



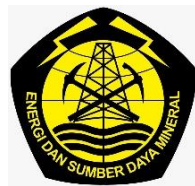
Indonesia's Effort to Phase Out and Rationalise Its Fossil-Fuel Subsidies

A self report on the G-20 peer review of inefficient fossil fuel subsidies
that encourage wasteful consumption in Indonesia



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Ministry of Energy and Mineral Resources
Republic of Indonesia



Ministry of Finance
Republic of Indonesia

2019



Preface


G20 and APEC Leaders committed in 2009 to “rationalise and phase out inefficient fossil fuel subsidies that encourage wasteful consumption over the medium term while providing targeted support for the poorest.” To follow up on this commitment, members of both groups have since engaged in a voluntary process of periodically reporting on their fossil-fuel subsidies.

Indonesia and Italy announced in 2017 that they would undertake a reciprocal peer review of their fossil-fuel subsidies under the auspices of the G20. With China and the United States setting the precedent for these peer reviews as the first countries to participate in such an undertaking, and Germany and Mexico as the second one, Indonesia and Italy are the third pair of countries to follow suit. The two countries negotiated terms of reference in the months that followed their decision, and proceeded to invite other countries and international organisations to take part in the review. In this case, Indonesia invited Italy, Germany, Mexico, China, New Zealand, World Bank, International Energy Agency (IEA), International Institute for Sustainable Development (IISD), and the OECD as a reviewer team. The OECD was also asked to chair the review, and to act as a co-ordinator and facilitator among the participants.

This report is an outcome of this peer-review process, reflecting the review team's in-person discussions with Indonesian officials, but also deliberations among the review team itself. After summarising the key aspects of Indonesia's energy landscape, the report addresses each stage of the supply chain for fossil fuels, discussing in detail the subsidies (and other measures) that Indonesia and the review team have identified in the course of the review process, as per the terms of reference negotiated between Indonesia and Italy.

As indicated in the terms of reference prepared by Indonesia and Italy, the purpose of G20 peer review is to:

1. find out the basic situations, differences and experience of fossil fuel subsidies in various countries;
2. push forward the global momentum to identify and reduce inefficient fossil fuel subsidies;

- 
3. improve the quality of available information about inefficient fossil fuel subsidies; and
 4. share lessons and experience of relevant reform.

This report covers two types of inefficient fossil fuel subsidies. First, the most direct and relevant are those that involve pricing below opportunity cost in the international markets. Second, for comparison with peer-review reports from other G20 members, this report documents Indonesia's tax incentives for its oil and gas sector. These are considered inefficient subsidies because they encourage the supply of fossil fuels, which in turn leads to increase consumption.

The next section, provides an overview of the energy sector in Indonesia; Indonesia's fossil fuel subsidy from the 2014 reforms onwards and highlights the impact of reforms; explanation on how Indonesia managed to make the recent reform happen, and the rest of the report concludes with Indonesia's efforts to shift consumption of fossil fuels to renewable energy.

The Indonesian's Self Report is product of Ministry of Finance and receives strategic guidance from the Minister of Finance and the Chief of Fiscal Policy Agency, and chaired by Dr. Hidayat Amir, Director for State Budget Policy. The report is prepared by Zulvia Dwi Kurnaini (Deputy Director for Subsidy Policy, as the lead author), the core project team consists of Hesty Handayani (Senior Analyst), Febri V. Pasaribu (Junior Analyst), Moch. Irfan (Junior Analyst), M. Olgiano Paellorisky (Junior Analyst), Gilang B. Utomo (Junior Analyst). This report includes contributions from Directorate General of Tax, Directorate General of Customs and Excise, and Center for Climate Change and Multilateral. The report also benefited from discussions with Ministry of Energy and Mineral Resources, Ministry of Environment and Forestry which represented by Muhammad Rizwi J. Hisyam (Directorate General of Oil and Gas - MEMR), Andriah Feby Misna and Elis Heviati (Directorate General of New Renewable Energy and Energy Conservation - MEMR), David F. Silalahi (Directorate General Oil of Electricity - MEMR), Emma Rahmawati (Directorate General of Climate Change - MoEF).



Acronyms & Abbreviations

CNG	Compressed Natural Gas
FPA	Fiscal Policy Agency
GDP	Gross Domestic Product
GHG	Greenhouse gas
GW	Giga-Watt
ICP	Indonesia Crude Oil Price
IMF	International Monetary Fund
IPP	Independent Power Producer
KL	Kilo-Liter
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MEMR	Ministry of Energy and Mineral Resources
MoEF	Ministry of Environment and Forestry
MoF	Ministry of Finance
MTOE	Million Tons Oil Equivalent
NDC	Nationally Determined Contributions
OECD	Organization for Economic Co-operation and Development
Organda	The Indonesian Land Transport Operators Association
PKH	Hope Family Program, a kind of Conditional Cash Transfer (CCT). Social protection program through providing cash assistance for



targeted family by fulfilling particular requirements related to education and health

PLN	State Electricity Company
PLTD	Diesel Power Plant
PIP	Smart Indonesia Program, cash transfer for education
PP	Government Regulation
RASTRA	Unconditional Cash Transfer, providing cash assistance for targeted family to buy rice
RON	Research Octane Number
RTM/RTS	Poor Household/Targeted Household
RUEN	General Plan of National Energy
SOE	State-owned enterprise
SUKUK	Sharia Government Bonds
SUSENAS	National Socio-Economic Survey
TTL	Base Electricity Tariff
USD	United States dollar
VA	Volt Ampere



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Chapter 1 Introduction

Globally, fuel subsidies have been recognized as a source of wasteful spending and harmful emissions of greenhouse gases (GHGs) and pollutants. Therefore, at the 2009 Pittsburgh meeting, the G20 Leaders declared their intention to rationalize and phase out inefficient fossil fuel subsidies. As a member of the G20, Indonesia has a strong commitment to phase out its own fossil fuel subsidies. In addition, the Indonesian government has also committed to supporting CO₂ reduction, as called for at the 21st Conference of the Parties (COP21) in Paris in December 2015.

Apart from its international commitments, Indonesia also needs to reduce its fuel subsidies because the relatively cheap fuel has stimulated increased consumption by consumers. Indonesia has recognized the large budgetary costs of these subsidies, and has attempted to allocate subsidies more efficiently. During the 2000–14 period, these subsidies accounted for 10–20 percent of total central government expenditure, equivalent to around 3 percent of GDP. The great change occurred in January 2015, when Indonesia started to reform its energy subsidies policy, particularly for gasoline. Nonetheless, because the government still depends on revenue from the oil and gas sector, it continues to provide tax incentives to encourage upstream activities.

This report forms part of a peer-review process that was installed voluntarily within the G20, including in Indonesia. In 2017, Mexico and Germany finished their peer-review process, as did China and the United States in 2016. Their reports have provided valuable material on the efforts undertaken and the challenges that remain in phasing out fossil fuel subsidies. This self-report outlines Indonesia's journey in reforming fossil fuel subsidies, how the reformation has been implemented, as well as how the negative impacts of the policy have been addressed. Its intent is to help other G20 countries understand the Indonesian experience in phasing out its inefficient fossil fuel subsidies, and to draw lessons from that experience.

This report covers two types of inefficient fossil fuel subsidies. First, the most direct and relevant are those that involve pricing below opportunity cost in the international markets. Second, for comparison with peer-review reports from other G20 members, this report documents Indonesia's tax incentives for its oil and gas sector. These are



considered inefficient subsidies because they encourage the supply of fossil fuels, which in turn leads to increase consumption.

The next section, Chapter 2, provides an overview of the energy sector in Indonesia. Chapter 3 focuses on Indonesia's fossil fuel subsidy from the 2014 reforms onwards, and highlights the impact of reforms. Chapter 4 explains how Indonesia managed to make the recent reform happen, and the rest of the report concludes with Indonesia's efforts to shift consumption of fossil fuels to renewable energy. Chapter 5 describes the future subsidy policy and the next steps to mitigate the impact of climate change.

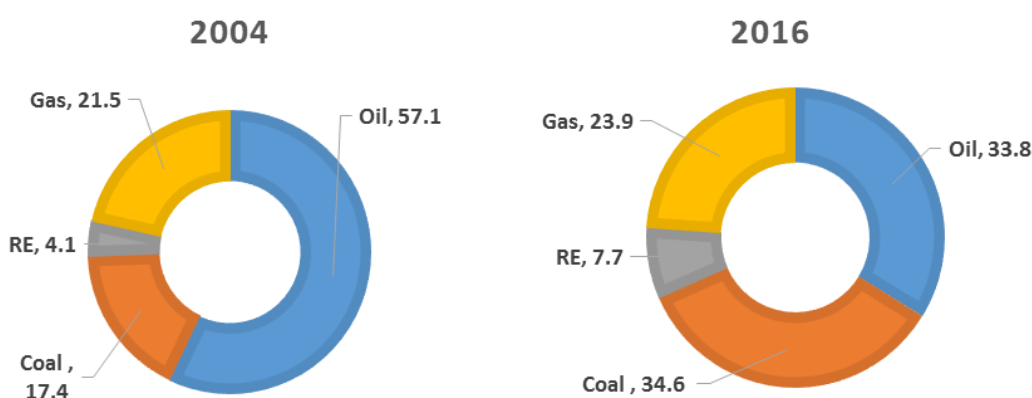


Chapter 2 Overview of Energy Sector in Indonesia

2.1 Energy Resources and Market Structure


In 2016, Indonesia's primary energy supply from both domestic production and imports mostly comprised oil (33.8 percent), coal (34.6 percent), and natural gas (23.9 percent). A variety of renewable energy resources contributed the remainder (7.7 percent), as shown in Figure 2.1.

Figure 2.1 Primary Energy Supply in Indonesia, 2004 vs 2016



Source: Ministry of Energy and Mineral Resources, 2017

The country has significant fossil and renewable energy resources. Indonesia was once a major producer of oil and gas, but crude oil production has been in decline since 1995 (1.6 million barrels a day), and production of natural gas has plateaued in recent years (BP 2015). This has led to an increasing reliance on costly imports of crude oil and petroleum products. Indeed, the country has been a net oil importer since 2004. It consequently cancelled its OPEC membership in 2009 and currently produces about 804 thousand barrels a day. Meanwhile, natural gas resources are still a reliable commodity to sustain the country's foreign exchange. Indonesia also continues to export natural gas to fulfil long-term contractual obligations. However, the higher domestic demand for natural gas, coupled with a succession of production problems led the country to import



liquefied natural gas (LNG) and to initiate the construction of new LNG terminals and gas-transmission pipelines.

On the other hand, Indonesia became the world's largest exporter of coal in 2013 (IEA 2014), even though it has only a small proven reserve of coal. Policy makers recently curbed the rate of coal extraction as part of a ban on mineral exports. That ban was intended to officially control the rate at which reserves are consumed and to promote more added-value from extractive industries domestically.

Indonesia's upstream oil and natural gas sector is dominated by international oil company, though state-owned companies retain a leading position in the downstream sector. As of early 2018, Chevron was the largest oil producer in Indonesia, accounting for about 28 percent of domestic crude oil production, while Total and BP Tangguh together produced nearly half of Indonesia's natural gas output. The state-owned oil company, Pertamina, thus accounted for only 17 percent of domestic crude oil production, and through its subsidiary Pertamina Gas, for only 13 percent of natural gas production. This contrasts with the downstream segment, where Pertamina operates nearly all of Indonesia's nine refineries and currently distributes almost all subsidized fuel. However, domestic refining capacity (1.1 million barrels per day) falls short of the country's rising petroleum consumption, which crossed 1.6 million barrels in 2013. As a result, the MEMR unveiled plans to build three refineries to refine more imported crude oil. The decline in domestic oil and gas production needs to be addressed with caution. In the medium term, the impact of low exploration and exploitation activities threaten the independency of national energy sustainability.

Indonesia is the third-largest geothermal energy generator in the world after the United States and the Philippines. In addition, Indonesia has also promoted the production and consumption of biofuels in order to replace a part of its oil imports. Currently, the country is the largest biodiesel producer in Asia, reaching an output of roughly 370,000 barrels per day according to the U.S. Department of Agriculture. Of this, about a third was blended within Indonesia and the remainder exported (IEA 2014). The government mandated that 20 percent of the fuel used in the industry and transport sectors and 30 percent of diesel used in the power sector be blended with biodiesel by 2016.

In line with its rich energy resources, Indonesia has been one of the better-performing nations in Southeast Asia in terms of energy access. There have been significant reductions in the population without access to clean fuels and stoves for cooking in countries with dedicated policy initiatives, in particular China, India, and Indonesia. This




decline is driven by a mix of economic growth; urbanization; greater availability of LPG, natural gas, and electricity; and stronger policy efforts to promote modern fuels and improve cook stoves, motivated by the goals of reducing household air pollution and environmental degradation (IEA 2017). Likewise, electricity access in Indonesia has improved. Although being a large archipelago nation presents a big challenge in reaching targets, an electrification ratio of 95.4% was achieved in 2017, higher than in 2016, when it was about 91.2%.

2.2 National Energy Sector

The needs to reform national energy sector in Indonesia is motivated by internal and external considerations. The internal factors are determined by the depleting fossil fuel resources and the pressure on the national budget as a result of energy subsidies. The Government of Indonesia (GoI) has designed a set of regulations to manage its energy sector. The Energy Law No. 30/2007 has laid a foundation to reforming the energy sector by encouraging renewable energy utilization. Further, Government Regulation No. 79 of 2014 on National Energy Policy (KEN) makes a commitment to reduce dependency on fossil fuels. To achieve KEN's targets, President Regulation No. 22/2017 on the General National Energy Plan has been introduced. On the other side are external factors in the form of international commitments to reducing GHG emissions under the United Nations Framework Convention on Climate Change (UNFCCC) framework; and to phasing out fossil fuel subsidies among G20 member countries. The commitments have been formally recognized by Indonesia in the Presidential Regulation No. 61 of 2011 on the National Action Plan for Green House Gas Emission Reduction (RAN GRK).

2.3 Stakeholder Analysis

A stakeholder analysis of the Indonesian energy sector's policy making is necessary to measure the complexity level of governance. The primary governing body in the sector is the Ministry of Energy and Mineral Resources (MEMR), which is headed by a Minister and a Vice Minister. It is one of the few ministries that has an additional high-level official position at the top. In addition, some ministries have authority roles on energy sector as follows: Two coordinating ministries (the Coordinating Ministry of Economic Affairs and the Coordinating Ministry for Maritime Affairs), five ministries (the Ministry of Finance, the National Development Planning Agency (BAPPENAS), the Ministry of State-Owned Enterprises, the Ministry of Environment and Forestry, Ministry of Public Works and Housing), and one agency (National Energy Council). Those



ministries and agency are overseeing some aspects and projects on oil and gas, renewable energy, and electricity.

2.4 Energy Pricing Subsidies

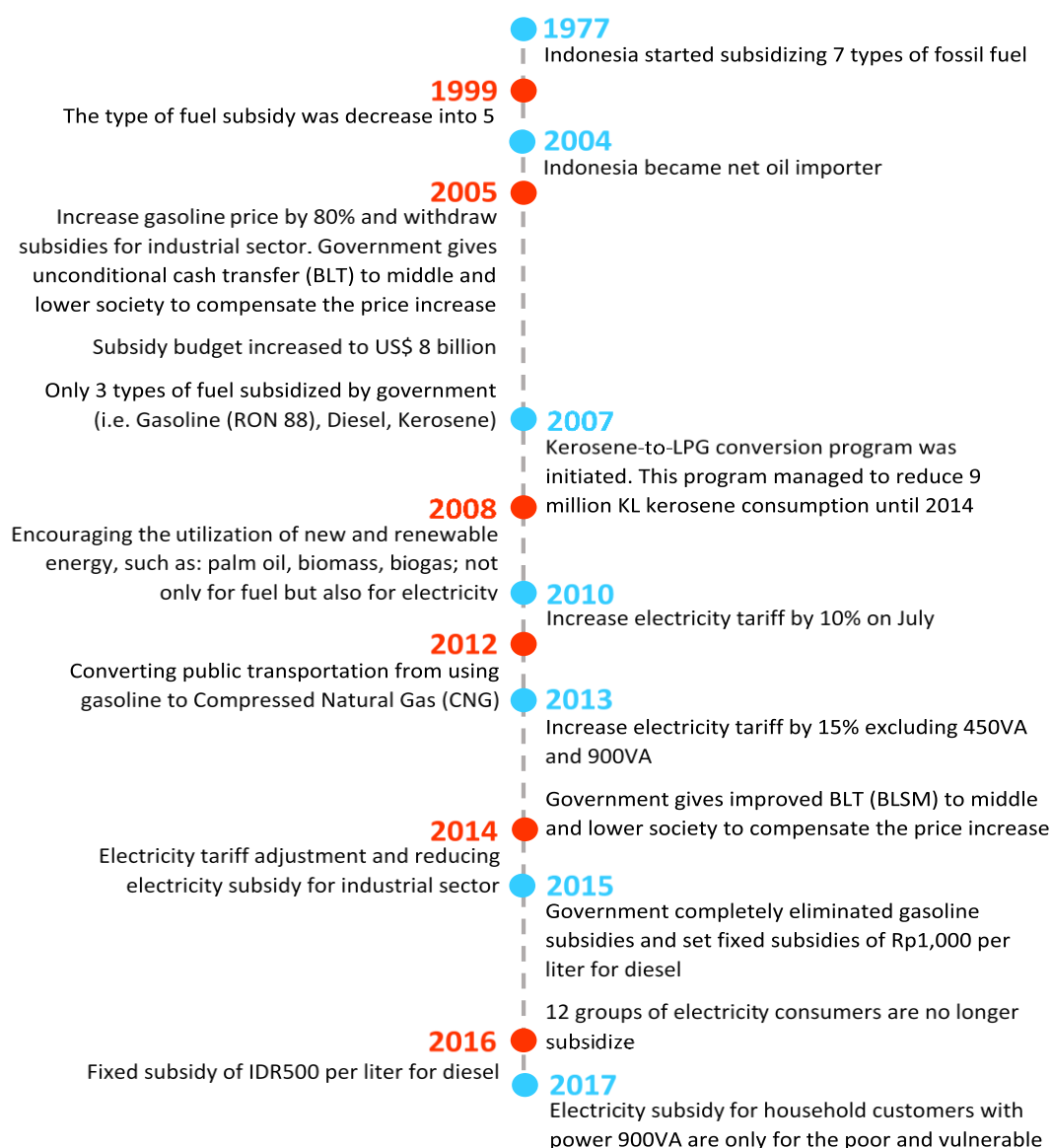
The Indonesian government has attempted to reform gasoline and diesel subsidies numerous times since the beginning of 21st century. After five ad hoc price increases and three ad hoc price decreases (see Figure 2.2), the government took bold steps to reform the subsidy policy by changing the pricing formula and adjusting prices more frequently.

The government has a mandate to provide affordable energy supply the poor, and hence subsidies are designed to be more targeted. There were seven types of fuel which sold at subsidized prices in the 1970s¹: aviation kerosene (i.e., jet fuel), aviation gasoline, marine fuel oil, industrial and marine diesel oil, diesel, gasoline (RON 88), and kerosene. However, since 1999, aviation kerosene and gasoline have not been subsidized. As time went by, to protect people from price fluctuation, the government maintained the price of fuel at a very low level (below USD 0.20 per liter) until 2005.

¹ Financial Note and State Budget year 1977/1978



Figure 2.2 General Timeline of Petroleum Products and Electricity Subsidy Reform in Indonesia



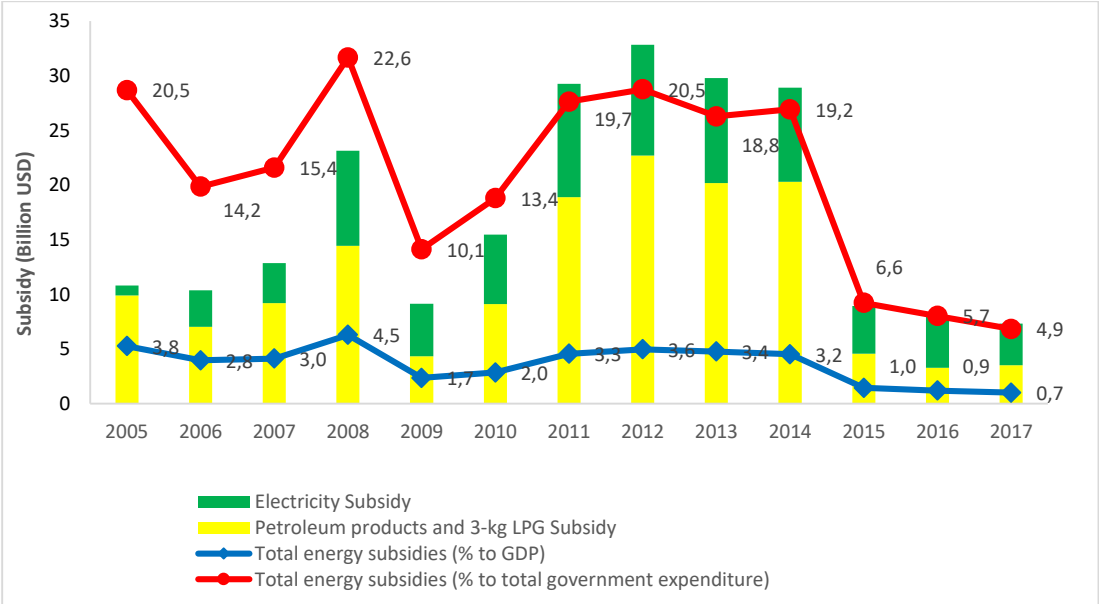
Since 2005, only three types of fuel have been subsidized: RON 88/Premium, kerosene, and diesel. The total subsidy spending on gasoline, diesel, and kerosene increased from USD 6.3 billion in 2000 to USD 9.9 billion in 2005. This subsidy spending affected the state budget allocation negatively as the subsidy became costlier, creating less fiscal space for other allocations of government spending. The surge of world oil price simultaneously heightened this condition, and thus the government increased fuel price by 30%, then revoked subsidies on gasoline and diesel for the industrial sector in November 2005.

On 17 November 2014, Indonesia’s new government hiked gasoline prices by around 31 percent and diesel by 36 percent. Only a month and a half later, it announced a second set of reforms. In January 2015, the government decided to completely abolish the subsidy for gasoline (RON 88) in the Java-Madura-Bali area (central Indonesia), and set a fixed subsidy for diesel at IDR 1,000 (±USD 7.5 cent) per liter below the market prices. The all gasoline subsidies were removed in other areas of the country, except those related to distribution costs. Chapter 3 will elaborate on the nature of these reforms.

Before the 2015 reforms, Indonesia’s subsidy expenditure was mostly directed towards energy subsidies, comprising petroleum products (gasoline, diesel, and kerosene), 3-kg LPG, and electricity subsidies. In 2014, gasoline subsidies made up 9.0 percent of all central government expenditure, diesel subsidies 6.2 percent, 3-kg LPG 4.0 percent, kerosene 0.6 percent, and electricity 8.5 percent. In the 2005–14 period, these accounted for 10–20 percent of total central government expenditure, equivalent to around 3 percent of GDP (see Figure 2.3).

Following the energy reforms of 2015, prices of gasoline and electricity for large-scale business and medium-high level of residential consumers are being reformed to increasingly align with market prices. However, the prices of other petroleum products (diesel, kerosene), 3-kg LPG, and electricity for poor household consumers still remain well below average cost.

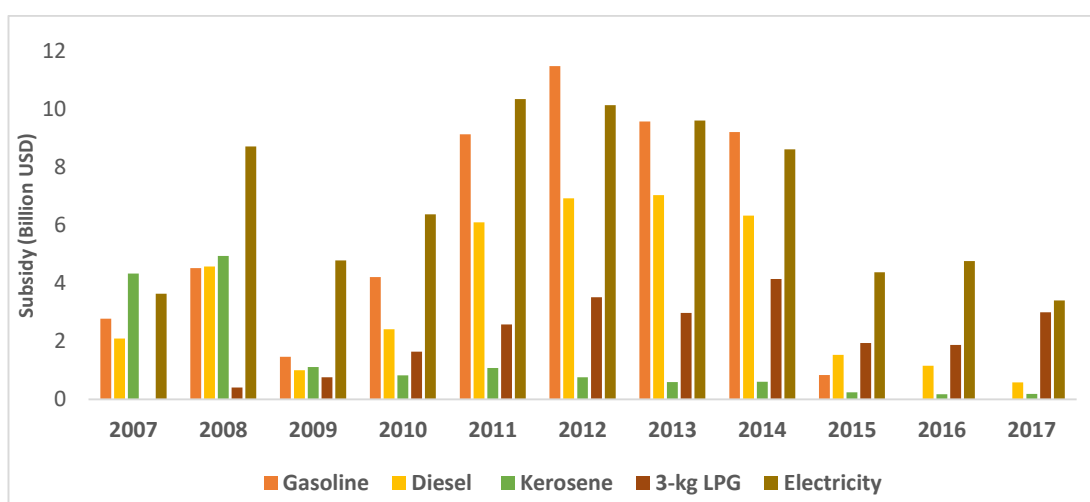
Figure 2.3 Government Spending on Energy Subsidies, 2005–17



Source: LKPP 2005–17, Ministry of Finance



Figure 2.4 Petroleum Products, 3-kg LPG, and Electricity Subsidy Expenditure



Source: Ministry of Finance, multi-years


On the other hand, in order to promote clean and efficient energy use, Indonesia started a kerosene to LPG conversion program in 2007. Unfortunately, as demand increases, the 3-kg LPG subsidy continues to increase over the years: the value of subsidies for 3-kg LPG, which was only IDR 14.8 trillion (USD 1.6 billion)² in 2010, more than tripled to IDR 48.9 trillion (USD 3.9 billion) in 2014 (Figure 2.4).

Meanwhile, in the electricity sector, the system is dominated by a vertically integrated monopolist, PLN, along with a few IPPs selling power to PLN. Power consumption has been growing rapidly because of income growth and more connections to the electricity grid. In addition, the increase in electricity subsidy budget is influenced by the increase in ICP and the exchange rate. Since 2014, the government has begun to gradually implement adjustment tariffs for large-scale industries, and continues to be more targeted.

2.5 Tax incentives

Rapid economic growth drives a sharp increase in energy demand. Energy consumption, which includes oil, gas, and coal in Indonesia, has increased up to 5.9% in 2016. Data show that Indonesia's energy consumption reached 175.04 million tons oil equivalent (MTOE) from 164.83 MTOE a year earlier. The level of consumption has doubled in the last 20 years, especially in the last 5 years. Energy demand is growing faster than GDP growth, which is at around 5%. Indonesia has sustained its economic growth despite the decline

² The exchange rate used in this document is IDR14,000/USD.



of oil production, and has remained an oil producer as well as an exporter. Hence, the government provides some incentives to the upstream industry.

The incentives are in the form of a tax allowance, tax holiday, and exemptions on VAT, sales tax on luxury goods, duties on imports of equipment, and on the land and building tax for certain oil and gas industries. All these incentives are to encourage oil and gas companies to undertake exploration and exploitation activities, and to increase the national production of oil and gas to boost non-tax revenues from natural resources. In 2016, the non-tax revenue from the oil and natural gas industry contributed IDR 63.3 trillion (USD 4.8 billion), or 4% of total central government revenue, while income tax payments by the industry contributed IDR 35.9 trillion (USD 2.7 billion), or 2% of total central government revenue. The introduction of these incentives means that there are potential revenue losses that cannot be compensated, so it can be categorized as a subsidy in a broad sense. Indonesian tax incentives for the oil and gas industries are described in Appendix 3.

2.6 Why Indonesia Should Carry out Fossil Fuel Subsidy Reform

The Indonesian government has realized that it is important to reduce fossil fuel subsidies to achieve greater environmental and fiscal sustainability and has attempted to reform the fuel subsidy policy numerous times since the beginning of the century. This process has not been easy because reforming the subsidy policy is not only a technical issue but also a political one. The reform proposals need the support of the public and of politicians, as well as clear and repeated communication of the rationale for reform is crucial.

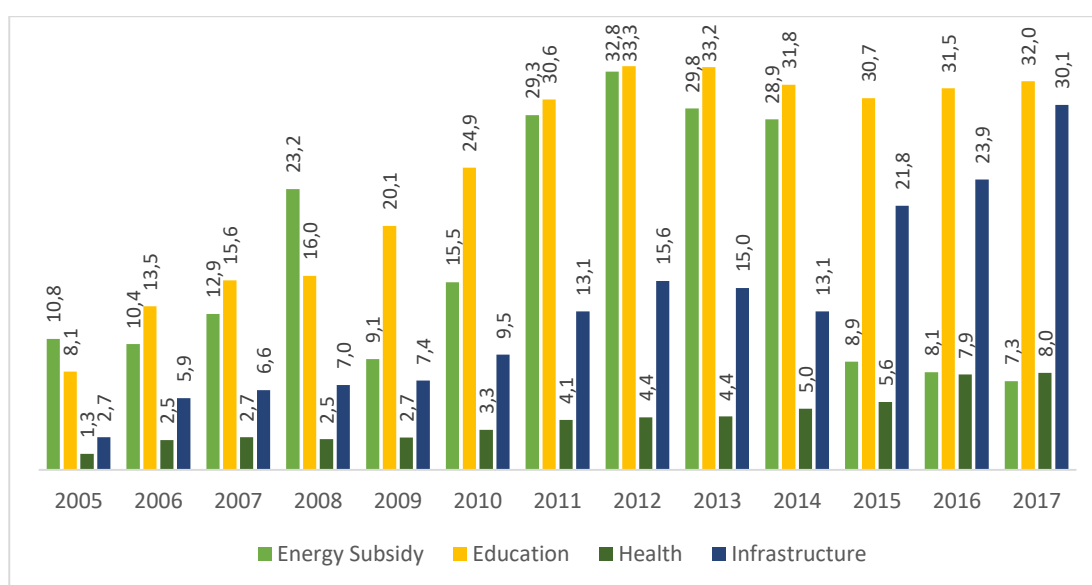
Reforming fossil fuel subsidies is a global action aimed at cutting government spending on fuels that contributes to emissions of GHGs and pollutants. Fuel subsidies, if targeted well, can help reduce the burden of international oil prices on the poor; on the other hand, the budgets for such subsidies tend to increase over time, ultimately putting pressure on fiscal capacity. Accordingly, phasing out subsidies gradually allows a country to expand its fiscal space, and to redirect funds to long-term investments in essential public services – such as infrastructure, education, health, and social protection – that are beneficial for economic growth and development. Some of the arguments supporting subsidy reform policy include:

1. **Limited fiscal space.** The budget allocation for energy subsidies, which consists of subsidies to petroleum products, electricity and 3-kg LPG, have accounted for 20% of



Indonesia's central government budget from 2008 to 2014. Energy subsidy spending was much higher than other productive sectors which aimed to promote economic growth and help the poor. Since 2009, the state budget mandated that 20 percent of government spending should be for education. This portion and other non-discretionary spending such as personnel and operational expenditures further reduced the fiscal space available in the state budget. This limited fiscal space makes the budgetary allocation difficult for other productive spending, such as for health, infrastructure, and social assistance, which would be beneficial for leveraging economic growth and alleviating poverty.

Figure 2.5 Spending on Energy Subsidies Compared to Productive Sectors, 2005–17 (USD Billion)³



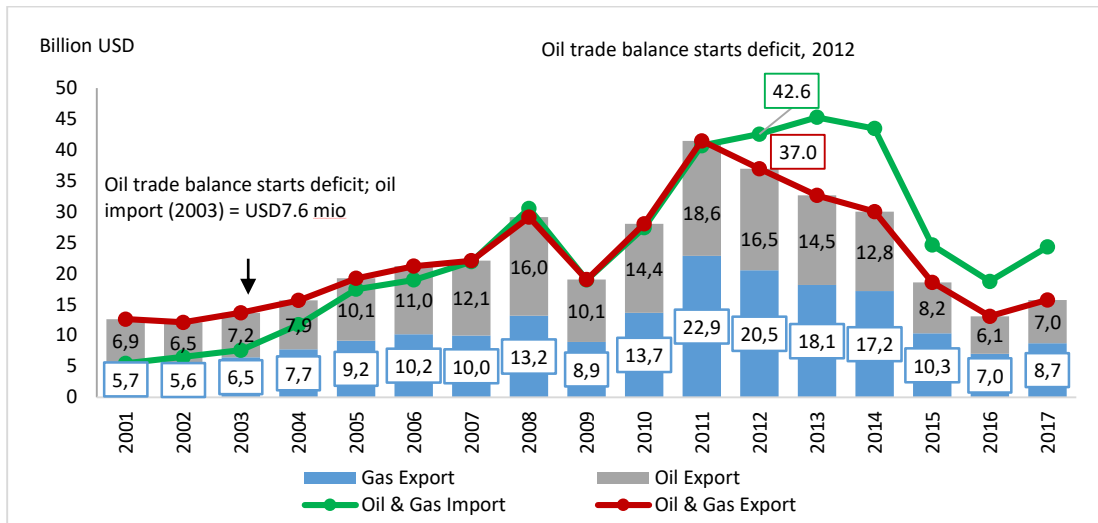
Source: Ministry of Finance

2. **Indonesia transforms from net exporter to net importer of oil.** In the past ten years, Indonesia has experienced stable and sustainable growth (between 4.5 and 6.5 percent per annum). This relatively high economic growth has in turn stimulated a higher demand for energy. Unfortunately, domestic oil production has been declining in the last two decades in the midst of growing energy demand. Oil imports are therefore needed to fill the demand gap which has resulted in Indonesia becoming a net importer of oil since 2003. Although the gas trade balance still records a surplus, its export performance started to decline in 2011. Thus, the oil and gas trade balance has

³ Energy subsidy numbers are on actual spending, others are on budget.

begun to record a deficit for the first time in 2012, which has resulted in a deficit in Indonesia's overall trade balance.

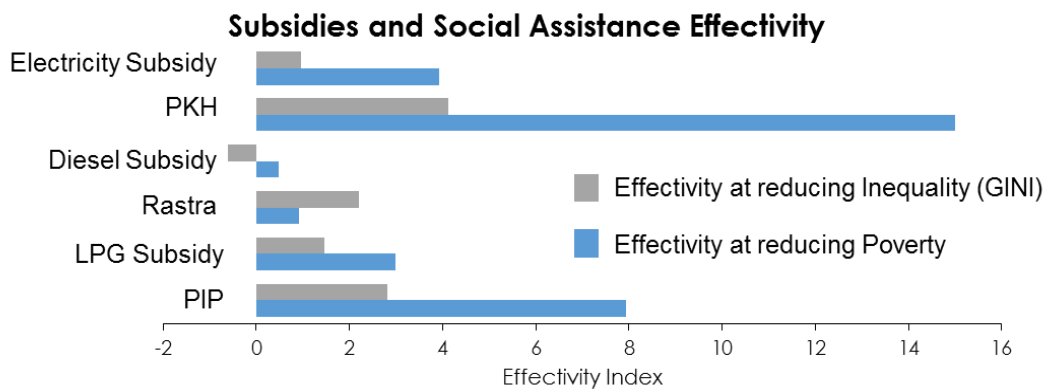
Figure 2.6 Export and Import of Oil and Gas



Source: Indonesia Statistic Bureau, 2017

3. Indonesia's fossil-fuel subsidy budget is poorly targeted. Fuel subsidy spending has a relatively low impact on reducing income inequality, as measured by the GINI coefficient. Figure 2.7 below shows that fuel subsidies are far less effective at reducing poverty and inequality than other social assistance programs such as the Family Hope Program (PKH) and PIP scholarships for the poor. Electricity and 3-kg LPG subsidies do reduce both poverty and inequality, but considering the amount needed and compared with other social assistance programs, its effectiveness is low. Meanwhile, the diesel subsidy reduces poverty only by a very small amount and is even regressive towards inequality.

Figure 2.7 Effectiveness of Subsidies and Social Assistance



Source: Ministry of Finance, 2016



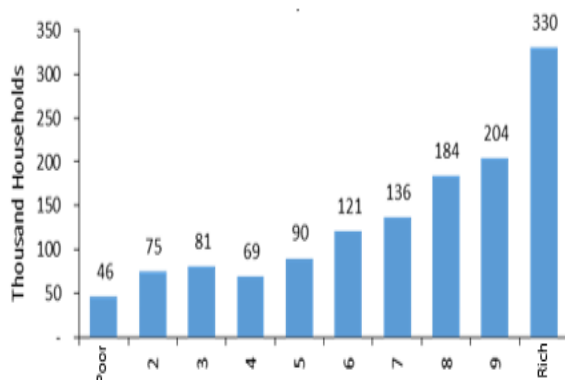
The poor targeting of electricity subsidies is evident from the fact that large-scale industries also benefit from them, and not only households. According to data from the Ministry of Energy and Mineral Resources, in 2013, some 24 percent of the total electricity subsidy was enjoyed by 10,931 large-scale industrial group customers (I3 and I4), while 39.5 million small household customers (using 450 VA and 900 VA) only received 40.2% of total electricity subsidy. In other words, the amount per customer received by the industry in the form of electricity subsidies is enormously higher than by small households.

Fuel subsidy program were not effective in reducing poverty and inequality because they benefited not only the poor and vulnerable households, but also the rich ones. This outcome was inevitable, due to the characteristic of the fuel subsidy itself, which is a blanket subsidy that reduces the price paid by all customers, rich or poor. Moreover, most of the fuel subsidy was utilized and enjoyed by higher-income Indonesians who own private vehicles.

Benefit incidence analysis by the Ministry of Finance⁴ using data from Susenas (2015) shows how much of the benefits of fuel subsidies go to each household by consumption decile and how much the actual value of the benefits these households received (decile 1 is the poorest 10 percent of households, and decile 10 is the richest 10 percent). In general, these subsidies are poorly targeted, and rich households receive a substantial share of benefits.

- **Benefit incidence of the diesel subsidy**

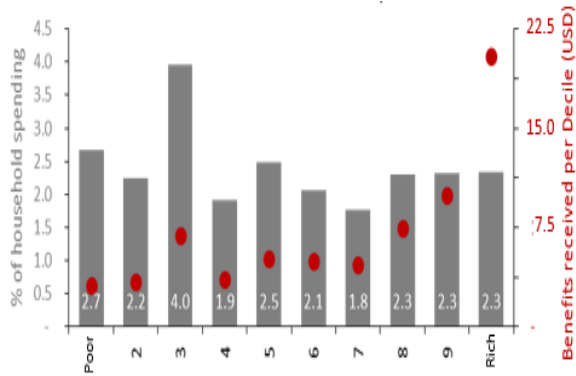
Figure 2.8 Number of Diesel Subsidy Beneficiaries



In total, there are 1.3 million diesel subsidy beneficiaries. Out of the 25 million poor and vulnerable households that comprise the poorest 40 percent, only 272,000 received diesel subsidy benefits. By contrast, among the richest 40 percent, 854,000 households received diesel subsidy benefits (Figure 2.8).

⁴ Ministry of Finance. (2016). *Analisis Benefit Incidence atas Subsidi dan Bantuan Sosial di Indonesia*. Jakarta.

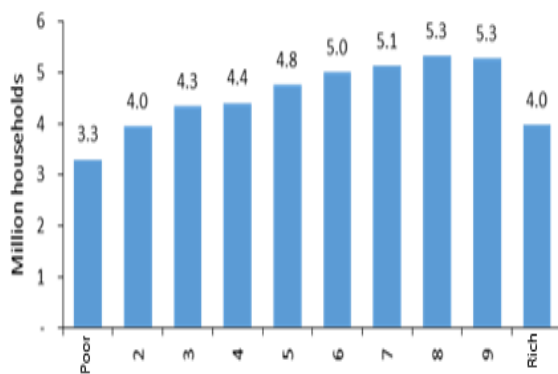
Figure 2.9 Value of Diesel Subsidy



Diesel subsidy benefits received by the richest 10 percent was far more significant than for the poorest 10 percent. In 2015, on average, the poorest 10 percent only received USD 3.07/month in diesel-subsidy benefits, equivalent to 2.7 percent of their average monthly spending. By contrast, the richest 10 percent received IDR 20.31/month in diesel subsidy benefits, equivalent to 2.3 percent of their average monthly spending (Figure 2.9).

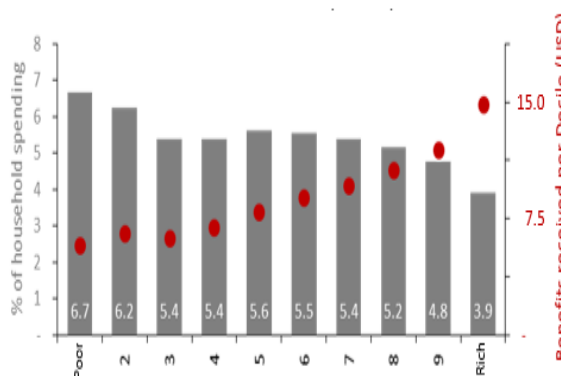
- **Benefit Incidence for the Electricity Subsidy**

Figure 2.8 Number of Electricity Subsidy



There were 45.5 million electricity subsidy beneficiaries in 2014, while the actual beneficiaries of the subsidized electricity tariff (450 VA and 900 VA) are 46 million people. The poorest 40 percent consist of 25 million poor and vulnerable households, of whom 16 million receive electricity subsidy benefits. Of the richest 40 percent, 19.7 million households receive electricity subsidy benefits (Figure 2.10).

Figure 2.9 Value of Electricity Subsidy



On average, the poorest 10 percent of households only receive USD 5.76 per month in electricity subsidy benefit, or 6.7 percent of their average monthly spending, while the richest 10 percent of households receive USD 14.80

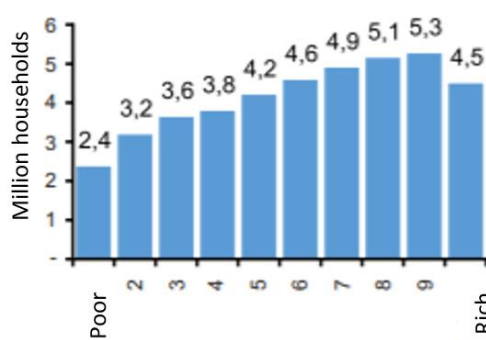


/month in electricity subsidy benefits, equivalent to 3.9 percent of their average monthly spending (Figure 2.11).

Although the poor receive less electricity subsidy benefits than the rich, those benefits are significant relative to their monthly spending. The benefit of electricity subsidy depends on the usage of the electricity itself, which means that the more a household uses electricity, the larger its benefits. Therefore, the subsidy is poorly targeted.

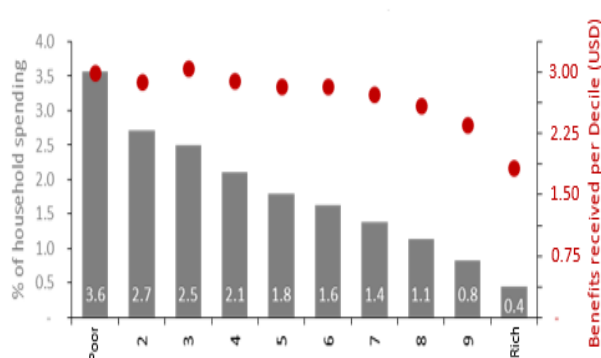
- **Benefit Incidence 3-kg LPG Subsidy**

Figure 2.10 Number of 3-kg LPG Subsidy Beneficiaries




There are 41.6 million 3-kg LPG subsidy beneficiaries, whereas 54.5 million beneficiaries. Out of 25 million poor and vulnerable households, which are the poorest 40 percent, only 13 million households received 3-kg LPG subsidy benefits; while in the richest 40 percent, 19.8 million households received 3-kg LPG subsidy benefits (Figure 2.12).

Figure 2.11 Value of 3-kg LPG Subsidy



On average, the poorest 10 percent of households only receive USD 2.98/month in 3-kg LPG subsidy benefit, which contributes 3.6 percent of their average monthly spending; while the richest 10 percent of households receive USD 1.82/month in 3-kg LPG subsidy benefit, which

contributes 0.4 percent of their average monthly spending (Figure 2.13). The fact that beneficiaries from the richest 40 percent outnumber the beneficiaries from the poorest 40 percent indicates that this subsidy is poorly targeted.

- 
4. **Fuel subsidies promote inefficient consumption.** The relatively cheap subsidized price of fuel irrefutably creates greater demand from consumers; however, subsidized fuel prices also create incentives for purchasing fuel for purposes other than their intended ones. Due to the wide discrepancy between subsidized and non-subsidized fuel prices, mainly diesel and kerosene, there were many cases where subsidized diesel and kerosene for households and the transportation sector were bought by the industrial sector illegally or even smuggled abroad. As a result, the volume of subsidized fuel consumption continues to increase, despite the ban on the use of subsidized diesel and kerosene in the industrial, mining, and plantation sectors.

 5. **Fuel subsidies create disincentives for the development of renewable energy.** Subsidized prices for fossil fuels and fossil fuel-based electricity have made renewable energy sources less competitive, which in turn discourages people from utilizing renewable energy. Indonesia has targeted achieving 23 percent of renewable energy in its energy mix in 2025, whereas that share was still around 7 percent in 2016 (MEMR 2017). If the government wants to achieve this target, the removal of fuel subsidy can be a trigger to make renewable energy more competitive.



Chapter 3 Fossil Fuel Subsidy Reforms in Indonesia and Their Impact

3.1 Fossil Fuel Subsidy Reforms

3.1.1 Petroleum Products

Over 4 decades, Indonesia's fuel subsidy has allowed people to enjoy fuel prices lower than the international average price. Subsidies were given based on a price gap between fuel retail price and price determination (government intervention). The basic price consists of acquisition cost, distribution cost, storage cost, and margin. Acquisition cost is the cost of providing fuel from domestic refineries and imports to fuel terminals or storage tanks, where it is calculated using the market price index (with market operating prices as a reference). Fuel retail price is the basic price plus 10% of Value Added Tax (VAT) and 5% of Vehicle Fuel Tax (VFT). Fuel price change is rarely done. Nevertheless, since 2005, the government has begun to pay attention to efficient consumption of fuel. Then, at the end of 2014 and early 2015, the government took a bold step and began to determine the selling price of fuel every three months or, if deemed necessary, even more often. However, the price setting process also takes into consideration factors such as macroeconomic developments, purchasing power, and current social and political conditions. Several policies have been implemented recently, such as the following:

1. Removal of subsidy for gasoline and applying fixed subsidy for diesel

Through the enactment of Presidential Regulation No. 191/2014, the government has completely removed the subsidy for gasoline (RON 88). Currently, only diesel (HSD 48) and kerosene are subsidized. The fixed subsidy scheme (maximum ± 7.5 cents USD per liter) is applied for diesel in order to minimize fiscal risk exposure in the future. In mid-2016, the fixed subsidy for diesel was changed to IDR 500 (± 3.75 cents USD) per liter below the market price. This subsidy is intended to support public transport services, fishermen with a maximum capacity of 30 GT, and poor farmers.



2. One fuel price policy since January 2017

Due to weak infrastructure and poor distribution channels, gasoline and diesel are about ten times as expensive in Papua as in Java. For instance, public fuel stations in Papua regions were located in district capital cities only. As only airplanes and vessels could transport fuels to the stations, remote locations are selling fuel at IDR 50,000-100,000 per liter. According to Energy Ministry Regulation No. 36/2016, fuel prices have to be the same throughout the country. This would mean that—under the current prices—premium gasoline has to be sold at IDR 6,450 (~USD 0.49) per liter, while diesel and kerosene are priced at IDR 5,150 and IDR 2,500 per liter, respectively. The majority of the locations to be covered by the program are in Papua and North Kalimantan. The program implies that fuel prices will fall drastically in Papua, thus boosting purchasing power in one of the poorest regions of Indonesia. This should boost the local economy as well. For the program to succeed, the SOE will need to invest in building new depots, new diesel distribution agents, as well as five special airplanes to carry fuel to the remote areas in Papua. The distribution costs of those kinds of fuel use the national weighted average mechanism and is incorporated into the components of the pricing formula.

3. Encouraging the use of biofuel as an alternative energy

To maintain national energy security, it is necessary to have a source of energy besides fossil fuels, for instance biofuel. Indonesia is the world's largest producer of crude palm oil, followed by Malaysia, which has almost half of the world's production. The country therefore can fulfil its sustainability needs by using palm oil as a raw material for biofuel.

Indonesia's National Energy Policy under Presidential Decree No. 5/2006, set a target of 5% for biofuels use in the national energy mix by 2025, consisting of bioethanol and biodiesel. For the time being, the biodiesel production is growing much faster than bioethanol. The target was revised in 2008, and in 2015, the government increased mandatory biodiesel blending from 10% to 15% for transportation and industrial use, and 25% for power plants.

Since early 2016 Indonesia has implemented a mandatory 20% blending of biodiesel (B-20). Implementation of this mandate is supported by performance tests of B-20 in diesel engine vehicles by Toyota, Mitsubishi, Hino, and Chevrolet. It has also been tested in the Denso Laboratory, Japan, with good results. In general, in road tests of up to 100,000 km, there have been no significant problems. The emissions of CO, NO_x, and HC at B-20



are lower than B-0 (diesel without palm oil), while particulate and opacity (black smoke) tend to be the same.

3.1.2 Electricity

In 2017, the installed capacity of electricity in Indonesia is 60.148 MW, of which 69% is owned by PLN, 23% is owned by individual power plant (IPP), and 8% is owned by Public Private Utility (PPU) and entities who produce and consume by themselves (i.e. fertilizer/cement factory). Indonesia's electrification ratio is 95.4%, which is higher than the government's target of 91.2% for 2017. Electricity consumption in Indonesia is 978.74 kWh per capita, which is relatively low compared to other countries, especially advanced ones. Coal is by far still the largest contributor in power plant energy mix with 58% share, followed by gas (23%), renewable energy (13%), and oil (6%). Electricity consumption by category is dominated by Industry (42%) and household (37%). General guidance on electricity tariff and subsidy policies is:

1. Ministry of Energy and Mineral Resources as the regulator commits to keep the supply of electricity efficiently and to maintain the balance of interests of the electricity provider (PLN) and customers;
2. The government evaluate the cost of power supply, with the principle of allowable cost and to maximize efficiency through diversification of primary energy and decrement of power losses; and
3. Electricity subsidy policy prioritized for indigent communities/customers (the poor), and tariff for other customers set to be economical.

Moreover, several big policy changes happened in the period 2014–17 (see Figure 3.1 and specifically on Figure 3.2). In 2005–12, all customers had subsidies (37 classes); however, more and more classes of customers were subsequently excluded from the subsidy and subjected to tariff increases. In 2017, the government gradually implemented the tariff adjustment for non-subsidized 900-VA household customers. Subsidized 900 VA is only given to poor and vulnerable households which are listed in the unified poverty database. As a result, the number of subsidy beneficiaries declined from 24 million households to 6.5 million households (using the poorest 40% database, issued officially by the government). This policy saved IDR 22 trillion. Unfortunately, there have been delays in the full price adjustment for wealthier 900 VA households in the mid of 2017.

Figure 3.1 Electricity Subsidy Reform in Indonesia

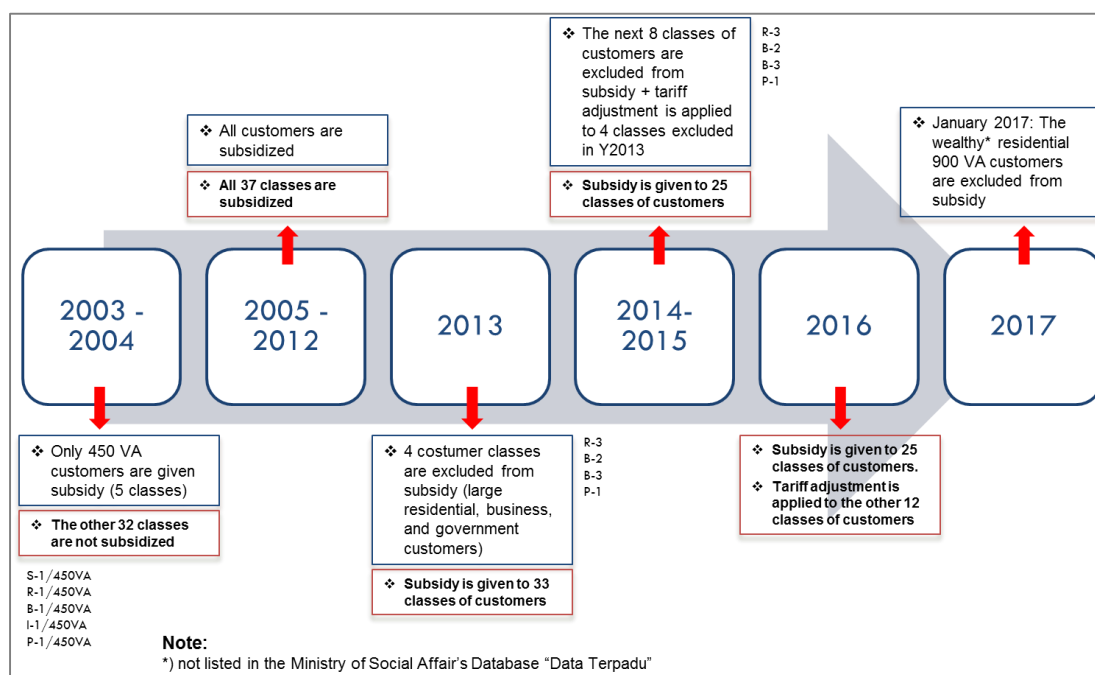


Figure 3.2 Implementation of Tariff Adjustment

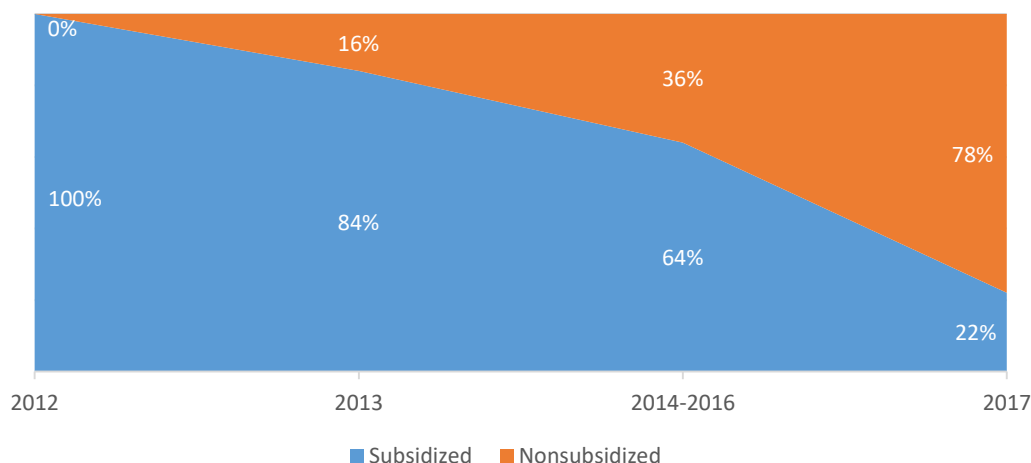
No.	Classes of Customers	Subsidy Elimination and Tariff Adjustment Application				
		2013	2014	2015	2016	2017
Social (S)						
1	Social (7 classes)	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
Residential (R)						
2	Small Household	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
3	Small Household - 900 VA	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Gradual Tariff Increase *)
4	Small Household - 1.300 VA	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
5	Small Household - 2.200 VA	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
6	Medium Household 3.500 s/d 5.500 VA	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
7	Large Residential (1 class)	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
Business (B)						
8	Small Business (3 classes)	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
9	Medium Business (1 class)	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
10	Large Business (1 class)	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
Industry (I)						
10	Small Industries (6 classes)	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
11	Medium Industries (1 class)	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
12	Large Industries (1 class)	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
Government (P)						
13	Small Government Office (4 class)	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
14	Medium Government Office (1 class)	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
15	Large Government Office (1 class)	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
16	Street and Road Lighting	Subsidized Tariff	Gradual Tariff Increase	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment
Others						
17	Traction	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
18	Bulk	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff	Subsidized Tariff
19	Premium Services	Non Subsidized Tariff	Non Subsidized Tariff	Tariff Adjustment	Tariff Adjustment	Tariff Adjustment

Source: Ministry of Energy and Mineral Resources 2017



Overall, there has been a decrease in the number of subsidized customers since 2012 until now. As we can see in Figure 3.3, in 2012 all of the electricity customers were subsidized, then it decreased to 22 percent in 2017 as government improve their effort to giving subsidy more targeted.

Figure 3.3 The Decrease of Subsidized Electricity Sales



Source: Ministry of Energy and Mineral Resources 2017

To make sure that all poor and vulnerable households receive the subsidized tariff, the government also provides “complaint management” as a solution to the fairness issue. If there is a poor and vulnerable household that does not get the subsidized tariff, they can report to the local government to be included. In the future, the government intends to implement better targeted electricity subsidy for 450 VA households. The Ministry of Social Affairs’ “Unified Data” had already been matched with 450 VA household customer data, and from 14.7 Million household, 95% had been identified as poor households. Once the House of Representatives approve the implementation of targeted subsidy for 450 VA households, the government can immediately apply the new policy.

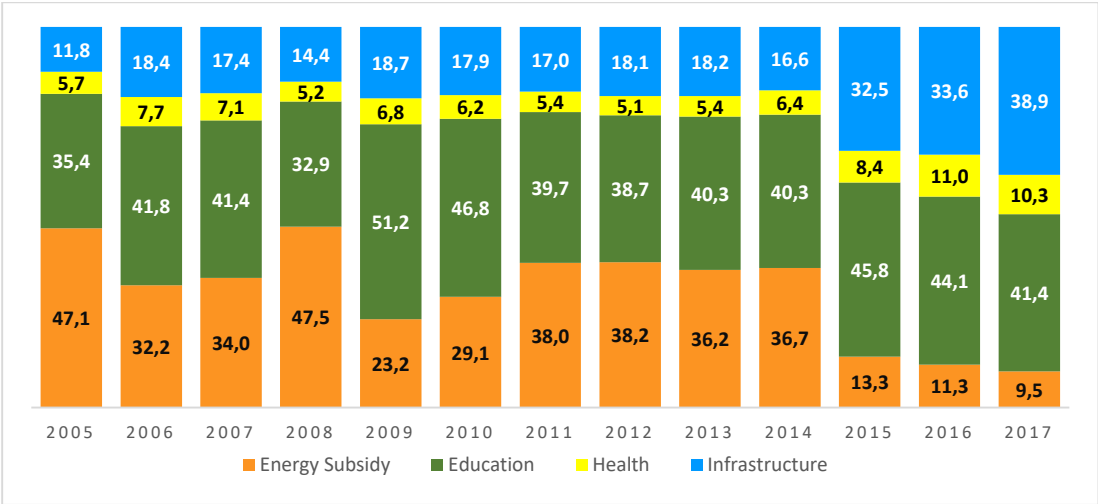
3.2 Impact of the Reforms

Indonesia’s 2014–15 reforms have improved the country’s fiscal situation more than most historical reforms, which typically kept subsidy expenditure stable in the face of rising world oil prices. Throughout this report, we show that the undertaken reforms have positively impacted the country’s budget and accordingly provided much-needed space not only for social assistance programs for the poor, but also for additional budget for infrastructure development.

3.2.1 Fiscal Impact: Create higher fiscal space, re-allocating from the energy subsidy to productive spending

The policy changes in 2014–15 were introduced for more fiscal space so that the government could invest in education, health, and infrastructure (Figure 3.4). Furthermore, another advantage is that the policy becomes a learning process for people; that although the booms and busts in world fuel prices are transmitted to domestic fuel and electricity price, it does not follow that the price of goods and services are raised arbitrarily. The policy reduces inaccuracy in targeting of subsidized fuel by giving people the choice to switch to non-subsidized fuel or gas fuel. Elimination of inefficient subsidies for fossil fuels in Indonesia is expected to have a significant impact on GDP and development since the subsidy savings could be used to compensate all households for the direct impacts of the reform, but GDP would remain similar to that of medium- and long-term enterprises (Asian Development Bank 2015).

Figure 3.4 Subsidy and Other Priority Spending Comparison
(% of Total Spending on Subsidies, Education, Health, and Infrastructure)

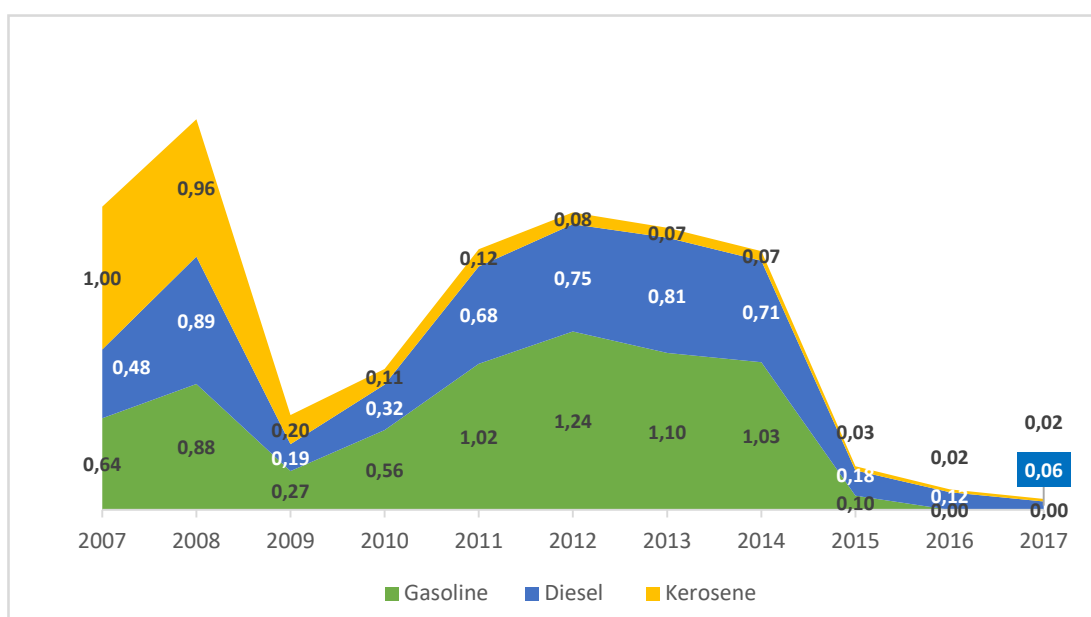


Source: Ministry of Finance

It has managed to cut the amount of fuel subsidies from IDR 191.0 trillion (USD 13.6 billion) in 2014 to only IDR 23.7 trillion (USD 1.6 billion) in the 2015 state budget. In other words, the fuel subsidy amount declined from 1.81 percent of GDP in 2014 to 0.31 percent of GDP in 2015. Besides, the volume of subsidized diesel decreased from 16.25 million KL in 2014 to 14.16 million KL, and subsidized kerosene decreased from 0.92 million KL in 2014 to 0.74 million KL in 2015. For more detail, we can see the declining of fuel subsidy budget allocation (as percentage to GDP) in Figure 3.5.



Figure 3.5 Fuel Subsidy Budget Allocation (as % to GDP)



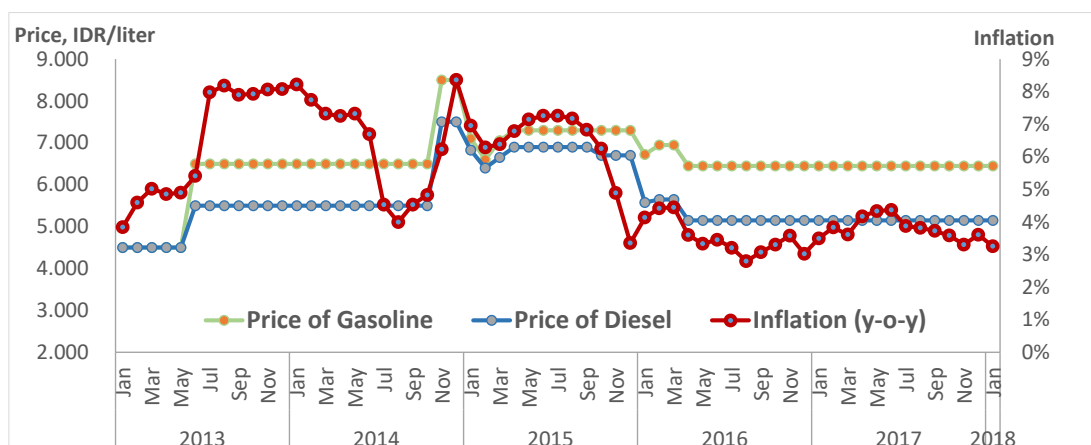
Since 2008, the allocation of kerosene subsidies has declined in line with the kerosene-to-LPG conversion program launched by the government in 2007. It is believed that LPG produces lower emission, and is safer and more efficient and economical than kerosene.

3.2.2 Inflation Impact

The increase in fuel and electricity prices generally also raise concerns about inflationary impacts. Although reforms usually create only a short-term inflationary effect, large, one-off price increases can have significant impacts that burden low-income households by increasing their cost of living. The role of inflation in the recent Indonesian reforms has been notable, as reflected in the difference in inflationary response between the initial price increases in November 2014 and the subsequent price decreases in January 2015. The inflationary response to price hikes in mid-November 2014 (Figure 3.6) accounted for almost half the country's annual inflation for 2014 (see Beaton et al. 2017). By contrast, only a moderate period of deflation in January and February 2015 followed the price decreases.⁵ The impact of removing the gasoline subsidy on the rate of inflation is not really perceptible since the price gap between gasoline (RON 88) and pertalite (RON 90) is slightly different.

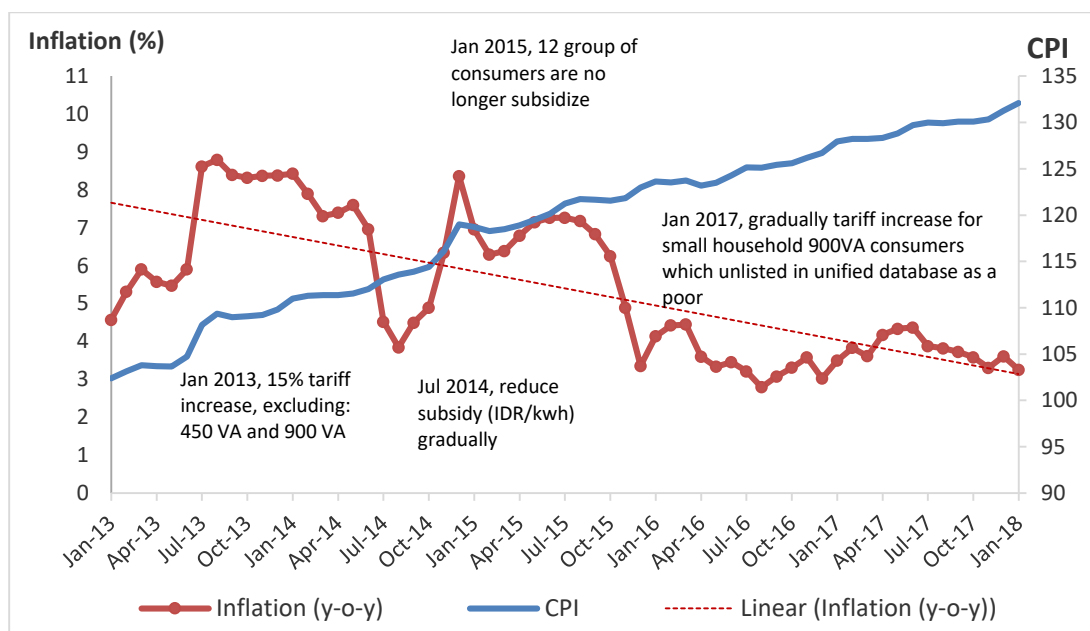
⁵ Beaton, C., Lontoh, L., & Wai-Poi, Matthew. (2017). *Indonesia: Pricing Reforms, Social Assistance, and the Importance of Perceptions*, The Political Economy of Energy Subsidy Reform, World Bank

Figure 3.6 Fuel Price and Inflation, 2013–18



Source: Statistics Bureau and Ministry of Finance

Figure 3.7 Inflation and Electricity Subsidy Policies, 2013–18



Note: CPI = Consumer Price Index. The CPI base year is 2012

Source: Statistics Bureau and Ministry of Finance.

In 2014, as set out in Ministerial Decree MEMR No. 19/2014, the government increased the electricity tariff to reach its market price. Adjustments to the price are carried out every two-months since July 2014 for households using 1300 VA and above, as well as for business and industries. The mechanism of gradual increases on a two-month basis is intended to protect consumers from sudden price shocks. The increase of electricity tariff in 2014 was initially expected to have a measurable effect on the rate of inflation in that year, which was exacerbated by rising fuel prices, food commodity prices, and the



provincial minimum wage. However, the LPEM (2015) estimated that the impact of the 20% increase in the basic electricity tariff in 2014 in fact had little effect on the general rate of inflation, ranging from 1.07% to 3.17%, although the basic electricity tariff in the two dominant groups, household and industry respectively increased by around 30% and 18% (53% for larger industries).

These results suggest that the Indonesian economy was able to manage inflation expectations related to the increase in the electricity tariff. Part of this was due to consumers who manage their consumption behavior more efficiently. Furthermore, on the production side, the increase in the electricity tariff has been compensated by the constant demand for the goods from consumers. Therefore, the balance of demand and supply in this period made the inflation rate not too high (see Figure 3.7).


3.2.3 Social Impact

Following the hike in prices, data show that the actual consumption of subsidized fuel has continuously fallen below the allocated yearly quota since 2015. The realized quota was 83.2% in 2015 and increased slightly to 85.59% in 2016, indicating partly that the higher price of gasoil, albeit still subsidized by the government, encouraged more cautious consumption.

Increasing energy prices is nonetheless an unpopular policy. The public in Indonesia has gone through many price hikes in the past. The response to fuel price hikes in November 2014, in particular, was muted in comparison to previous reforms. Yet, it still resulted in some degree of disorder and protest in some areas. The announcement was largely followed by panic buying at gas stations all across Indonesia, but ended shortly after the new price was officially applicable.

The price hikes were also met by protests in several cities, largely rallied by university students. Responding to the fuel price hikes, the Indonesian Land Transport Operators Association (Organda) called for a one-day nation-wide strike on November 19, 2014, to push an immediate negotiation to manage the impact of fuel price increases on the public transport sector. Workers unions joined the street protest in a coordinated call to revoke the price increase and asking for an immediate upward adjustment of the minimum salary.

However, the reaction from the public was not entirely negative. The Indonesian Consumers Association (YLKI) stood in firm support of the fuel subsidy reduction policy. From the universities, two student associations, the University of Indonesia and the



University of Padjadjaran Faculty of Economy Student Executive Body (BEM), came under the spotlight after making public their stance to support the fuel price increase.

Another benefit of the reforms is that there will no longer be large, one-off fuel price adjustments of the kind seen in 2005, 2008, 2013, and 2014. These large, pent-up price shocks likely added to inflation risk perceptions. The elimination of this source of inflation risk premium should contribute to the stability of inflation expectations. Finally, the general improvement of the fiscal position was seen to have increased investor confidence, with the exchange rate strengthening against major currencies and the stock exchange rising in the days after the announcement. Standard & Poor's, for instance, improved Indonesia's BB+ credit rating from "stable" to "positive"—citing, among other reasons, the improved quality, effectiveness, and predictability of government expenditure.



Chapter 4 Making Reform Happen

4.1 Risk Mitigation

Over the past decade, the Indonesian government has increased the price of fuel repeatedly. In 2005, the fuel price was increased by almost 100% from the 2000 rate. Fuel prices increased again in 2008 by about 30%, although in 2009 the price returned to the end-2005 level. Then in 2013, fuel prices were increased by 40% to slightly above the 2008 prices. Lastly, President Joko Widodo increased the fuel price in 2014 by 30% before entirely removing RON 88 subsidy and setting fixed subsidy for diesel in 2015.


From those experiences, three critical factors emerge that determine the success of energy subsidy reform as follows: the political dimension, technical administration, and public communication, as pointed out by Indrawati (2017).

The central issue is political management because initiating subsidies reform is very unpopular publicly and toxic politically. The GoI has to deal with multiple stakeholders including members of parliament, informal leaders, and public figures.

The technical administration factor involves the compensation that is related to eligibility identification of the beneficiaries (by name and by address) of cash transfer in a short period (3 months). In addition, the timing is critical to determining the success. As an illustration, subsidy for kerosene was reduced one month before Ied al Fitr (Islamic holiday) that is celebrated by 90% of the Indonesian population.

Finally, public communication on a policy change is key in ensuring successful reform. Media becomes important in the discussions on subsidy issues. A strategic communication campaign would help the public accept the subsidy change from commodity subsidy to direct subsidy. The GoI compensates the subsidies lose with the cash transfer to the poor; therefore, from the households' point of view, there should not be a perceivable difference in terms of money.

For each increase in fuel prices, the government implemented a range of compensation programs that target the poor segments of the population to help them cope with the effect of rising prices. In the same decade, the government had introduced a number of



poverty alleviation programs as social safety nets. While still far from perfect, the programs represent the building blocks of a comprehensive social welfare system.

The huge fuel price increase in 2005 was explicitly linked to the creation of a temporary unconditional cash transfer program (Bantuan Langsung Tunai/BLT). The program was intended to help poorer households cope with the adverse effect of fuel price increase and maintain their purchasing power to be able to meet their basic needs. The program was mandated by presidential decree and started to run from October 2005 to December 2006 targeting 19.1 million poor households. The government gave unconditional cash amounting to IDR 100,000 (around USD 11) per month for 12 months to the poor households (Rumah Tangga Miskin/RTM) category. The program was re-implemented in 2008, when the government distributed a monthly stipend of IDR 100,000 (around USD 10) per month for 7 months to 19.1 million targeted households (Rumah Tangga Sasaran/RTS) (Rosfadhila et.al. 2011).

In 2013, the government provided another unconditional cash transfer assistance—BLSM (Bantuan Langsung Sementara Masyarakat)—to poor and vulnerable households as a buffer against the effects of rising fuel prices. BLSM was available to 15.5 million household in the lowest socio-economic bracket, identified from the 2011 unified database. The government gave a 4-month transfer of IDR 150,000 (USD 13.6) per month to targeted household registered in the database.

In an effort to reform the distribution of fuel subsidies to the poor households, the government of Indonesia has experimented with “smart card” systems over the years. Indonesia has three cards to help offset the impact of fuel price and other hikes on the poor—the Indonesian Health Card (Kartu Indonesia Sehat/KIS), the Indonesian Smart Card (Kartu Indonesia Pintar/KIP), and the Prosperous Family Card (Kartu Keluarga Sejahtera/KKS). The latest card system, launched in November 2014, is designed to facilitate access to healthcare and education, and overcome the problem of frivolous spending and corruption associated with direct cash transfers to the poor.

In addition to the unconditional cash transfer program of each fuel price hike, the GoI also has regular social assistance programs that have been used in the past decade to assist poor citizens. The first program, Raskin (Beras Miskin or “Rice for The Poor”), recently renamed as Beras Sejahtera or Rastra, was started in 1998 as a social safety net program. The implementation of Raskin was intended to supply the market with subsidized rice, so low-income households would still be able to purchase rice, their most important staple food (Perdana 2014). Bulog (the central government’s logistic agency)




delivers subsidized rice to “distribution points” (at the village level) each month. Eligible recipients—identified by a coupon or a letter signed by the village head stating that they are a poor household—then line up once every month to purchase up to 15 kilograms of rice each at IDR 1,600/Kg.

Secondly, government also introduced BSM (Bantuan Siswa Miskin or “Assistance for Poor Students”). BSM is a cash assistance for students from poor households who are enrolled in elementary school, junior secondary, and high school. The program was introduced in 2008 and provides a cash transfer from IDR 360,000 (USD 36) to IDR 1,000,000 (USD 100) per student per year, depending on the school level (Perdana 2014). The amount is intended to cover school-related expenses other than tuition expenses, mainly the cost of transportation, material, etc. In 2008, the BSM provided assistance to some 3 million students at all levels of elementary and secondary education. By early 2013, the program was already targeting 8 million students. In the second half of 2013, following an increase in fuel prices, the BSM was expanded even further to target all students from households in the bottom 25% of income levels, equivalent to 15.4 million students.

Beside these two programs, the government also enacted a conditional cash transfer program called PKH (Program Keluarga Harapan) in 2007. Initially, the program ran in seven provinces, covering 350,000 families (Perdana 2014). In 2013, the PKH program was operating in 70% of the districts and covered 2.4 million households, and increased to 2.9 million households in 2014, eventually reaching 6.4 million households in 2017. Recipients of the program receive up to IDR 2,800,000 (USD 200) per year, depending on how many family members are enrolled in the PKH, and if they fully comply with all conditions for eligibility. On average, PKH households in 2013 received IDR 1,400,000 (USD 100) per year (Perdana 2014).

PKH targets households at the bottom 7-10% income group (considered as “very poor”) comprising at least one of the following: a pregnant mother; children under the age of 6; elementary school children (aged 7-12); or junior secondary school children (aged 12-15). PKH households need to ensure that pregnant mothers visit a health care center at least four times during their pregnancy; that children under 6 visit a health clinic to measure their weight and height as well as receive vitamins and scheduled immunization; and that school-aged children are enrolled in schools and maintain a minimum 85 percent attendance each month. Some impact evaluations have shown that PKH families have greater access to health and education (TNP2K 2015; World Bank 2011). Compared to non-beneficiary families, those that received PKH showed a 2.7-percentage-point



decrease in severe stunting and an 8.8-percentage-point increase in the rate of transition from primary to secondary school for children.

Risk mitigation is also done in the kerosene-to-3-kg LPG conversion. Pertamina conducted a market test to distribute the initial 3-kg LPG packages for free, and worked with an independent consultant to assess feedback (Pertamina & WLPGA 2015). Based on the market test, it was found that the best program models should cover several issues. The first was the importance of learning from local governments; detailed schedules and execution steps of the conversion were established by a conversion team in each Pertamina region. Secondly, Pertamina had the key role of converting kerosene agents and retailers to become 3-kg LPG agents and retailers. Furthermore, distribution of the packages to those who were entitled was based on the preliminary survey in each region. It was directly followed by socialization and education activities. Finally, kerosene was only withdrawn in areas in which the conversion packages were distributed completely, gradually cutting the agents' allocation and kerosene supply.

4.2 Getting the Right Momentum

To some extent, subsidized fuel and energy prices in Indonesia have acted as a social welfare policy. The low prices of gasoline and diesel keep transportation costs low and help stabilize prices of goods and services. Subsidized fuel also brings down the transportation costs of lower- and middle-income households. Similarly, subsidized electricity for lighting and cooking reduces the cost of these activities. However, over the years, energy subsidies have become less effective and efficient where a larger share of the benefits has been captured by the growing middle- and high-income population, purchasing larger quantities of gasoline and diesel for direct use in private vehicles.

The opportunity for scrapping fuel subsidy came from the fall of international oil prices in 2014. The relatively low non-subsidized fuel price has insulated the effect of subsidy abolition, creating a rather smooth transition period. This policy has received global applause over governmental commitment to more efficient and effective budgetary spending allocation, especially to the country's major infrastructure. Benes et.al (2016) also stressed that the limited opposition was caused by the success of President Joko Widodo's administration in neutralizing the political opposition.




4.3 Management of Public Opinion

In the effort to scrap fossil fuel subsidy, Indonesian governments were more concerned with how to deal with the opposition in legislature rather than managing the impact of the reform. In the 2005, 2008, and 2013 fuel price reform, the government faced with strong opposition and protest both from the public and in the parliament. Nevertheless, the response to price hikes in 2014 was more muted than previous reforms, but still resulted in some degree of disorder and protest (GSI 2015).

When the government announced the fuel price rise, it was immediately followed by massive panic buying at gas stations all across Indonesia, creating multiple queues hundreds of meters long. During the rush, PT Pertamina gas stations were heavily guarded by armed policemen. Fuel sales in several areas in Indonesia soared to more than twice their daily average, but PT Pertamina's gas stations managed to operate throughout the critical hours without any major supply shortage (Tempo 2014). PT Pertamina was said to have maintained a fuel reserve capacity at around 20–22 days of average consumption. The rush ended shortly after the new price was officially applicable.

A public protest was carried out by the Indonesian Land Transport Operators Association (Organda), who called for a one-day nation-wide strike on November 19, 2014 to push an immediate negotiation to manage the impact of fuel price increases on the public transport sector (GSI 2015). The strike in various areas of Indonesia left commuters, including school children, helplessly walking for kilometers to their destinations. Members of Organda claimed that the decision caught them by surprise in the middle of a negotiation with the government on how the fuel price increase should be conducted, which included an instruction from the government to land transport operators not to increase their fares for the first three months after the new price announcement. The Ministry of Transportation responded quickly by allowing public transport providers to increase tariffs by 10%. The ceiling of public transport fares (bus and taxi) in Indonesia is set by government regulation

Indonesia energy subsidy reform was always preceded by an extensive public relations campaign to educate the population on the growing costs of fuel and energy prices, and on the benefits expected from the reform. Indonesian news media and public seminars and meetings carried a broad range of educational programs showing the energy waste due to low fuel prices. Political, business, and social leaders, as well as academics were mobilized to speak in favor of the reform and enumerate the benefits expected from the reform. The President and senior government officials frequently spoke about the



inefficiencies resulting from cheap energy and the opportunity for funding education, health, and infrastructure from the fuel subsidy funds.

The GoI also relentlessly emphasized the inequality resulting from low fuel price. Historically, in most countries, the elimination of subsidies to staple products results in loss of real income that disproportionately affects poorer households (Guillaume et. al. 2011). For this reason, the government emphasized from the outset that the reforms were not about eliminating subsidies, but switching subsidies from products to households. The reform would therefore benefit poor households, who would receive cash benefits, while in the past they were not benefitting much from the cheap energy that was mostly consumed by the richer groups.

Nevertheless, the fact that a fuel subsidy reform passed without major public backlash shows that attitudes have changed, and there is strong potential for removing price controls. Completing the reforms successfully will require two key elements: increased transparency and fiscal buffers to better manage volatility in the oil and currency exchange markets; and macroeconomic stability, which in turn requires fiscal adjustments for inflation through coordinated credit, fiscal, and exchange rate policies (Hussar & Kitt 2016). Such measures, combined with increased investment and directed social assistance, soften the impact of higher fuel prices and make reforms more socially acceptable.

A successful social welfare and assistance system are also able to strongly justify energy subsidy reform. In Indonesia, political opinion on government social welfare programs is still mixed. Nevertheless, when the government again cut the fuel subsidy in 2013, negative reactions were more muted than in 2005 and 2008. The subsequent cash transfer program was also met with a relatively calm response, compared to the often angry criticism of previous years. The government had learned from the experience of previous cash transfer programs, and were more prepared in 2013. The public reaction made government more confident in implementing dual energy-and-welfare policy reform (Perdana 2014).

On the external side, a proper communications strategy is important to enable the government to build support for reform by explaining the reasons behind and the benefits to be gained for the population (Beaton et al. 2013). A well-designed communications strategy around LPG reform should also aim to inform people about mitigation measures that the government intends to put in place instead of subsidies,



including information about targeting, entitlements, and processes for receiving the subsidy (GSI 2016). This will in turn support the government in its efforts to reduce the risks of exclusion as reform is implemented.



Chapter 5 The Way Forward

5.1 Future Subsidy Policy

5.1.1 Petroleum Products

In the effort to scrap fossil fuel subsidy, Indonesian governments were more concerned with how to deal with the opposition in legislature rather than managing the impact of the reform. In the 2005, 2008, and 2013 fuel price reform, the government faced with strong opposition and protest both from the public and in the parliament. Nevertheless, the response to price hikes in 2014 was more muted than previous reforms, but still resulted in some degree of disorder and protest (GSI 2015).

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5.1.2 Electricity

In the future, the government intends to only provide the electricity subsidy to select public services customers⁶ and the 40% lowest income household customers (450 VA and 900 VA power). Therefore, since in the first half of 2017, the non-poor household customers with power 900 VA have no longer received electricity subsidies. For the next step, the Ministry of Social Affairs' "Unified Data" had already been matched with 450 VA household customer data and 95% of 14.7 million household had been identified as poor. Once the House of Representatives approve the implementation of targeted subsidy for 450 VA household customers, the government can immediately apply the new policy.

The GoI has gradually been moving to the right track of energy subsidy policy. As stated in article 20 Government Regulation No. 79 of 2014 (PP No 79/2014), (1) energy prices are set up based on economical price and fairness and (2) targeting energy subsidies for the poor. Moreover, the Indonesian government has been moving forward to maximize the use of renewable energy by considering the economic level, giving several tax incentives to promote renewable energy and attract more investors, and minimizing the use of fossil fuel energy in its energy mix.

5.2 Renewable Energy Development in Indonesia

Due to the long history of dependency on fossil fuel, until 2017, it is still the primary energy source in Indonesia: fossil fuel is about 92.7% as portion of national energy mix, compared to 7.3% new and renewable energy (NRE), whose share has started to grow slowly in recent years. However, taking the General Plan of National Energy (RUEN) as the energy policy direction, the roadmap seems to indicate that the use of NRE could reach 23% in 2025, equal to the current electricity production of 45.2 GW. While

⁶ This refers to small Government Offices, small businesses and industries.



Indonesia could potentially produce 441.7 GW of renewable energy, to date it has only produced about 2.0%; therefore, Indonesia should attempt to boost renewable energy as priority instead of as an alternative.

Figure 5.1 National Energy Mix 2017

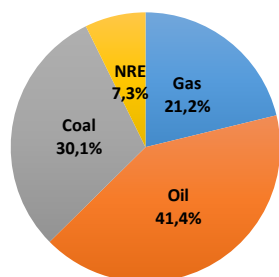
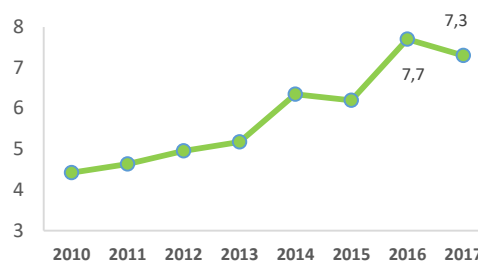


Figure 5.2 Renewable Energy Share



Source: Ministry of Energy and Mineral Resources, 2017

Table 5.1 Potential of Renewable Energy in Indonesia, 2017 (Unit: GW)

No.	Energy Source	Potential	Installed Capacity	Utilization
1.	Geothermal*	28.5	1.9	6.736%
2.	Hydro & Micro Hydro	94.3	5.3	7.098%
4.	Bioenergy	32.6	1.8	5.635%
5.	Solar PV	207.8 (4.80 kWh/m ² /day)	0.09	0.043%
6.	Wind	60.6 (≥4m/s)	0.001	0.002%
7.	Marine	17.9	0.0003	0.002%
TOTAL		441.7	9.1	2.058%


* *Badan Geologi* 2017. Geothermal resources: 11.073 GW, geothermal reserves: 17.506 GW

Source: Ministry of Energy and Mineral Resources, 2017

The importance of NRE development is in its potential to accelerate the accessibility of modern energy with a 99% electrification ratio by 2019 and to contribute to a targeted reduction of 314 million ton of CO₂ and GHG emissions. Currently, electrification ratio has reached 95.4%, but the reduction of GHG emissions has reached only 33 million tons of CO₂.

5.3 Tax Incentives on Renewable Energy Development

To achieve the 23% target by 2025, the government is attempting to attract more investments on renewable energy, make pricing more competitive giving tax incentives, and enhance municipal governmental roles to strengthen energy independence.



Government support has been extended through the national budget, but has not yet been optimally implemented, such as through tax incentives and further government spending on renewable energy infrastructure development. In 2016, the government proposed a subsidy of IDR 1.3 trillion (USD 96.3 million) for the renewable energy sector. This was rejected by Congress since the basic philosophy of direct subsidy is to only benefit the poor, rather than companies.

The fiscal incentives policy to support the development of renewable energy in Indonesia has been in place since 2007, yet mostly still limited to strategic products and the geothermal energy sector. The tax incentive for the development of renewable energy is provided through Ministry of Finance Regulation No.21/PMK.011/2010 and includes (i) corporate income tax facility (tax allowance, exemption from import income tax article 22); (ii) import value-added tax facility; and (iii) import duty facility. The government also provides land and building tax facility and income tax borne by the government on the geothermal sector.

A. Tax Allowance

As per the Ministry of Finance Regulation No. 89/2015 and Government Regulation No. 18/2015 and 9/2016, the facilities are provided through (i) Net income reduction (Investment Allowance) of a maximum of 30% of total investment for 6 years, 5% annually; (ii) accelerated depreciation and amortization; (iii) income tax on dividends paid to a foreign tax subject to 10%, or lower tariff based on P3B; and (iv) extended loss compensation from 5 to 20 years.

B. Exemption of Income Tax Article 22

Article 22 exempts imports of machinery and equipment, either in an installed or detached condition, from income tax. The geothermal sector is regulated by Ministry of Finance Regulation No. 16/2016.

C. Value-added tax facility

1. Government Regulation No. 81/2015 provides exemption from value-added tax for imports of strategic taxable goods in machine and equipment, either in installed or detached condition, excluding the spare parts.



2. Ministry of Finance Regulation 196/PMK.010/2016 exempts value added tax and import luxury sales tax for luxury goods used for geothermal exploration and exploitation.

D. Import duty facilities

Import duty is also exempted for imported machinery, goods, and materials for development or industry for the purpose of investment, and on the import of capital goods in the context of development of power generating industry for public interest.

E. Land and building tax facility

The government has provided a facility for land and building tax reduction for geothermal mining or business activities at the exploration stage. The reduction is given at 100 percent of the debt of geothermal land and building tax.


F. Income tax borne by the government on the geothermal sector

The income tax borne by the government is a facility intended to maintain a conducive investment condition for investors in the geothermal business. This incentive is provided through government budget regulation as tax subsidy allocation. This facility is for geothermal developers who were already operational before 2003.

Nevertheless, the tax incentives have not been utilized optimally by the developer, and so it has not provided the full potential of benefits for renewable energy development. This is partly due to the lack of socialization and technical constraints (regulation and implementation). It is, therefore, necessary to identify further technical constraints, issues regulations, and revise the applicable regulations where needed. In addition, it is necessary to socialize the existing tax incentives so that private investment becomes more attractive and is thus further mobilized. Moreover, we have not been able to quantify the amount of tax forgone through tax incentives due to data unavailability. Indonesia is currently developing a “tax expenditure report” and the coverage of such fiscal incentives is described in Appendix 4.

5.4 Climate Change Mitigation

As mentioned before, promoting the use of renewable energy to reduce its reliance on fossil fuel also contributes to a targeted reduction of 314 million tons of CO₂ of GHG emissions. Indonesia’s commitment to GHG emission reduction by 2020 is 26 percent.

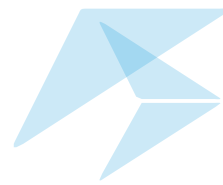


Furthermore, after 2020, Indonesia updated its emission reduction targets to 29 percent as set forth in the Nationally Determined Contribution (NDC) under the Paris Agreement within the framework of the United Nations Framework Convention on Climate Change (UNFCCC); and with international assistance, to 41 percent by 2030. The implementation of low-carbon and climate resilience policies is also an effort to achieve Sustainable Development Goals (SDGs).

In 2012, the Ministry of Finance conducted a Mitigation Fiscal Framework study which estimates that with the support of the climate change budget as it is today, emission reductions can only reach 15 percent by 2020. The execution of the climate change budget urgently needs sharpening to achieve the 26 percent reduction target by 2020. The study was also supported by a Bappenas report on the Implementation of the National Action Plan for Greenhouse Gas Emission Reduction (RAN-GRK) in 2018, which found that the reduction of GHG emissions by 2016 was 13.47 percent for three areas, namely land-based, energy, and waste management. This indicates the need for additional measures to address climate change from both public and private planning, as well as international assistance.

The NDC Indonesia 2016 document states that to support Indonesia's commitment to emission reduction, the Indonesian government has allocated approximately USD 17.48 billion for adaptation, mitigation, and climate change advocacy activities for the 2007–14 period. Indonesia will continue to provide funds for action implementation and climate change plans, including allocating a total of USD 55.01 billion for the 2015–19 period (NDC 2016). NDC programs in the energy sector include 1) renewable energy as power and fuel; 2) energy efficiency; 3) clean power; 4) fuel switching; 5) post mining reclamation. Other activities that could be included are solar energy, public transportation (buses and trains), electric vehicle, massive public participation in energy conservation (green building, energy saving).

To increase the effectiveness of climate change financing, the government engages in budget tagging activities by requesting line ministries to mark programs and activities related to climate change mitigation. This process has begun to be regulated through Ministry of Finance Regulation No. 136/2014 on the Technical Guidelines for the Formation of the Ministry's Working Budget Plan (RKA-K/L) FY 2015 which became the basis for the implementation of climate change mitigation marking. The objective of the marking activity is to know the financing of climate change especially in 6 ministries, such as Ministries of Energy and Mineral Resources, Environment and Forestry, Transportation, as implemented in Presidential Regulation No.61/2011 for RAN-GRK.



Budget tagging is a system that has been developed based on the existing performance-based budgeting system. It is also embedded in the national budgeting system. The financing of climate change mitigation in each ministry, which is the result of the budget marking process, is detailed in the figure below.

Based on the results of budget marking, the government has allocated a budget for climate change mitigation of IDR 72.35 trillion (USD 5.46 billion) or about 3.5 percent of the total central government spending for FY 2016. Climate change financing has increased in 2017 to IDR 81.79 trillion (USD 6.14 billion) or about 3.9 percent of total central government spending.

To expand the source of financing, the government has launched Green Sukuk and Green Bond (through the SBN/SBSN issuance scheme) which can be utilized as alternative financing. Several sectors that can be financed with these instruments including new and renewable energy, energy efficiency, climate's change resilience, sustainable transportation, waste management for energy, and sustainable agriculture.

Of the international funds, Indonesia has access to the Green Climate Fund (GCF). The GCF is a major international funding source for climate change mitigation and Indonesia has the potential to gain substantial funding if it can prepare GCF-eligible projects. The estimated funding from GCF for climate change mitigation and adaptation is about USD 2.8 billion per year.



Chapter 6 Conclusion

The GoI has attempted to reform the policy of fuel subsidy numerous times since the last decade. The biggest reduction of subsidies was in 2015 with the elimination of subsidies for gasoline and the fixing of subsidy for diesel. The fossil fuel subsidies budget was cut and reallocated to productive sectors, mainly infrastructure and social protection plans such as social assistances directly aimed at the poor.

Indonesia's fossil fuel subsidy reform is widely accepted as it is already on the right track and benefits the country more. Indonesia supports the gradual reduction of fossil fuel subsidies but will not phase them out completely as it needs to sustain economic growth with some concerns on inequality and poverty elevation. The government aims to constantly improve the mitigation policy despite the difficulties arising from geographical conditions as well as budget constraints. In addition, reforming the subsidy policy is not only a technical issue but is also more political. The proposal for reform needs the support of both the people and the politicians. Therefore, communicating about the policy is crucial, because reducing subsidies may increase the price of the commodity.

Currently, the reform has been effected gradually in order to soften its impacts such as the increase of poverty and inflation. Moreover, Indonesia also consistently promotes the use of renewable energy to reduce the reliance on fossil fuel. It is necessary to socialize the existing tax incentives so private investment is further mobilized and becomes more attractive. Indonesia commits to increase the use of biofuels and renewable energy.



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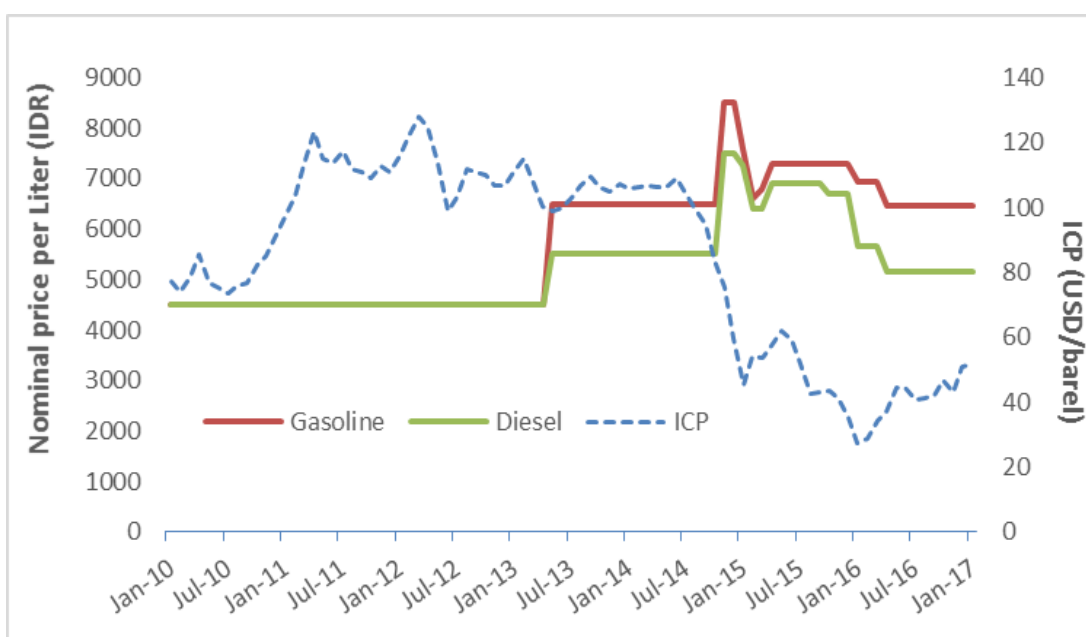
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Appendixes

Appendix 1

The government began to determine the selling price of fuel every three months or even more if deemed necessary. However, the price setting process also considers macroeconomic developments, purchasing power, and current social and political conditions.



Appendix 2

Types of Subsidized Fuel and Their Users According to Presidential Decree No. 191/2014

Type of Subsidized Fuel	Sector	Description	Point of Transmission
Diesel	Micro Enterprise	For machineries with engines that use Diesel (Diesel Fuel). Purchases are to be made with verification and letter of recommendation from the SKPDs in charge of micro-enterprises.	Distributor
	Fisheries	Fishermen who use Indonesian fishing vessels with engines that have maximum capacity of 30 GT and are registered in the Ministry of Maritime Affairs and Fisheries/SKPDs with verification and recommendation letter of Fisheries Harbour/Head of Regency/City/Province SKPDs in charge of fisheries in accordance to each authority	Distributor
		Small-scale fish farmers	Distributor
	Agricultures	Farmers / Farmers Group / Business Services. Agricultural machinery for farming food crops, horticulture, plantation, with a maximum size of 2 hectares. This category includes dairy/cattle/poultry farm. Purchases are to be made with verification and recommendation from Head of Kelurahan/Village/SKPDs in charge of Agriculture	Distributor
	Transportation	1. Individual Motor Vehicles to transport goods or people with basic black background and white characters license plates.	Distributor
		2. Public Motor vehicles for people or goods with license plates of yellow background and black writing (except for mining and plantations transportation modes with more than six wheels)	Distributor
		3. All type ambulances/hearses/and fire trucks.	Distributor
4. Marine Transportation Modes (Indonesian flagged vessels).		Distributor	
5. Modes of transportation in streams, lakes and crossings (Indonesian flagged vessels) with quotas set by Regulatory Agency		Distributor	
6. Pioneer expedition ship with quotas 7. Train for passengers and goods based quotas.	Distributor/ Fuel Terminal/Depot Distributor/ Fuel Terminal/Depot		

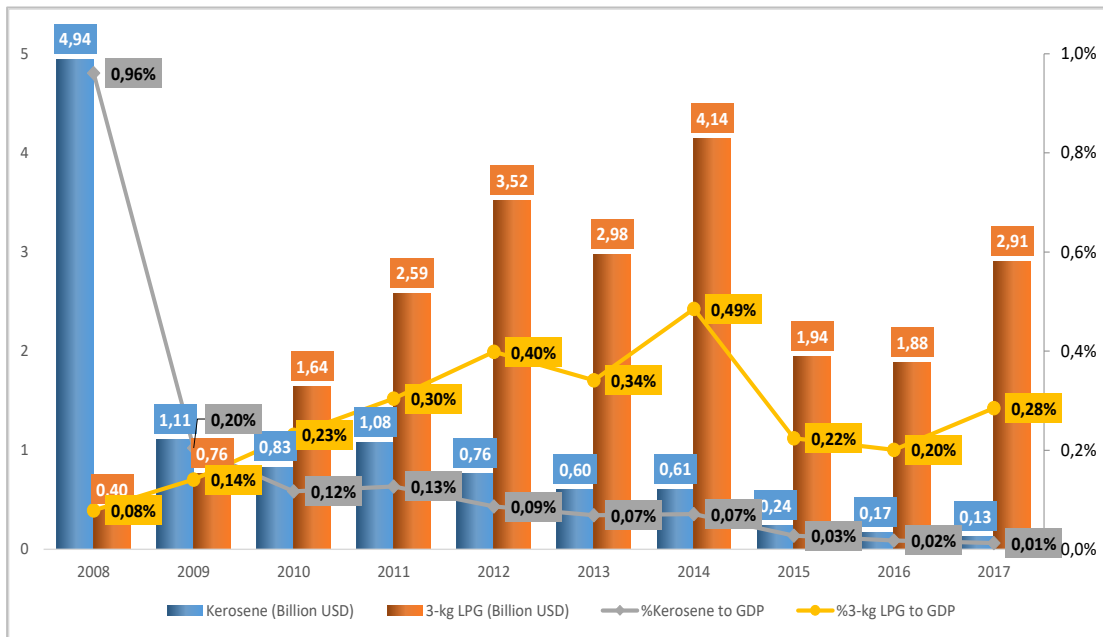


Type of Subsidized Fuel	Sector	Description	Point of Transmission
	Public Services	1. Crematorium and places of worship 2. Orphanages and Nursing homes 3. Type C and Type D Hospital and health centers.	Distributor/Fuel Terminal/Depot
Kerosene	Household	For cooking purpose (for households in the areas that have not been converted into using LPG). For lighting purpose (households without access to electricity).	Distributor
	Micro-enterprise	In the areas that have not been converted to using LPG.	Distributor
	Fisheries	For cooking and lighting in a small fishing boat (In the areas that have not been converted into using LPG).	Distributor

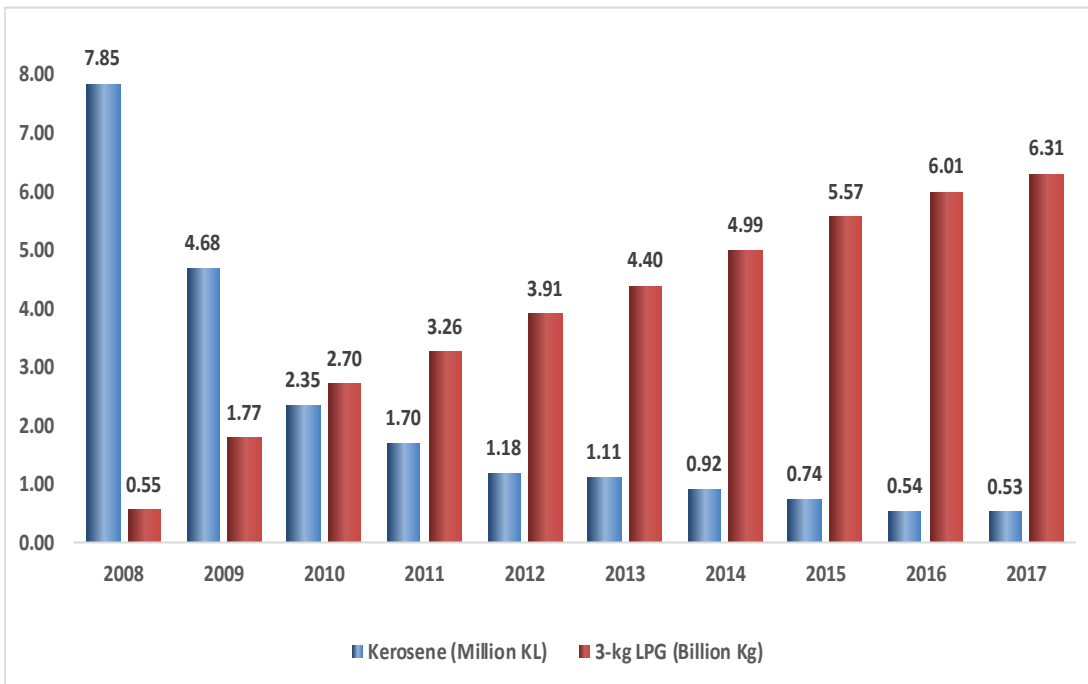
Source: Presidential Decree No. 191/2014

Appendix 3

Kerosene & 3-kg LPG Subsidy and Percentage to GDP, 2008-17



Volume of Kerosene and 3-kg LPG Subsidy, 2008-17





Appendix 4

Tax Incentives on Oil and Gas Industries

1. Income tax facility for capital investment in specified business fields and/or certain regions

Tax Benefit Recipient	Indonesian corporate taxpayer who makes a new investment or business expansion based on approval letter of investment in specified business as stated in first and second attachment of government regulation number 9 of 2016				
Objective	Increasing domestic investment activities				
Legal basis	<ul style="list-style-type: none"> Government Regulation Number 18 of 2015 as last revised by government Regulation No 9 of 2016 Minister of Finance Regulation Number 89/PMK.010/2015 				
Revenue Forgone (Projected) (Billion Rupiahs)	2012	2013	2014	2015	2016
	n.a.	n.a.	n.a.	n.a.	n.a.
Type of subsidy	<ul style="list-style-type: none"> Net income reduction (Investment Allowance) maximum 30% of total investment for 6 years, 5% annually; Accelerated depreciation and amortization; Income tax on dividends that paid to a foreign tax subject of 10%, or lower tariff based on P3B; and Loss compensation from 5 to 10 years. 				
Recent Developments	<ul style="list-style-type: none"> Untapped by taxpayers Draft of Government Regulation of Changes of Government Regulation No 9 of 2016 about Income Tax Facilities for Investment in specified Business Sectors and/or regions is being formed. 				
Outlook					

2. Tax Holiday for pioneer industry

Tax Benefit Recipient	Corporate taxpayer with these following criteria: 1) New taxpayer 2) Pioneer industry, such as: a. Upstream metals industry; b. Oil refinery industry or oil refinery industry and infrastructure with government and business entity scheme; c. Basic organic chemical industry origination from oil and gas industry; d. Machinery industry that produces industrial machines; e. Manufacturing based on agriculture, forestry, and fisheries industry; f. Telecommunications, Information, and Communication industry; g. Marine transportation industry; h. Economic infrastructure outside of government and business entity scheme.				
Objective	To increase direct investment activity especially for pioneer industry to encourage economic growth.				
Legal basis	<ul style="list-style-type: none"> Government Regulation Number 94 of 2010 Minister of Finance Regulation Number 130/PMK.010/2011 as last revised by Minister of Finance Regulation Number 129/PMK.011/2014 Minister of Finance Regulation Number 159/PMK.010/2015 as last revised by Minister of Finance Regulation Number 103/PMK.010/2016 				
Revenue Forgone (Projected) (Billion Rupiahs)	2012	2013	2014	2015	2016
	n.a.	n.a.	n.a.	n.a.	0
Type of subsidy	<ul style="list-style-type: none"> Reduction of corporate income tax at most 100 % and at least 10 % in a period of 5 years up to 15 years from the taxable year when the commercial production is begun; Consider the interests of the competitiveness of national industry and the strategic value of specific business activities, can be given additional facilities into a maximum period of 20 years by approval from Ministry of Finance. 				
Recent Developments	Untapped by tax payers				
Outlook	-				

3. Value Added Tax and Sales Tax on Luxury Goods reimbursement upon deliveries of taxable goods for the oil and gas contractors.

Tax Benefit Recipient	Contractors of oil and gas				
Objective	To stimulate investment in oil and gas industry.				
Legal basis	Minister of Finance Regulation 218/PMK.02/2014 as last revised Minister of Finance Regulation 158/PMK.02/2016				
Revenue Forgone (Projected) (Billion Rupiahs)	2012	2013	2014	2015	2016
	-	-	-	4,429.66	14,665.63
Type of subsidy	The government would reimburse VAT and STLG which are paid by the oil and gas contractors during the acquisition of the asset for exploration and exploitation phase.				
Recent Developments	-				
Outlook	-				

4. Land and Building tax deductions on Oil and gas exploration

Tax Benefit Recipient	Tax Payers in oil and gas sector who are on the exploration stage				
Objective	Increasing the national production of oil and gas				
Legal basis	Minister of Finance Regulation 267/PMK.011/2014				
Revenue Forgone (Projected) (Billion Rupiah)	2012	2013	2014	2015	2016
	-	-	-	66.66	80.07
Type of subsidy	Land and Building tax deductions on oil and gas exploration up to 100%				
Recent Developments	-				
Outlook	-				

5. Import duty exemption on imported goods for upstream oil, gas, and geothermal activities.

Tax Benefit Recipient	Firm in oil and gas and geothermal business areas				
Objective	Increasing the national production of oil and gas and geothermal business				
Legal basis	Minister of Finance Regulation 177/PMK.011/2007				
Revenue Forgone (projected)	2012	2013	2014	2015	2016
Type of subsidy	Import duty exemption on imported goods for upstream oil, gas, and geothermal activities.				
Recent Developments	-				
Outlook	-				

6. Exemption VAT and Sales Tax on Luxury Goods for imported goods used in upstream oil and gas exploration and exploitation

Tax Benefit Recipient	Contractor taxpayers in upstream oil and gas activities				
Objective	To facilitate the discovery of new oil and gas reserve.				
Legal basis	Minister of Finance Regulation 142/PMK.010/2015				
Revenue Forgone (projected)	2012	2013	2014	2015	2016
Type of subsidy	VAT and sales tax on luxury goods are zero rated on goods that are used for upstream oil and gas exploration and exploitation				
Recent Developments	-				
Outlook	-				



Appendix 5

Tax Incentives on Renewable Energy Sector

1. Facilities of renewable energy

Tax Benefit Recipient	Taxpayer who take benefits in renewal energy activity				
Objective	To reduce the dependency of the non-renewable energy and to guarantee the supplies of continuous energy				
Legal basis	Ministry of Finance Regulation 21/2010				
Revenue Forgone (Projected) (Billion Rupiahs)	2012	2013	2014	2015	2016
	0	0	0	0	0
Type of subsidy	<ol style="list-style-type: none"> 1. Tax allowance <ul style="list-style-type: none"> • Net income reduction (Investment Allowance) maximum 30% of total investment for 6 (six) years, 5% annually; • Accelerated depreciation and amortization; • Income tax on dividends that paid to a foreign tax subject of 10%, or lower tariff based on P3B; and • Extended loss compensation from 5 (five) to 20 (twenty) years. 2. Exemption from the collection of import income tax article 22 for import in machine and equipment, either in installed or detached condition, exclude the spare parts. 3. Exemption from value added tax for import of strategic taxable goods in machine and equipment, either in installed or detached condition, exclude the spare parts, which are needed by a trader who takes benefit in renewal energy to produce taxable goods. 4. Exemption from import duty of machine, goods, and materials for construction and industry development for investment as stated in Minister of finance regulation number 188/PMK.011/2015. 5. Exemption from import duty of capital goods for power plants' construction and industry development for public importance as stated in Minister of finance regulation number 154/PMK.011/2008. 				
Recent Developments	- Untapped by tax payers				
Outlook	-				

2. VAT exemption on import or handover of certain taxable goods that are strategic

Tax Benefit Recipient	All taxpayer that import and/or handover certain taxable goods that are strategic				
Objective	To improve national development				
Legal basis	Government Regulation 81/2015; Minister of Finance Regulation 268/2015; Ministry of Finance Regulation 196/PMK.010/2016				
Revenue Forgone (Projected) (Billion Rupiah)	2012	2013	2014	2015	2016
	0,02	364,28	0,61	untapped	8,49
Type of subsidy	VAT exemption on import or handover of certain taxable goods that are strategic				
Recent Developments	-				
Outlook	-				

3. Income tax borne by government of exploitation result of geothermal resources for power plant

Tax Benefit Recipient	Taxpayers of exploitation result of geothermal resources for power plant				
Objective	To maintain the investment climate for investor in exploitation result of geothermal resources				
Legal basis	Minister of Finance Regulation 179/PMK.011/2013				
Revenue Forgone (Billion Rupiahs)	2012	2013	2014	2015	2016
	815.40	770.60	1,000.00	2,190.00	1,848.69
Type of subsidy	Income tax borne by government of exploitation result of geothermal resources for power plant				
Recent Developments	This regulation applied as long as the subsidy is budgeted by the government in State Budget or Revised State Budget				
Outlook	-				

4. Land and Building deductions for companies who exploring Geothermal energy

Tax Benefit Recipient	Companies that explore geothermal energy resources				
Objective	To increase renewable energy to ensure sustainable energy supply				
Legal basis	Minister of Finance Regulation 172/PMK.010/2016				
Revenue Forgone (Projected) (Billion Rupiahs)	2012	2013	2014	2015	2016
	0	0	0	0	0
Type of subsidy	Land tax deductions on geothermal exploration up to 100%				
Recent Developments	Enacted 2017				
Outlook	-				

5. Value Added Tax and Sales Tax on Luxury Goods are not collected on goods that are used for geothermal exploration and exploitation

Tax Benefit Recipient	Contractor taxpayers in gas activities				
Objective	To facilitate the discovery of new gas reserve.				
Legal basis	Minister of Finance Regulation 142/ 2015				
Revenue Forgone (projected)	2012	2013	2014	2015	2016
Type of subsidy	VAT and sales tax on luxury goods are not collected on goods that are used for geothermal exploration and exploitation				
Recent Developments	-				
Outlook	-				

6. The exemption of import duty on the imported goods that are used for geothermal business activity and renewable energy

Tax Benefit Recipient	<ol style="list-style-type: none"> 1. Corporate that obtains Mining Working Area (WKP) or obtains preliminary survey assignment or Geothermal Mining Business Permit. PT. Pertamina (Persero) and PT. Geo Dipa Energi. 2. Taxpayer from renewable energy sector 				
Objective	Increasing the national production of gas and geothermal business				
Legal basis	Minister of Finance Regulation 177/2007 / Minister of Finance 21/2010				
Revenue Forgone (projected)	2012	2013	2014	2015	2016
Type of subsidy	The exemption of import duty on the imported goods that are used for geothermal business activity, and renewable energy.				
Recent Developments	-				
Outlook	-				



7. Import duty exemption on imported goods for geothermal activities on condition: not yet produced domestically, produced domestically but no yet meet specifications, produced domestically but not yet sufficient.

Tax Benefit Recipient	Contractor taxpayer in upstream oil, gas, and geothermal activities				
Objective	Increasing the national production of gas and geothermal business				
Legal basis	Minister of Finance Regulation 177/2007				
Revenue Forgone (projected)	2012	2013	2014	2015	2016
Type of subsidy	Import duty exemption on imported goods for geothermal activities on condition: not yet produced domestically, produced domestically but no yet meet specifications, produced domestically but not yet sufficient.				
Recent Developments	-				
Outlook	-				



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