Why energy subsidy policy reform is crucial for a just transition in Indonesia, and how it can be achieved

November 2024

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We acknowledge and celebrate Australia's First Peoples.

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Acknowledgements

For helpful comments, suggestions and feedback the authors wish to thank Toby Phillips and Annabel Brown.

Published by the Centre for Policy Development

Cite this paper as: Ruddy Gobel, Caitlin McCaffrie and Mara Hammerle (2024) *Why energy subsidy policy reform is crucial for a just transition in Indonesia, and how it can be achieved*, Centre for Policy Development.

Table of Contents

Executive Summary

Energy subsidy policy is holding back Indonesia's just energy transition. By tackling this challenging policy area, Indonesia's new President can accelerate pace towards achieving the country's Net Zero Emissions (NZE) target by 2060 or sooner. Effective energy subsidy policy reform could also facilitate the new government's goal of achieving 8 per cent annual economic growth, by freeing up an estimated 33.7 trillion Indonesian Rupiah IDR (~ 1.9 billion USD) in fiscal resources from LPG and 23.8 trillion IDR (~ 1.5 billion USD) from electricity subsidies, as explained below.

Indonesia would benefit from tackling fossil fuel subsidies at all levels, however this policy brief looks specifically at household subsidies for energy consumption. It outlines in practical terms how Indonesia can:

1. Shift from a commodity-based subsidy to a direct targeted subsidy,
2. Improve the ability to target subsidies to reach people most in need,
3. Use the budget savings to increase investment in sustainable development priorities including renewable energy,
4. Invest in education and public awareness.

Currently energy subsidies for households (both LPG and electricity) benefit wealthier groups more than poorer ones. Moving to direct targeted subsidies would enable the subsidy to reach 40 percent of the lowest socioeconomic status: i.e. those registered in the *Data Terpadu Kesejahteran Sosial* (DTKS - Integrated Social Welfare Data) database. This brief argues the subsidy should be delivered through an electronic fund transfer directly linked to the purchase of energy commodities, and aligned with existing social welfare systems like those for food (BPNT) and education (PIP). We propose the amount should be a fixed monthly sum based on national average consumption.

This reform would not only be more socially equitable, it would also lead to less overall demand for energy as those no longer receiving the subsidy would be encouraged to use less. The over 50 trillion IDR saved by these reforms could then be spent on sustainable development, including policies to facilitate greater take up of renewables. This will have huge benefits to national wellbeing, and enable Indonesia to meet or exceed its NZE 2060 targets. It's not just about balancing budgets; it's also about creating a fairer and more sustainable future for all.

Background

The Indonesian Government has shown great commitment to the energy transition over the past five years. First as G20 President in 2022 and then as ASEAN Chair in 2023, Indonesia made energy transition a top priority, and has submitted its long-term commitment to achieve NZE by 2060 (or earlier with international assistance). At the domestic level, policy measures such as the early retirement of coal-fired power plants and the acceleration of electric vehicles are receiving increased attention, and financing vehicles like the Energy Transition Mechanism Country Platform and Just Energy Transition Partnership (JETP) have been established. However, some policies remain that undermine this progress: one is household-based energy subsidies.

What's wrong with the current policy?

Indonesia has been subsidising fossil fuels since the late 1970s, with the aim to help poor and vulnerable households gain access to affordable energy, as well as maintain affordability of basic necessities. However, in reality the policy has never achieved these goals. There are five main problems with the way the energy subsidy is currently structured:

1. Subsidies create an increasing fiscal burden

The energy subsidy places enormous fiscal burden on the state budget. In 2022, total energy subsidy and compensation amounted to IDR 502 trillion (approximately USD 35 billion), which constituted about 22.3% of total government expenditure.[1] Indeed, the amount of money spent on energy subsidies far exceeds the USD 20 billion pledged by the JETP to cover part of the financing needs of the energy transition. The more public money is spent on subsidies, the less money remains for development priorities such as education, health and infrastructure. Over time, these subsidies undermine the country's fiscal resilience, particularly as the cost of subsidies continues to rise alongside energy consumption, especially of fossil fuels. Without substantial reforms, these subsidies will persist in depleting the country's budget, and will hold back a just transition.

2. Subsidies make it harder for renewables to compete

Energy subsidies encourage the excessive consumption of fossil fuels through maintaining artificially low prices. Fossil fuels comprise a large share of both the overall energy supply and generation mix in Indonesia (around 77% and 82% in 2022, respectively).[2] Maintaining artificially low prices of fossil fuels means that people are not incentivised to conserve energy, in turn increasing the need for investments in supply, and producing higher levels of greenhouse gas emissions, air pollution, and resource depletion. The complete removal of consumer subsidies for electricity (from their levels in 2013) could reduce electricity consumption by over 10 percent per annum.[3]

At the same time, subsidies also reduce the incentive to invest in clean energy resources and technologies. Currently, energy subsidies are only available to consumers using the PLN grid, while renewable energy generators are mostly off-grid. The way that the existing PLN grid is designed makes it difficult if not impossible to incorporate renewables. Thus although the subsidy is energy-agnostic, in practice it props up the continued use of grid-based fossil fuels, making it harder for renewables to compete.

We recognise there are additional barriers to renewables entering the market. New renewable sources of electricity are typically more expensive than fossil-fuel sources per kilowatt-hour,[4] even without distortions from price caps on coal sold to the PLN. The need to build new transmission networks to accommodate renewables further drives up costs. However, reforming the household-based subsidy to a direct targeted subsidy will help to remove one disincentive, as well as free up finances to spend on renewables and other development priorities.

3. Subsidies not only fail to address inequality, but actively worsen it

Ironically, energy subsidy policies in Indonesia benefit wealthier groups more than poorer ones. Data indicates that most energy subsidies, particularly for electricity and LPG, are utilised by households with higher energy consumption, typically belonging to the upper-middle-income group.[5] For example, 75% of the total population accessed

subsidised LPG in 2017, comprising 78% of "non-poor" households, compared to only 51% of those classified as "poor" or "near-poor".[6] Thus energy subsidies not only fail to achieve their intended goal, but in fact actively worsen social inequality. Reforms to the electricity subsidy in 2017 did improve targeting of vulnerable recipients somewhat, by removing 18 million ineligible households from receiving the subsidy. However more than half of electricity subsidy recipients continue to come from those in the top half of income earners.[7]

4. Subsidies do not address the energy access gap

Vulnerable groups such as female-headed households, people living with disabilities, and the elderly often do not have access to electricity and gas networks and therefore cannot benefit from subsidised energy. People living in remote areas that are hard for distribution networks to reach also do not benefit from energy subsidy policies. According to data from the National Team for the Acceleration of Poverty Alleviation (TNP2K), in 2020 the number of people using firewood as a main source of energy for cooking included 2.74 million female heads of families, 4.06 million elderly individuals, and 762 thousand people with disabilities.[8] This method of cooking is bad for both health and for the environment. A just transition in Indonesia will not take place if groups like these are left behind due to where they live or their position in society, and the current method of providing the subsidy to the commodity rather than to the individual means they are locked out of this system.

5. Subsidies contribute to crime and misappropriation

Further, the significant price gap between subsidised and non-subsidised energy creates opportunities for criminal activities like smuggling and misappropriating subsidised LPG and selling them at non-subsidised prices. This practice is not uncommon, with 40 police reports filed within six months in 2023, leading to the seizure of 118,504 LPG cylinders, and likely more gone unreported.[9] This practice not only damages the state financially but also leads to social injustice, as certain groups exploit the misuse of subsidies that are intended for the poor.

Energy subsidy policy reform measures

To achieve a just energy transition, energy subsidy policy reform is crucial. CPD proposes the following priority actions:

1. Shift from a commodity-based subsidy to a direct targeted subsidy

Consumption-based energy subsidies should no longer be available to everyone, but to poor and vulnerable households only, freeing up fiscal space and improving social equity. We estimate that limiting the beneficiaries to poor and vulnerable households would save approximately IDR 33.7 trillion from the LPG subsidy and IDR 23.8 trillion from the electricity subsidy budget.

LPG subsidies:

- A fixed monthly subsidy can be calculated based on the average annual consumption of LPG of poor and vulnerable households.
- According to TNP2K, the price difference between subsidised and non-subsidised LPG is around IDR 5,000 per kilogram. Considering that the average monthly LPG consumption is around 9 kg, we propose a fixed monthly subsidy allocation of IDR 45,000 to eligible beneficiaries.[10]
- Based on 2020 figures, the DTKS database identified 29.2 million poor and vulnerable households who would be eligible for the subsidy under our proposed new system. This would cost the state budget IDR 15.8 trillion per year, a saving of IDR 33.7 trillion from the 2020 actual spend on the LPG subsidy of IDR 49.5 trillion.[11]

Electricity subsidies:

- A fixed monthly subsidy can be calculated based on the average value of the subsidy currently received by eligible Indonesian households. By providing a fixed monthly subsidy of IDR 95,000, it will slightly exceed the current average subsidy that households receive every month, but only reach those who need it most, thus significantly reducing the overall spend.[12]
- Based on 2020 DTKS data for the number of PLN registered customers receiving electricity subsidies, 27.2 million households would be eligible in the new system.
- If these households each receive IDR 95,000 per month as above, this would equate to a total spend of IDR 31 trillion per year, leaving a IDR 23.8 trillion saving from the 2020 actual spend of IDR 54.8 trillion.[13]

The implementation of a fixed monthly subsidy system direct to individuals has the potential to encourage savings and efficiency in the use of both LPG and electricity. If those households are energy-efficient, they could feasibly cover their entire monthly LPG expenditure through the subsidies they receive. Similarly, households that keep their monthly electricity consumption below IDR 95,000 will not be charged additional fees during the period. Those no longer receiving the subsidy will also be incentivised to limit their energy use to avoid increased costs.

In geographically remote communities where electricity and LPG are not available, subsidies should be used flexibly to finance locally available alternative energy sources, or for households to pay to electrify their homes. This can encourage the increased feasibility of renewable energy projects in remote areas based on locally-led solutions.

Once the subsidy has been changed, prices for energy will increase to reflect true supply costs. The absence of a price gap will decrease the risk of hoarding and misappropriation mentioned above, and reduce the level of bureaucratic oversight required by the current system.

2. Improve the accuracy of subsidy recipients

To align with existing poverty reduction programs and national energy access targets, this new energy subsidy should be limited to use for energy only, rather than direct financial aid. This approach ensures that subsidies are actually used for energy access, thereby reducing the risk of funds being diverted to other purposes, in line with Law Number 30 of 2007, which states that energy subsidies are aimed solely at increasing energy access for the underprivileged. We recommend distribution in electronic form. The government should work closely with the banking sector and local financial services to explore mechanisms of reaching those in remote areas outside the formal banking system.

Household-level data from DTKS can improve the accuracy of targeting subsidised households, ensuring they go only to those who need them. The Indonesian Government already does this with existing social assistance programs like Non-Cash Food Assistance (BPNT), the Smart Indonesia Program (PIP) for education assistance, the JKN Contribution Assistance Program (PBI) for health, and the Family Hope Program (PKH). We propose that electricity and LPG subsidy recipients can be integrated with the PKH and BPNT systems. Biometric technology could also be explored as a way of ensuring accuracy of beneficiaries, however should be done prudently and with high data protections to avoid privacy violations.

3. Increase investment in sustainable development priorities including renewable energy

Remarkably, the most significant source of funding for health, education, infrastructure and social protection programs has historically come from the savings generated by reducing energy subsidies.[14] In our proposal, the over 50 trillion IDR (~$3.4 billion USD) saved by reducing the number of people who benefit from fossil fuel subsidies can be diverted to other areas, including increasing investment in renewable energy infrastructure, or providing incentives for the use of renewable energy. This would accelerate the energy transition and reduce dependence on fossil fuels. Indonesia originally set a target of 23% of renewable energy in the mix by 2025, which it has since revised down to 17-19%.[15] It is unclear whether this goal will be met. Reforming energy subsidies could free up fiscal space to pursue this target more aggressively, and pursue other sustainable development priorities like poverty reduction, social welfare, health and nutrition.

4. Invest in education and public awareness and create a complaint mechanism

Any policy that results in higher prices for some groups is likely to encounter some resistance. The proposed change in energy subsidies would likely contribute to a one-off change in price levels, as has been seen before in Indonesia. Investing in public education campaigns to inform people about the many benefits of energy subsidy policy reform will be crucial to win public acceptance of the policy. The experience of implementing the targeted electricity subsidy policy in 2017 is illustrative here. In that case, public rejection was avoided due to intensive public education, and early support from policy advocacy groups.

In addition to investing in education and public awareness, it will be important to regularly monitor the reforms to ensure they are working as intended. As a monitoring tool, we propose that a clear and easily accessible complaint mechanism should be established. This mechanism would allow members of the public to dispute eligibility and record issues with distribution. It would also help to improve transparency, accountability and public trust in the process.

Conclusion and challenges

The Government of Indonesia spends a large amount of money on household-based energy subsidies each year, with the aim of helping poor and vulnerable households. However, these subsidies have increased energy inequality and not improved energy access. In fact, these policies do nothing to address access gaps particularly for already marginalised groups, significantly affecting the nation's short and long-term wellbeing.

To address this, CPD proposes changing from commodity-based subsidies to direct targeted subsidies targeted to households at or below the poverty line. Recipients of subsidies should be given the freedom to use them to remove barriers to energy access as well as address the affordability of energy. These changes can yield a range of benefits, such as (1) freeing up fiscal space to be spent on more sustainable industries and other poverty alleviation measures, (2) addressing poverty and improving social equity and energy access through better targeted support and (3) removing incentives for ongoing reliance on fossil fuels. This policy shift is critical to achieve a just transition in Indonesia.

Like any major policy change, this will require regulatory reforms, including to Presidential Regulations and several Ministerial Regulations. In addition, cross-ministerial cooperation must be strengthened in implementing this policy change. The Ministry of Energy and Mineral Resources, the Ministry of Finance, and the Ministry of Social Affairs must all be actively involved. Banking resources and financial technology service providers must also be mobilised to support the distribution of subsidies. The new government inaugurated on 20 October 2024 should take on this challenge as a priority issue, setting the scene for accelerated climate action in Indonesia over the coming decade.

Endnotes

[1] Compensation in this context refers to the reimbursement paid by the government to state-owned enterprises for offering services below market cost. Ihsan, A. et al. 2024. *Indonesia's fuel subsidies reforms*, World Bank Group.

[2] International Energy Agency (IEA). 2023. Energy system of Indonesia.

[3] Burke, P. and Kurniawati, S. 2018, 'Electricity subsidy reform in Indonesia: Demand-side effects on electricity use', *Energy Policy*, *vol. 116,* May, pp. 410-421.

[4] Bintang, H. 2023. *Making energy transition succeed: A 2023's update on the levelized cost of electricity and levelized cost of storage in Indonesia*, Institute for Essential Services Reform (IESR).

[5] Gobel, R. et al. 2024. 'Equity and efficiency: An examination of Indonesia's energy subsidy policy and pathways to inclusive reform', *Sustainability*, vol. 16, no. 407.

[6] Kusumawardhani, N. et al. 2017. *Gender and fossil fuel subsidy reform: An audit of data on energy subsidies, energy use and gender in Indonesia,* International Institute for Sustainable Development.

[7] Gobel, R. et al. 2024. 'Equity and efficiency: An examination of Indonesia's energy subsidy policy and pathways to inclusive reform', *Sustainability*, vol. 16, no. 407.

[8] TNP2K. 2020. *Data Terpadu Kesejahteraan Sosial (DTKS) Berdasarkan Kepmensos, No. 8/HUL/2019 2020*.

[9] Pertamina. 2023. 'Consistent action against fuel and LPG subsidy misuse, Pertamina appreciated Indonesian National Police's Criminal Investigation Unit', Press Release, 4 October.

[10] This is based on Badan Kebijakan Fiskal. 2019. *Kebijakan Subsidi LPG Tabung 3Kg Tepat Sasaran,* BKF Kementerian Keuangan; TNP2K. 2019. *Laporan Pemanfaatan Teknologi Keuangan Untuk Penyaluran Subsidi LPG.*

[11] Badan Kebijakan Fiskal.K.K.R. 2020. *Bahan Kepala Badan Kebijakan Fiskal, Kementerian Keuangan Pada Rapat Panja Asumsi Dasar, Kebijakan Fiskal, Pendapatan, Defisit Dan Pembiayaan Dalam Rangka Pembicaraan Pendahuluan RAPBN TA 2022*; BKF Kementerian Keuangan.

[12] Based on: TNP2K. Reformasi Kebijakan Subsidi ELPIJI Dan Subsidi Listrik Tepat Sasaran; TNP2K: Jakarta, Indonesia, 2020; TNP2K *Policy Paper (Naskah Kebijakan) Transformasi Subsidi Listrik Di Indonesia: Tujuan Dan Usulan Mekanismenya*

[13] This is based on TNP2K. 2021. *Reformasi Kebijakan Subsidi ELPIJI Dan Subsidi Listrik Tepat Sasaran ;* TNP2K. 2021. *Policy Paper (Naskah Kebijakan) Transformasi Subsidi Listrik Di Indonesia: Tujuan Dan Usulan Mekanismenya*.

[14] TNP2K. 2018. *Program bantuan pemerintah untuk individu, keluarga, dan kelompok tidak mampu menuju bantuan sosial terintegrasi .*

[15] Setiawan, D. and Setyawati, D. 2024. 'Indonesia's expansion of clean power can spur growth and equality', *Ember* , 14 August.

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