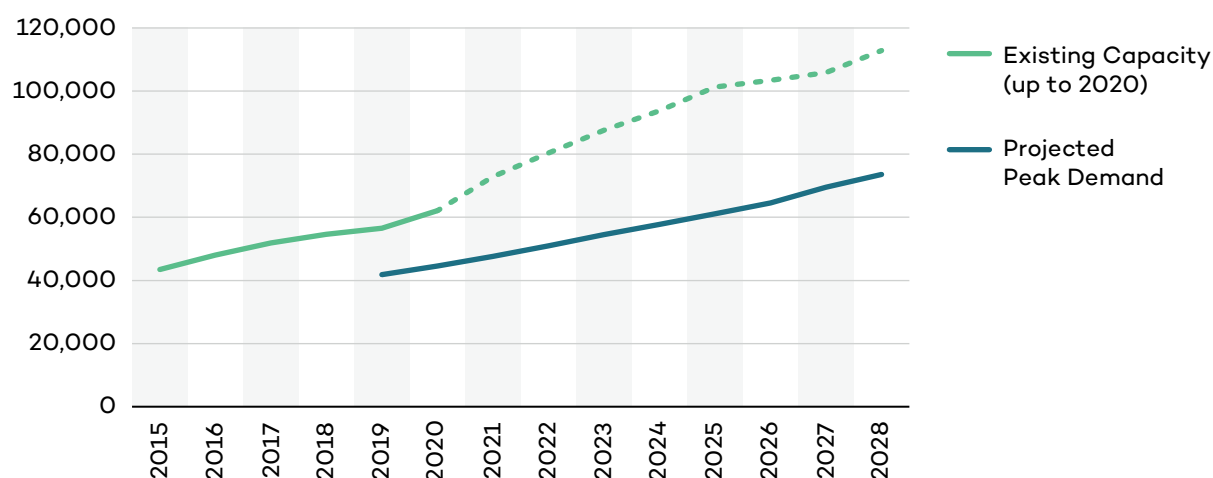
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<sup>6</sup> Note that this and the subsequent chapters were developed before the official publication of the RUPTL in 2021. Therefore, information of this RUPTL version is not included in this paper.





**Figure 3.** Existing and planned additional capacity (in MW)



Source: Author graphic, based on data from PT PLN, 2020.

PT PLN decided to cut its capital expenditure (CAPEX) from IDR 100 trillion to IDR 53.39 trillion this year. This is expected to delay a number of electricity projects. They are currently investigating which projects to postpone by adjusting the load growth projections and current conditions. Currently, the company is focused on saving operations and maintaining the electricity supply throughout Indonesia (Indrawan, 2020a). PLN also asked private power companies and independent power producers (IPPs) to postpone the generator's COD due to the take-or-pay (TOP) scheme. This would help PLN avoid paying a fine for not absorbing IPP generation (Utami, 2020) in light of lower electricity demand. PLN will also be receiving funds from the government in the form of compensation for the lack of electricity tariff adjustments in 2018 and 2019, totalling IDR 45.42 trillion (Indrawan, 2020a).

## 2.5 Renewable Energy

The Directorate General of New and Renewable Energy and Energy Conservation (EBTKE) noted that out of 75 renewable energy PPAs that were signed between 2017 and 2018, as many as 27 have not reached financial closing, while another five have been terminated (Indonesia Essential Services Reform [IESR], 2020). The total capacity of these PPAs is approximately 510.65 MW. In the last three to four years, the development of renewable energy has averaged 500 MW per year, which won't be enough to achieve the 23% target by 2025 (Umah, 2020). In fact, between 2018 and 2020, only a total of 564.89 GW from 13 projects (an average of 188.3 MW per year) have signed PPAs, far lower than previous estimates (MEMR, 2020b).

In addition to this, several renewable energy development projects in Indonesia have been hampered by the COVID-19 pandemic. MEMR initially attempted to pursue a renewable energy target of USD 2.3 billion in investment and 10,843 MW (+6.7% year over year) in additional capacity by the end of 2020. However, several projects that are currently in the construction phase and were originally planned for completion in 2020 will be postponed to 2021. There has also been some delay in disbursing funds from banks due to concerns



over the current COVID-19 pandemic conditions, which will have an impact on project sustainability (Rina, 2020).

At the event “PLN Go Green and Sustainable” (PLN, 2020) in early November 2020, the Minister of Finance, Sri Mulyani Indrawati, conveyed that the government has provided various fiscal stimuli<sup>7</sup> to PT PLN and MEMR to achieve the new and renewable energy mix target of 45 GW (23% of renewable energy) by 2025. Currently, Indonesia has only been able to utilize 10.4 GW (2.4%) of the total renewable energy potential of 442 GW (Putri, 2020).

Additional fiscal instruments include a Special Allocation Fund (DAK) in the form of grants to local governments to encourage and develop renewable energy infrastructure, especially solar power plants, biogas, and geothermal (Putri, 2020).

The geothermal sector receives special attention due to its contribution to state revenue. The Ministry of Finance recorded a significant annual increase of 33.8% on average in non-tax state revenue, which consists of fixed exploration fees, fixed production fees, royalties, and deposits for the government (Meilanova, 2018). In 2020, state revenue from geothermal energy is estimated to reach IDR 1.3 trillion based on Perpres 72/2020 and is expected to grow 7.1% in 2021 (CNN Indonesia, 2020).

There is a certain emphasis on using these tax incentives for the upstream geothermal industry. Head of Fiscal Policy Agency of the Ministry of Finance, Febrio Nathan Kacaribu, said that the fiscal incentives are intended to reduce the cost of geothermal energy and lower its selling price. The government also provides risk mitigation support that aims to provide financing facilities and mitigate the risks at the exploration stage (CNN Indonesia, 2020).

The government launched the second Green Sukuk Series (ST007) in early November 2020. It seeks to raise capital and share the financing risks of financing and refinancing eligible green projects that promote the transition to a low-emission economy and climate-resilient growth, including climate mitigation, adaptation, and biodiversity (Kementerian Keuangan Republik Indonesia, 2019). The proceeds from the issuance of ST007 will be used for environmental (green) projects in accordance with the government's commitment to the green framework to reduce global carbon emissions as well as funding the recovery from the COVID-19 pandemic. Projects in the green framework include transportation, railway infrastructure, energy, renewable energy, waste management, water management, and agriculture. To date, Indonesia is the only Green Sukuk Retail publisher in the world (Bareksa, 2020)

Floating solar PV projects are a lever of renewable energy generation, eliminating one of the biggest hurdles in project development: land acquisition. In addition to the ongoing 145 MW Cirata floating solar PV, several others followed suit, and one even hit the lowest bid price of USD 3.68 cents/kWh (IESR, 2021). The demand for rooftop PV comes from the public sector through the MEMR's and Ministry of State-Owned Enterprises' (SOEs') programs on the acceleration of utilization that mandated government buildings

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<sup>7</sup> These stimuli were put in place in early 2020, and include: tax allowances, tax holidays, and land and building tax (PBB) exemptions for those who wish to invest in the renewable energy sector (Suharsono & Lontoh, 2020). The Government also provides value added tax (PPN) and import duty exemption facilities on imports of capital goods for business actors producing new and renewable energy. (Putri, 2020).



be equipped with rooftop PV. This is also supported by PT LEN Industri as the solar cell producer and Bank BRI as the provider of low-interest green financing schemes (Tim Detik.com, 2021). An amendment to the MEMR's Regulation No 16/2019 on The Use of Rooftop PV Systems by PLN's Consumers will increase the export value of electricity from the rooftop PV to PLN's grid from the current value of 65%, is expected to attract more consumers. The MEMR sets the rooftop PV capacity target at 70 MW in 2021, compared to 13.4 MW in 2020 (Meilanova, 2021).

Renewable energy investors have been waiting too long for regulatory certainty. A few projects that have been included in the RUPTL 2019–2028 have not proceeded to the tendering phase. The long-awaiting Presidential Regulation on the Purchase Price of Electricity from Renewable Energy Sources has yet to be finalized pending Ministry of Finance approval of the incentive types and schemes (Mulyana, 2021).



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