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Global Subsidies Initiative

ACHIEVING A FOSSIL-FREE RECOVERY IN INDONESIA
Brief #2

Financing Green Recovery From Fossil Fuel Taxation and Subsidy Reform

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1.0 Introduction

The COVID-19 pandemic has had a significant impact on Indonesia's fiscal position. Government debt, normally capped at 3% of GDP, is likely to approach 5% in 2022 due to suppressed revenues, high health costs, and stimulus spending (Suroyo & Diela, 2021). The government could partially fill this budget gap by reforming some types of fossil fuel subsidies and taxes. While taxes are the principal means for governments to raise revenues, the Organisation for Economic Co-operation and Development (OECD) (2021) highlights that they should have roles beyond this, such as addressing socio-economic problems that have arisen from the COVID-19 pandemic. Further, G20 members have also stressed the importance of including funds to mitigate and tackle climate change in their recovery budgets and ensure financial flows are consistent with a low-carbon emission pathway (G20, 2021).

This brief summarizes the findings from three recent publications by the International Institute for Sustainable Development related to subsidy reform and taxation pertaining to Indonesia. We based our series of briefs on the five principles of achieving a fossil free recovery in the flagship report (Sanchez et al., 2021). In the previous brief, *How Indonesia Can Achieve Both COVID-19 Recovery and Its Climate Target* (Sumarno & Sanchez, 2021), we analyzed and highlighted COVID-19 recovery spending in Indonesia. The results show that despite Indonesia's ambition to achieve an energy mix that included 23% renewable energy—along with 29% lower emissions—by 2030, there was not enough spending on renewable energy. Most of the spending went to support the fossil fuel industry. This brief applies the second principle, that is, raising money from fossil fuel subsidy reform and taxes. In this brief, we look at the key findings from our two recent studies:

- *Fuelling the Recovery: How India's Path From Fuel Subsidies to Taxes Can Help Indonesia* (Laan et al., 2021)

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- *Taxing Coal to Hit the Goals: A Simple Way for Indonesia to Reduce Carbon Emissions* (Sumarno & Laan, 2021)

Together, these publications make a strong case for increasing fossil fuel prices in Indonesia while ensuring support for the poor, raising funds for a green recovery from COVID-19, and supporting the case for an energy transition at the upcoming G20 agenda.

2.0 Why Fossil Fuel Subsidy Reform and Taxation?

Indonesia currently subsidizes fossil fuels as part of its yearly budget and has offered support to fossil fuel-intensive sectors, such as cash supports to PT Perusahaan Listrik Negara (PLN) (state-owned electricity enterprise that mainly uses coal for power generation), PT Pertamina (state-owned energy enterprise that operates in the oil and gas sector, both upstream and downstream[2]), PT Garuda Indonesia (state-owned aviation enterprise), and PT Kereta Api Indonesia (state-owned rail enterprise) totalling IDR 95 trillion (USD 6.6 billion), as part of its COVID-19 recovery packages (Sumarno & Sanchez, 2021). Fossil fuel subsidies have negative climate, social, and economic impacts. Rather than subsidizing fossil fuels, the Government of Indonesia (GoI) could pivot toward using fossil fuels to raise revenue. Subsidy reform, along with taxation of transport fuels and coal, would provide the most promising opportunity for raising revenue in the immediate term (Laan et al., 2021; Sanchez et al., 2021; Sumarno & Laan, 2021). Price reform would deliver major side benefits, including reducing pollution and sending price signals to consumers and investors to switch to cleaner energy.

While recovery from COVID-19 is understandably the Indonesian government's priority, the country's net-zero plans and climate targets discussions, as well as the latest Rencana Usaha Penyediaan Tenaga Listrik (National Electricity Supply Business Plan, or RUPTL) (2021–2030), show that there is also ambition to reduce carbon dioxide (CO_2) emissions and increase the share of renewable energy to 52% by 2030 (PLN, 2021b; Pribadi, 2021). Both COVID-19 recovery and the energy transition require significant public funding. In 2020, the GoI had COVID-19 recovery expenditures of IDR 584 trillion (USD 40.6 billion)[3] (Table 1). Since July this year, Indonesia increased its recovery budget 2021 to IDR 745 trillion (USD 51.7 billion), 7% higher than the initial allocation for the year (MoF, 2021d; Thomas, 2021). Indonesia will need an additional estimated IDR 540 trillion (USD 37.5 billion) cumulatively to achieve the renewable energy target of 23% by 2025 (Pribadi, 2019).

[2] PT Pertamina owns a subsidiary that operates in geothermal energy.

[3] The exchange rate used in this brief is IDR 14,400/USD, based on the official exchange rate in the Indonesian State Budget (APBN) 2020 (Ministry of Finance [MoF], 2021).

Table 1. 2019 Fossil fuel subsidies and COVID-19 recovery spending 2020 and budget 2021

Yearly fossil fuel subsidies 2019[a]	124 trillion IDR
	8.6 billion USD
COVID-19 recovery spending 2020[b]	584 trillion IDR
	40.6 billion USD
COVID-19 recovery budget 2021[c]	745 trillion IDR
	51.7 billion USD

Sources: (a) Fossil Fuel Subsidy Tracker, n.d.; (b) MoF, 2021a; (c) MoF, 2021d; Thomas, 2021.

Subsidies to fossil fuels are very costly, standing at roughly IDR 124 trillion (USD 8.6 billion) in Indonesia in 2019 (Fossil Fuel Subsidy Tracker, n.d.). Of this, IDR 43 trillion (USD 3 billion) went to fossil fuels for transport and IDR 13 trillion (USD 0.9 billion) to coal (OECD, n.d.).[4] Significant public resources can be freed up by the reform of these subsidies. In addition, subsidies to fossil fuels such as gasoline, diesel, and coal benefit the rich more than the poor in Indonesia, given that this demographic uses more energy (Tim Nasional Percepatan Penanggulangan Kemiskinan [TNP2K], 2021b, 2021a). Globally, gasoline, diesel and coal subsidies have encouraged consumption of these fuels (Bárány & Grigonytė, 2015; Rentschler, 2018), exacerbating air pollution that has badly impacted health and contributed to climate change. According to the International Monetary Fund, the cost of fossil fuel externalities in Indonesia in 2020 was USD 392 billion, equivalent to 37% of the country's GDP (Parry et al., 2021).[5]

Taxes are the most efficient way to incorporate the externality costs of fossil fuels into their price (OECD, 2018). Consumer energy taxes are easy to collect and difficult to evade (OECD, 2020; Parry, 2019). They broaden the tax base, capture revenues from the informal sector (i.e., those outside the income or corporate tax system), and have fewer impacts on employment and output than taxes on capital and labour (Heine & Black, 2019). Fossil fuel taxes can also be designed in a way that puts a higher burden on wealthier consumers (Chancel, 2020).

Indonesia has a tax-to-GDP ratio[6] lower than that of the BRICS emerging economies (OECD, 2018). The ratio has been decreasing in the past 3 years because of increased public spending following the COVID-19 pandemic, reaching 8% of GDP in 2020 (Gardner, 2020). Because

[4] 2019 is the latest available year for which estimates of total fossil fuel subsidies in Indonesia exist as of the time of writing. These represent a high share of the total subsidies to fossil fuels. Indonesia subsidized fossil fuels at IDR 124 trillion (USD 8.6 billion) in 2019 (Fossil fuel subsidy tracker, n.d.) and increased its fossil fuel subsidy to IDR 205 trillion (USD 14.2 billion) in 2020, not including unquantified tax exemptions to fossil fuels (Energy Policy Tracker, n.d.; MoF, 2021a).

[5] The IMF estimates of externalities include air pollution, climate change, traffic congestion, traffic accidents, and road damage.

[6] Note that the tax-to-GDP ratio does not include social security contributions or non-tax revenue. As a comparison, in 2016 the Russian Federation had a tax-to GDP ratio of 37%, Brazil of 32%, South Africa of 29% India of 18%, and Indonesia 12% (OECD, 2018).

Indonesia needs additional resources, there is an opportunity to tax transport fuels (gasoline and diesel) and coal, which is the biggest contributor to emissions in the electricity sector (Laan et al., 2021; PLN, 2021a; Sumarno & Laan, 2021). An additional tax on transport fuels for IDR 500/litre would raise up to IDR 31 trillion (USD 2.2 billion), and a tax on coal (IDR 78,700/ton) would raise an additional IDR 49 trillion (USD 3.4 billion).[7]

The following sections will discuss in further detail how the GoI could reform subsidies and tax transport fuels and coal. First, it highlights the total subsidy envelope and identifies areas where reforms could happen. Finally, it compares the total potential revenues with social protection and health expenditures as part of COVID-19 recovery spending 2020.

3.0 Potential Revenues From Subsidy Reform and Taxation

3.1 Transport Fuels

The GoI has been subsidizing transport fuels (BBM) since 1967 (Matanasi, 2018), and these subsidies have made current fuel prices in Indonesia the 30th lowest in the world and the second lowest in the Association of Southeast Asian Nations (Statistics Times, n.d.). Indonesia also imposes taxes on its transport fuels while subsidizing them (Laan et al., 2021). In 2018, the transportation sector accounted for 27% of total GHG emissions from non-land use sectors (manufacturing, residential, transportation, commercial, and energy) (Ministry of Environment and Forestry, 2020).

SUBSIDIES

Indonesia subsidizes transport fuels in three ways.

1. Budgetary subsidies are provided for certain fuels (BBM Tertentu)—diesel and biodiesel—at a rate determined by the Ministry of Energy and Mineral Resources (MEMR), currently IDR 1,000 per litre.
2. Retails prices are fixed by MEMR for special fuels (BBM Khusus): PT Pertamina's low-octane gasoline brand (Premium, RON 88).
3. Other "general fuels" (BBM Umum) are generally unsubsidized, but prices must be approved by the MEMR, leaving some room for government interference (Zuhra, 2017).

This system creates subsidies in the form of direct budgetary transfers, accounting for IDR 35 trillion[8] (USD 2.4 billion) on average for fiscal years 2018 and 2019 (Suharsono et al., 2021). Price subsidies are provided by Pertamina selling fuels at below-market prices, resulting in losses (or "under-recoveries") and reduced profitability (Laan et al., 2021). PT Pertamina also received significant bailout funds (IDR 38 trillion, or roughly USD 2.6

[7] The proposed tax to transport fuels calculation is based on 2020 national gasoline and diesel consumption multiplied by IDR 500 per litre (Laan et al., 2021); the tax to coal for electricity generation calculation is based on 2020 coal used for coal-fired power plants (PLN) multiplied by IDR 78,700 per ton (Sumarno & Laan, 2021).

[8] This value excludes the much lower figure in 2020, which was an atypical year as a result of significantly reduced demand due to COVID-19 lockdowns and the economic downturn.

billion) as part of COVID-19 recovery packages in 2020 (MoF, 2021), as the company suffered a sales drop when social distancing and work-from-home schemes were introduced (Suharsono & Lontoh, 2020).

TAXATION

The GoI applies a total tax of 15% on gasoline and diesel (10% VAT is a federal tax and 5% tax on transport fuels is provincial taxes [Government Regulation No 21, 1997]). This raised around IDR 50 trillion (USD 3.5 billion) in 2020. A tax increase on gasoline and diesel of IDR 500 (USD 0.04)[9] per litre could raise an additional IDR 31 trillion (USD 2.2 billion) per year[10] (Laan et al., 2021).

TOTAL POTENTIAL REVENUES

The modest tax increase, together with reform of the public budget allocation to subsidized transport fuels, could deliver revenue of over IDR 154 trillion (USD 10.7 billion) per year to be used in economic recovery and the energy transition. While there would have to be a lot of work to undertake reform and ensure social protection, from a pure numbers standpoint, it is interesting to note that this amount is more than half of the social protection expenditure as part of the 2020 COVID-19 recovery packages (IDR 195 trillion, or approximately USD 13.5 billion) (see Table 2).

3.2 Coal

Indonesia is the world's 4th largest thermal coal exporter (Casey, 2021; International Energy Agency, 2020). In 2020, around 80% of domestic coal use in Indonesia was used for electricity generation, which accounted for 66% (180,869 gigawatt hours [GWh] in current capacity) of the total power generated in the country (MEMR, 2021). Indonesia also plans to add 20 GW of coal power plants as part of the 35 GW target by 2035 (Enerdata, 2015). However, this comes at a high environmental and social cost: coal contributes to 40% of the energy sector's total carbon emissions (PLN, 2021a), and Indonesia's coal-fired power stations have been estimated to cause 7,480 premature deaths per year from air pollution-related diseases alone (World Health Organization, 2021).

GoI wants to reduce coal-related emissions and has hence approved implementation of a carbon tax for April 2022 limited to coal-fired power plants at a rate of IDR 30,000/tonne of CO_2 equivalent (tCO_2e) (USD 2.1/tCO_2e) (MoF, 2021a). The latest RUPTL aims to reduce the share of coal used for electricity generation to 45% by 2030 (PLN, 2021).

If implementing the carbon pricing mechanisms on coal is delayed, simply increasing coal taxes (such as the VAT or adding a new excise) could be an alternative (Sumarno & Laan,

[9] IDR 500 (USD 0.04) is equivalent to INR 3, the amount of excise duty that was raised in 2020 by the Indian government, which had a successful experience in imposing a fuel tax for COVID 19 recovery (Laan et al., 2021).

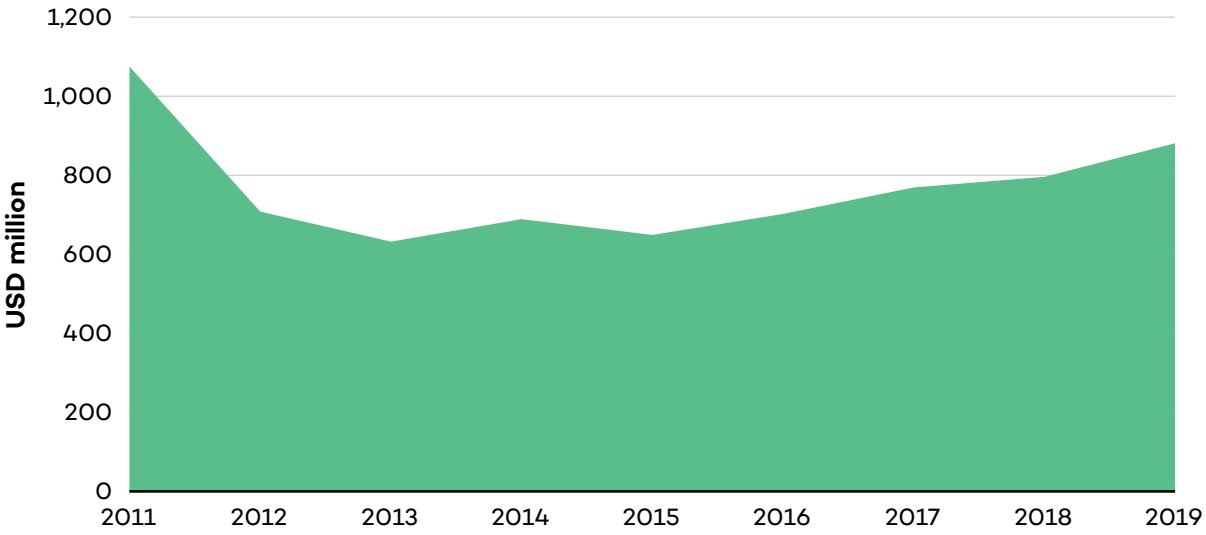
[10] Calculation based on consumption of 62,931 million litres of gasoline and diesel in the transport sector in 2019 (MEMR, 2021) multiplied by IDR 500/litre, resulting in revenue of IDR 31.46 trillion, as per Laan et al. (2021). More recent data was not used since 2020 was atypical year as a result of significantly reduced demand due to COVID-19 lockdowns and the economic downturn.

2021). Coal taxes are easier to administer than a carbon tax and can act as a de facto carbon price while raising significant revenue.

SUBSIDIES

Subsidies to coal consumption in Indonesia were estimated at USD 881 million in 2019, in the form of direct budgetary transfers (Fossil Fuel Subsidy Tracker, n.d.). The Indonesian coal sector also benefits from a series of unquantified tax and royalty advantages (OECD, n.d.). Further, coal is provided for electricity generation at below-market prices through the Domestic Market Obligation (DMO) scheme, resulting in further price subsidies (Indonesia-Investments, 2018). The reform of subsidies to coal consumption would free up IDR 13 trillion (USD 881 million) (Fossil Fuel Subsidy Tracker, n.d.) (see Figure 1).

Figure 1. Subsidies to coal consumption in Indonesia, 2010–2019



Source: Fossil Fuel Subsidy Tracker, n.d.

TAXES

Indonesia imposes a 10% VAT on coal. In 2020, the GoI raised revenue from coal of IDR 45 trillion (USD 3.1 billion).[11] Additional revenue of IDR 49 trillion (USD 3.4 billion) per year could potentially be generated by applying a coal tax of IDR 78,700/tonne (USD 5.5/tonne) of all coal produced[12] (Sumarno & Laan, 2021).

TOTAL POTENTIAL REVENUES

With the current 10%VAT on coal, applying a coal tax and simultaneously reforming the coal subsidies could generate revenue around IDR 107 trillion (USD 7.4 billion) per year. This revenue could be allocated to COVID-19 recovery and be used for economic recovery and the energy transition. This amount could fully cover the health expenditure (IDR 56 trillion,

[11] Based on 2020 coal production of 537 million tonnes and 2020 coal price reference (MEMR, 2021).

[12] Based on the 2021 coal production target of 625 million tonnes (Reuters, 2021) and assuming zero elasticity.

roughly USD 3.9 billion) and some of the social protection spending as part of COVID-19 recovery packages (see Table 2).

3.3 How Much Money Can Be Raised for COVID-19 Recovery Budgets?

Table 2 summarizes the potential tax revenues and subsidy reform from transport fuels and coal, while Table 3 provides details on 2020 COVID-19 recovery expenditures. These tables show that the amount of money that could be raised from taxing and reforming subsidies on transport fuels and coal is almost half of the total COVID-19 recovery spending in 2020 of IDR 584 trillion (USD 40.6 billion). Reforming subsidies and taxing these fuels could generate IDR 261 trillion (USD 18.1 billion) per year. These revenues would fully cover both COVID-19 related social protection expenditure (thus compensating the poor for higher energy prices) and the health expenditure. The GoI could also allocate some of these revenues to support renewable energy development in Indonesia.

Table 2. Summary of potential tax revenues and subsidy reform from transport fuel and coal

	Yearly potential revenues	Amount (trillion IDR)
Transport fuels	Subsidy reform	73
	Current taxes[a]	50
	Proposed tax[b]	31
Coal	Subsidy reform	13
	Current taxes[a]	45
	Proposed tax[b]	49
Total		**261**

Notes: (a) For transport fuels: calculated based on total transport fuel consumption in 2019 (MEMR, 2020) multiplied by 2019 fuel prices (2020 was not considered as it was an atypical year for fuel consumption due to the COVID-19 crisis and the fall of international oil prices); for coal: VAT value (10%) applied on coal since 2020, multiplied by the total amount of coal production in 2020 (MEMR, 2021); (b) For transport fuels: proposed tax of IDR 500/litre; for coal: proposed tax IDR 78,700/ton.[13]

[13] These estimates are what is being proposed in the briefs *Fuelling the Recovery: How India's Path From Fuel Subsidies to Taxes Can Help Indonesia* (Laan et al., 2021) and *Taxing Coal to Hit the Goals: A Simple Way for Indonesia to Reduce Carbon Emissions* (Sumarno & Laan, 2021), and not an official number from the GoI. See main text of these briefs for details of calculations and assumptions.

Table 3. 2020 COVID-19 recovery expenditures

Element of COVID-19 recovery packages 2020[a]	Amount (trillion IDR)
Electricity subsidy as part of social protection	13
Social protection (excluding electricity subsidy)	182
Health	56
State-owned fossil-fuel enterprises' support as part of corporate finance support	95
Micro, small, medium-sized enterprises & corporate finance (excluding state-owned fossil fuel enterprises' support)	78
Priority program	104
Business incentives (tax)	56
Total	**584**

Notes: (a) Actual/realization of 2020 COVID-19 recovery budget (MoF, 2021a).

4.0 What About Subsidy Reform and Taxation for Production and for Other Fuels?

This brief recommends the taxation and reform of subsidies to gasoline, diesel, and coal as effective (and administratively straightforward) ways to raise revenue and impose a de facto carbon price. But it does not imply that reform of producer subsidies[14] or price reform for other fuels are not also urgently needed. Indonesia subsidizes the production of oil, gas, and electricity as well as the consumption of electricity and other fossil fuels, such as liquefied petroleum gas (LPG).[15] In total, quantified fossil fuel subsidies in Indonesia were IDR 124 trillion (USD 8.6 billion) in 2019, but production subsidies are underestimated (Fossil Fuel Subsidy Tracker, n.d.).

The priorities presented in this report are based on socio-economic impacts, feasibility of implementation, and capacity to incorporate externalities in consumer prices. More transparency is needed when it comes to production subsidies in Indonesia, as many are not quantified (OECD, n.d.). Not being able to quantify a subsidy should not prevent reform if the impacts are known to be negative (such as locking in new fossil fuel supply in a carbon-constrained world). But lack of quantification does make it hard to estimate the impacts of reforms on government revenue and end-user prices; these were thus considered to be out of the scope of this brief.

[14] In addition to coal, Indonesia produces oil and gas, though it is a net importer of oil (MEMR, 2021).

[15] Only the 3 kg canisters are subsidized, not the 5.5 kg or 12 kg ones. However, 89% of total LPG consumption in 2019 was in the form of the 3 kg cannister, costing the government IDR 58.1 trillion (USD 4 billion) in 2019 (43% of all energy subsidies) (Directorate General of Oil and Gas, 2021).

Reform of electricity or LPG subsidies can also be complicated, as they are important for energy access for the poor. Rapid price increases could cause energy poverty and a switch to more-polluting fuels (such as biomass or kerosene). The reform of these subsidies should prioritize protecting vulnerable consumers and not damaging socio-economic development. In April 2021, the Budget Committee (Banggar) of the Indonesian House of Representatives agreed on a reform of the LPG and electricity subsidy. It announced that, from 2022, the subsidies in each case would be given directly to poor customers (i.e., on a consumer instead of commodity basis) (MoF, 2021b).

5.0 Higher Taxes Mean Higher Energy Prices: How can this be done in a socially responsible way?

The proposed subsidy reform and taxation on transport fuel and coal could drive consumers to move away from fossil fuels to cleaner energy sources. However, these also would increase the energy price and are likely to be passed on to consumers. To help compensate for the effects of higher prices, the GoI could potentially use the subsidy savings and tax revenues to help vulnerable customers (households or industries), to accelerate economic recovery, to support renewable energy development in the country, as an alternative to coal power generation (Sumarno & Laan, 2021), and to ensure the just transition in the country. Policies can be developed with employers, employees, and stakeholders to ensure a smooth transition and best outcomes (Sanchez et al., 2021).

Around 64% of Indonesian electric power generation is sourced from coal (PLN, 2021) so that an increase in coal price due to a tax or subsidy reform will affect the cost of electricity. This leaves two options:

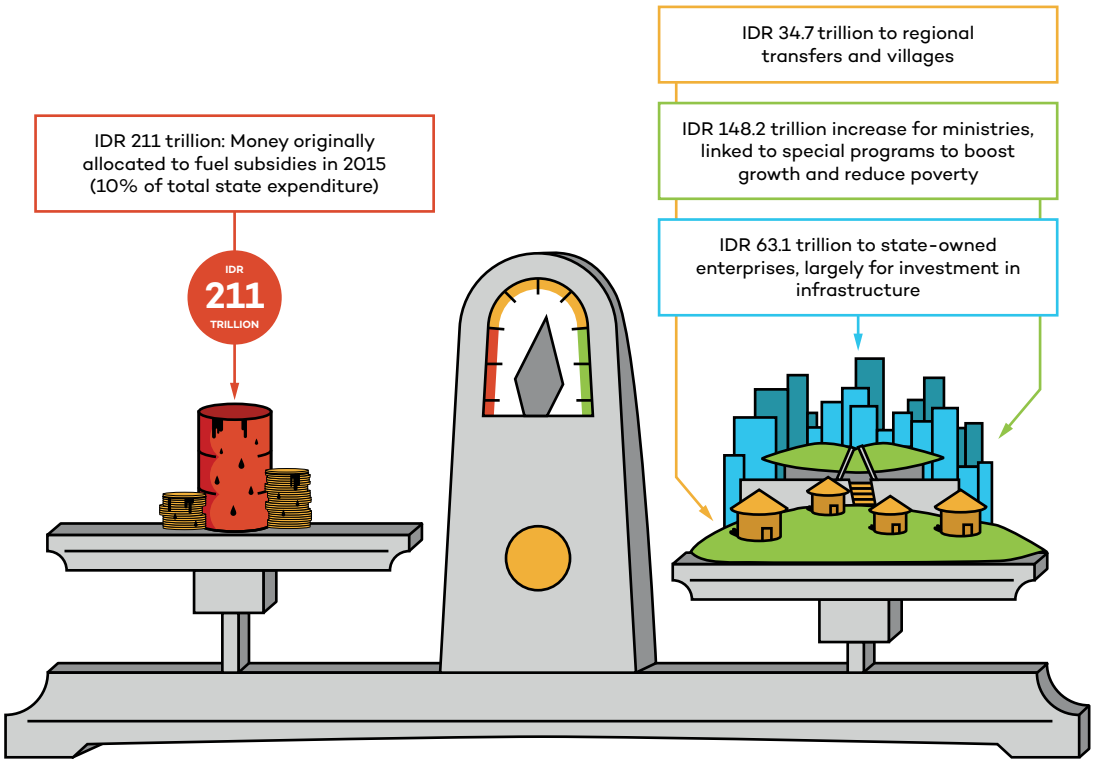
- PT PLN has to absorb the increased costs—worsening its already vulnerable financial status (Suharsono et al., 2021)
- PT PLN passes on the costs to consumers (Sumarno & Laan, 2021).

Currently, 74% of the electricity subsidy benefits rich households (TNP2K, 2021b). A coal tax of IDR 75,000 (USD 2.20) per tonne of coal would increase electricity prices by around 3% (Sumarno & Laan, 2021). This price rise should not be a problem for middle- and upper-income groups, for whom price rises could trigger beneficial energy-saving measures or consideration of alternatives such as installing rooftop solar panels. However, higher electricity tariffs could sink poorer households into energy poverty or force them to switch to other, more-polluting fuels for lighting, so that targeted measures have to be put in place to support these groups.

Furthermore, both reforming subsidies and implementing taxes on transport fuels can increase energy prices and potentially the overall prices for final goods (Marron & Toder, 2013). Road transport is the sector most affected when fuel prices increase (Setyawan, 2014). The increase in transport fuel prices affects all economic sectors, which could lead to national inflation (Abbas, 2002; Setyawan, 2014). Energy price reform can affect the costs in the value chain and eventually increase the final price of products or lead to energy poverty if not conducted properly (Setyawan, 2014).

The GoI needs to address this by better targeting subsidies. There are many examples (such as in Ghana or Morocco) of governments using fossil fuel subsidy reform to implement effective social programs (Sanchez et al., 2020) and others (such as India) that used reform to better target subsidies (Sharma et al., 2020, 2021). Indonesia followed a similar approach in 2014. In 2014, the GoI took the opportunity of a decline in international oil prices to reduce its gasoline and diesel subsidies, which resulted in government savings of IDR 211 trillion (USD 14.6 billion) (Pradiptyo et al., 2016). The GoI spent the majority of the savings on social protection and infrastructure programs (see Figure 2). However, price subsidies for transport fuels escalated again as the gap between government-determined prices and market prices widened.

Figure 2. Fuel subsidy savings and major increases in expenditure in Indonesian Revised State Budget 2015



Source: Pradiptyo et al., 2016.

This strategy may be difficult to replicate at this point in time, when energy prices are increasing. While this may trigger an increase in subsidies to help the poor, this could also generate more revenues from taxing fossil fuels, and the GoI could allocate these revenues to soften the blow from subsidy reform and the increase in energy prices.

In addition to subsidy targeting, countries can also plan for price reform in order to minimize the impacts on the public. Strategies include implementing a price adjustment formula for when the international oil prices increase to smooth price volatility (McCulloch et al., 2017). The GoI could also implement a gradual approach, implementing reform when energy prices are lower or shifting support to renewables or energy efficiency in order to provide more sustainable and, over time, cheaper alternatives (Sanchez et al., 2020). These reforms require

transparency and strong social safety programs from the government (McCulloch et al., 2017). Hence, the GoI should carefully plan the reform and communicate this to society to build trust and confidence while also explaining how revenues from subsidy saving and taxes would be used to benefit the public.

6.0 Conclusions and Recommendations

In 2022, Indonesia has the opportunity to lead the G20 climate and energy agenda by setting a positive example. The reform of subsidies to—and taxation of—transport fuels and coal is consistent with G20 commitments on the energy transition and can contribute to economic recovery while protecting the poor, as well as to achieve nationally determined contribution targets and the United Nations Sustainable Development Goals. The following are our recommendations:

- **Reform transport fuel subsidies while also implementing modest tax increases on these fuels.** In fact, imposing a higher tax on these fuels could be done before phasing out the fuel subsidies (Laan et al., 2021). Higher taxes mean higher energy prices but also higher tax revenues. The government could spend these revenues to strengthen social protection programs in the country.
- **Remove subsidies for coal and implement a coal tax, while also pursuing a carbon tax in the future.** A coal tax is easier to administer than a carbon tax, and it does not require negotiation with all carbon-intensive industries other than those that use coal as their main energy source. A coal tax can raise revenue for the GoI and encourage industries to replace coal with alternative, cleaner renewable electricity sources (Sumarno & Laan, 2021).
- **Prepare to take advantage of low international prices when they arise**, which allow reforms to be undertaken without significantly affecting consumer fuel prices. At the same time, communication campaigns and engagement with the public are needed to explain the price reform and its advantages to minimize the risk of protests and backsliding once energy prices rise (Laan et al., 2021).
- **Reconsider coal DMO policy in Indonesia.** The current coal DMO policy (USD 70/ton) hides the true cost of electricity in Indonesia. According to the International Renewable Energy Agency (2021), the levelized cost of solar photovoltaic and wind power has fallen over the past decade and is now USD 0.03/kWh. This is below the current subsidized coal-fired power plant costs in Indonesia of USD 0.08/kWh (International Renewable Energy Agency, 2021). Reforming the DMO policy in Indonesia could reveal the true costs of coal-fired power plants, provide a level playing field for renewable energy, and accelerate its adoption as part of Indonesia's economic recovery.
- **Use the money raised from energy taxes and subsidy reform to help the poor, accelerate economic recovery, and fuel the energy transition.** Higher energy prices can directly affect poor consumers and industries. The GoI can redistribute the money to the poor and vulnerable who would suffer from energy price increases by establishing or strengthening social protection systems in the country. The GoI can also promote the energy transition shifting support from fossil fuels to renewable energy development and ensuring a just transition that includes workers and communities.

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