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REVIEW OF ELECTRICITY SUBSIDIES IN INDONESIA 2015-2020

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ABSTRACT
To meet the adequacy of electricity needs and help people's purchasing power, the government through the State Revenue and Expenditure Budget (APBN) provides cheap and affordable electricity services for certain segments of society every year. Electricity subsidies are assistance provided by the government to consumers in the form of electricity tariffs that are lower than their economic tariffs. The difference between the subsidized tariff and the economic tariff is borne by the Government, which is then paid to PT Perusahaan Listrik Negara (PT PLN Persero). This research will review the burden of subsidy spending that must be borne by the government and the journey of electricity subsidy reform on target. In addition, it will also review the role of electricity as an instrument in handling COVID-19 in 2020. Based on data on the realization of electricity subsidy spending for the last 5 years which have been audited (2015-2020), it can be seen that starting in 2015 there was a decline in spending as policy reforms began. more targeted electricity subsidies. However, since 2018 electricity subsidies have again increased due to one of the reasons for the increase in the cost of providing electricity (BPP) of electricity in FY 2018 compared to FY 2017 and a significant increase in the number of 450 VA customers. In 2020, an increase in electricity subsidies also occurred due to the electricity discount policy for certain groups of people and business entities as part of handling the impact of COVID-19.

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1. INTRODUCTION

The 1945 Constitution mandates that the wealth of natural resources and its contents are intended for the prosperity of all Indonesian people. Based on the 2020 population census, the Indonesian population in 2020 was 270.3 million people (Statistics, 2021) creating a variety of needs that must be met by the government. The welfare of the community is the main responsibility of the government, realized by improving public services and equity. These services include providing goods/services and strategic needs in community life. On the other hand, the consequence of providing these services is a very large financial support need.

Law Number 30 of 2007 concerning Energy states that the state needs to be present in realizing equality and justice in the provision of community electrical energy needs. Thus the government needs to provide assistance for the class of poor people and reduce the inequality of energy access.

These efforts have been demonstrated consistently by the government through the State Budget (APBN) policy every year. One of them is providing cheap and affordable electricity facilities for certain community segments through providing electricity subsidies.

Subsidies are payments made by the government to companies or households to achieve certain goals that make them able to produce or consume a product in a larger quantity or at a cheaper price. Economically, the purpose of subsidies is to reduce prices or increase output/output (Spencer & Amos JR, 1993).

Electricity subsidies are assistance provided by the government to consumers in the form of electricity tariffs that are lower than their economic tariffs (Widarma & Kumala, 2018). With the same amount of electricity usage, consumers who get subsidized rates will pay an account or electricity bill lower than those who do not get subsidies. The difference between subsidized tariffs the economic tariff is borne by the government, which is then paid to PT PLN Persero (TNP2K, 2021A)

Along with the efforts to provide electricity subsidies as the responsibility of the government, several challenges need to be observed to realize the justice of electricity access for the whole community.

Academics and decision-makers have different views on implementing public sector policy reforms. The pros and cons related to the right steps and time in the implementation of reform: Is the electricity sector reform carried out radically, gradually, and incrementally? The next question is related to the role of the institution (structure) and actor (agencies) at the formulation stage of the electricity sector reform concept, as well as the interaction between the two at the policy implementation stage (Sambodo & Hidayat, 2020). In the case of reforming electricity subsidy policies on target continue to be sought to be incremental (Munzinger P et al., 2017).

Proposed Electricity Subsidies for Large Scale Electricity Consumers have been rolled out by the government in 2014. This was based on a commodity-based electricity subsidy policy before 2015, which had an impact on the amount of subsidy burden because the government had not yet taken into account the basis of the community welfare (TNP2K, 2021a)

In 2015 the government began to remove gasoline subsidies, and permanent subsidies for diesel fuel and expand the use of biodiesel for transportation facilities. Revocation of electricity subsidies for consumers of 900 Volt Ampere (VA) power users came into force in 2017 (Rosadi & Amar, 2019)

Elimination of fuel subsidies and providing electricity subsidies specifically for consumers 450 VA and 900 VA that are poor and vulnerable to impact the decline (Nikho, N.D.-A).

This article aims to review the burden of subsidized spending that must be borne by the government and the journey of electricity subsidy reforms on target. In addition, it will also be reviewed the role of electricity as an instrument in handling COVID-19 in 2020.

2. LITERATURE REVIEW

Government Expenditure

According to Law Number 17 of 2003, government expenditure is the obligation of the central government which is recognized as a deduction from the value of net wealth. Based on the APBN posture, state expenditure consists of central government spending and transferring to the regions and village funds.

The derivative of Law 17/2003, namely Government Regulation Number 71 of 2010 concerning Government Accounting Standards, classifies expenditure into 3 (three), namely organizational classification, classification of economic functions, and classification.

Organizational classification identifies spending based on budget user organizational units. Central government spending according to the organization is expenditure allocated to the State Ministry/Institution and the State General Treasurer Budget (BUN). Central government spending consists of several programs allocated to achieve certain outcomes in the budget section of the State Ministry/Institution and the State General Treasurer Budget Section.

Classification according to the function of grouping spending based on the main functions of the central/regional government in providing services to the community. Law 17/2003 explains the details of expenditure according to the function in Article 11 paragraph 5 consists of eleven 11 functions and 79 sub-functions.

The Organization for Economic Co-Operation and Development (OECD), classifies government expenditure based on the classification of government functions (Classification of the Functions of Government/Cofog) into 10 functions: general public services; defense; public order and security; economic affairs; environmental protection; housing and public facilities; health; recreation; culture and religion; education; and social protection (Second-level, 2021).

In economic classification, spending is grouped according to the type of expenditure to carry out activities. Economic classification for the central government, namely employee expenditure, goods expenditure, capital expenditure, interest, grants, social assistance, other expenditure, and subsidies (Indonesia, 2010). Government spending through investment in the electricity network provides economic and social benefits such as improving the quality of life, increasing productivity, and facilitating the growth of small and medium enterprises (Akhmadi, 2021).

Subsidy

Subsidies are essentially fiscal instrument that aims to ensure the implementation of the role of the state in economic activities to improve the welfare of society fairly and equitably (Yustika, 2008). Like many countries in the world, the Indonesian government uses subsidized instruments to achieve social and economic goals (Budiantoro & Saputra, 2013).

With so many priority needs to urge, the decision of the allocation of government fiscal resources is the most difficult and important task of the government. In this framework, the government acts as a regulator to carry out special assignments to state-owned or private enterprises to try to reduce market failures, especially for the vital economic sector that transports the livelihoods of the wider community (Akyuwen, 2016).

The government in providing subsidies will choose the most important strategic sector for its economy, one of which is the energy sector. In the 2005-2011 State Budget, the Indonesian government is still spending energy subsidies for the community with a greater allocation compared to defense, health, social security, and education (Tumiwa et al., 2012) although spending on energy subsidies began to decline and began to increase spending in other sectors.

The International Institute for Sustainable Development (IISD) defines subsidies as various forms of government actions aimed at reducing energy production costs, increasing energy producer income, or reducing costs paid by energy consumers (Tumiwa et al., 2012).

Energy subsidies are divided into two categories: subsidies designed to reduce the cost of energy consumption, which are referred to as consumer subsidies, and subsidies aimed at supporting domestic production, or producer subsidies (Ellis, 2010).

When referring to this category, electricity subsidies are classified as subsidies designed to reduce energy consumption costs. Electricity subsidies are given on the difference between electricity rates (TTL) imposed to the public lower than the cost of providing electricity (BPP) by PT PLN Persero.

International Energy Agency (IEA), OPEC, OECD, and World Bank assume that energy subsidies contribute to economic growth, poverty reduction, and supply security and can improve social welfare while overcoming market failures (Tumiwa et al., 2012).

The Indonesian government subsidized fuel oil (BBM) and electricity so that energy prices can be reached, especially by low-income circles to have a positive impact to increase community household income (Munawar, 2013). With a more affordable price of electrical energy for certain groups, the community will have a greater residual income for other purposes and directly affect other economic sectors.

But behind the positive impact, several studies state that the energy subsidies are mostly not on target, especially before 2015, and are enjoyed by the High-sales Society (Ermawati, 2015; Kurnaini & Nikho, N.D.-B; Paramita et al., 2020; Widarma & Kumala, 2018b). This indicates that energy subsidies are regressive policies that make the poor accept relatively small benefits compared to high-income communities.

3. RESEARCH METHOD

This article uses a qualitative descriptive research method to review the burden of subsidized spending that must be borne by the government and the journey of electric subsidy reforms on target and the role of electricity as an instrument in handling COVID-19 in 2020. Data collection is carried out by literature study techniques through textbooks, journals, financial statements, and searches for related digital literature as well as secondary data from research objects. Thus this descriptive qualitative research only develops concepts and gathers facts, but does not do hypothesis testing (Singarimbun, 1995).

4. REVIEW RESULTS

a. Review of Expenditures and Electricity Subsidies Policy in 2014-2019

To maintain a stable economic momentum, the government strives to achieve fiscal sustainability through the APBN instrument so that government expenditure can be maintained in a safe condition and sufficient for public service needs in the medium and long-term framework (Solikin & Choirunnisah, 2019).

The consequences of this policy, especially in terms of continuity of energy subsidies for the community, of course, put pressure on fiscal, especially subsidized spending that has a large portion of state spending and state revenue that is not optimal.

Subsidies are government policies that aim to increase production output (output) or reduce prices. The mechanism is done by making payments to economic actors, namely companies or households so that they can produce more or consume in a larger quantity at a more efficient price. In addition, subsidies are also needed to maintain the sustainability of development through vital commodity consumption such as electrical energy.

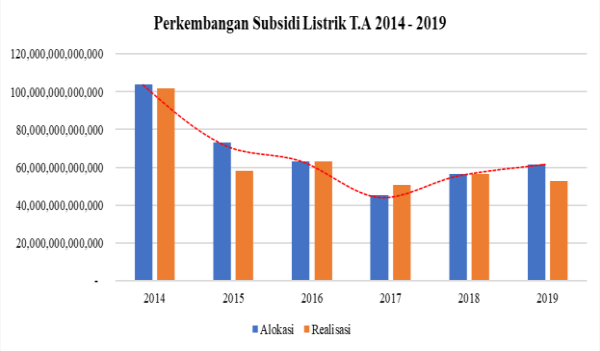
The policy of providing selective subsidies is given to goods and services that have positive externalities, namely the impact of greater production output, for example, electrification needs for social, industrial, household, business, government services, and special activities.

Based on data from the 2014 Financial Note and APBN, the realization of electricity subsidy spending experienced a growth of 3.6% per year from Rp83.9 trillion in T.A. 2008 to Rp100.0 trillion in APBNP T.A. 2013. In 2014 the allocation of electricity subsidies was Rp103.8 trillion with a realization of 98.07%.

The fiscal load of electricity subsidies can be seen in Figure 1 which experienced a gradual allocation decrease in the 2014-2017 period and increased in the 2018-2019 period. A very significant decrease occurred in 2015, the realization of electricity subsidy spending fell 42.71% compared to 2014. The main factor that underlies this significant decline is the change in electricity subsidy policy before 2015 given to all groups of PT PLN Persero service user tariffs.

Figure 1

The development of electricity subsidies 2014 - 2019



Source: Processed from LK-BUN and LKPP

The 2015 electricity subsidy policy underwent very significant change and accordance with the main points of fiscal policy related to electricity subsidies, one of which is to increase the efficiency of the electricity subsidy budget through the implementation of the tariff adjustment mechanism for certain customer tariff groups to increase the accuracy of the target through the Minister of Energy and Mineral Resources Regulation Number 9 the Year 2015 concerning Amendments to the Minister of Energy and Mineral Resources Regulation Number 31 of 2014.

Based on data from the Directorate General of Budget (Appendix), 10 tariff groups were issued from subsidized recipients and began to be subject to an increase in electricity rates (TTL), namely the household group (R.2 / 3,500 VA to 5,500 VA; R.3 / 6,600 VA to on); Business (B.2 / 6,600 Va to 200 kVA; B.3 /> 200 kVA); industry (i.3 /> 200 kVA; i.4 / 30,000 kVA and above); Government Office & PJU (P.1 / 6,600 VA to 200 KVA; P.2 /> 200 KVA; P.3); and special services (L/TR, TM, TT).

Allocation of electricity subsidies in 2015 amounted to Rp73.1 trillion with a realization of Rp58.3 trillion or 79.74%. This figure dropped very significantly by -42.71%. On audit examination by the Supreme Audit Agency (BPK) in 2015 the value of the lack of electricity subsidy payments to PT PLN (Persero) was Rp5.2 trillion.

In 2016, the Ministry of Finance c.q. The Directorate General of Budget (DJA) received an electric subsidy expenditure allocation of Rp63.0 trillion with a realization of 99.99%. The allocation has decreased by Rp10.1 trillion compared to 2015 in line with the existence of a tariff adjustment policy for 12 customer tariff groups and the addition of the tariff group issued from the recipient of the electricity subsidy, namely R.1 / 2,200 VA and R.1 / 1,300 VA as much as 10, 1 million customers.

However, when compared to the realization of 2015, there was an increase of 8.17% or Rp4.7 trillion to Rp63 trillion. The 2016 electricity subsidy payment of Rp. 63 trillion consists of the payment of 2016 subsidy expenses of Rp50.8 trillion and the payment of electricity subsidies in 2014 of Rp12.2 trillion. On the BPK audit examination in 2016, there was a lack of payment of electricity subsidies to PLN (Persero) of Rp7.2 trillion.

The policy of providing electricity subsidies for the 2017 fiscal year is readjusting in line with the Minister of Energy and Mineral Resources, Regulation Number 18 of 2017 which regulates the implementation of the tariff adjustment every 3 months if there is a change in the electric subsidy parameter including the Customer Tariff R.1M / 900 VA or the household is capable so that the burden Electricity subsidies for 900 VA customers are reduced. The decline was due to an improvement in the mechanism of providing electricity subsidies, especially for poor and vulnerable households for 450 VA and 900 VA customers in 2017 more on target.

The allocation of electricity subsidies for the 2017 fiscal year amounted to Rp45.3 trillion with realization exceeding the allocation ceiling of Rp50.5 trillion or 111.5%. Although the realization exceeded the ceiling, when compared to 2016, the number of realizations decreased significantly by Rp12.5 trillion or -19.81% of the 2016 realization which reached Rp63.0 trillion. The realization of 2017 amounted to Rp50.5 trillion consisting of 2017 subsidized payments of Rp45.3 trillion and payment of subsidized lack of BPK in 2015 amounted to Rp5.2 trillion.

When viewed from the payment of expenses outside the payment of the previous fiscal year, there is a decrease of Rp5.5 trillion in 2017 when compared to the 2016 expenses caused by the improvement of the subsidy policy by adjusting the adjustment tariff,

especially in R.1M / 900 VA and the Sedidi Receipting Subsidies Electricity in the 900 VA customer group.

In addition to the tariff adjustment factor and customer sweeping, another factor that influences is there is a decrease in parameters associated with electricity supply costs, namely macro assumptions in the form of ICP, exchange rates, and inflation. Based on data from the 2017 State Treasury Financial Statements (LK BUN 2017), there is an additional budget with the top mechanism on electricity subsidy expenditure of Rp5.2 trillion to pay the shortage of electricity subsidy payments for the 2015 BPK inspection. This policy is carried out to maintain debt service achievements PT PLN (DSCR) Coverage Ratio (DSCR) to remain above 1 (one). This additional electricity subsidy is then the cause of realization beyond the initial allocation ceiling in 2017.

The policy of providing energy subsidies, especially electricity subsidies, was carried out again in 2018 with the removal of customer subsidies capable of 900 VA or R.1M / 900 VA and only given to the families of low-income people (MBR). Policies related to 2018 electricity subsidies are directed to (1) Continue the provision of electricity subsidies that are more targeted to 900 VA poor households, (2) increase national electrification ratios, and reduce inequality between regions, (3) Increase the efficiency of electricity supply, through optimizing gas and coal fuel generation, and reducing the composition of fuel usage in electric power plants, and developing new energy and more efficient renewable energy.

Electricity subsidies in 2018 were allocated Rp56.5 trillion with 100%realization. The realization of 100% worth Rp56.5 trillion consists of Rp5.3 trillion for payment of electricity subsidy shortages in 2016 to PT PLN (Persero) and Rp51.2 trillion for payment of electricity subsidies in 2018 which includes payments for the 900 tariff group VA Households are capable at low voltage (R.1M/ 900 VA) of Rp5.3 trillion, which is not a subsidized tariff group in the 2018 APBN policy.

Payment of the R.1M/ 900 VA tariff group that has been realized at Rp5.3 trillion is then compensated/ set off with including payment of part of electricity subsidies in 2018 of Rp2.2 trillion, payment of remaining electricity subsidy debt in 2016 amounted to Rp1.9 Trillion, payment for lack of electricity subsidy payments for BPK's findings in 2017 amounted to Rp 363 billion.

For the compensation/set off, there is then the remaining payment of Rp816.8 billion to the subsidy receivables of PT PLN (Persero) to the government. If calculated by the realization of non-payment payments in the previous year, in 2018 an increase of Rp3.6 trillion from the previous 2017 amounting to Rp45.3 trillion to Rp48.9 trillion in 2018 although 900 VA household customers were able to have been expelled from subsidies. This is because one of them is an increase in the cost of providing electricity (BPP) in the 2018 FY compared to the 2017 FY and the significant addition of 450 VA customers amounting to 36,500 customers.

Electricity subsidies in 2019 were initially allocated to the Ministry of Finance c.q. DJA amounting to Rp59.32 trillion, then in the second quarter precisely in May there was a 1st revision of the Budget Implementation List (DIPA) which added the ceiling of Rp2.28 trillion for the Payment of Undebah 2016 and 2017 so that the total final ceiling was Rp61.61 trillion.

In 2019 electricity subsidy expenditure was realized at 85.48% or Rp52.66 trillion from the final ceiling including addition. Based on BAV data throughout 2019 which shows the verified payment figure of Rp52.66 trillion is used to pay pure subsidies outside of underpayment payments in previous years. When compared to the Underpayment Non -Payment in 2018 amounting to Rp48.9 trillion, in 2019 there was an increase of around Rp3.76 trillion. This is reasonable because the policy taken in 2019 is to continue to provide subsidies to the capable household group (R.1M/ 900 VA) of 21.45 million customers and a significant increase in subsidized customers R.1/ 900 VA of 650 thousand customers.

The tariff adjustment policy on customers R.1M/ 900 VA targeted to be implemented on January 1, 2019, cannot be implemented and is expected to begin on January 1, 2020, by the Minister of Energy and Mineral Resources Regulation Number 19 of 2019.

b. Subsidies and Electricity Stimulus in Handling COVID-19 of 2020 in Indonesia

As part of the social protection system during the Covid-19 pandemic period and to maintain the purchasing power of the people, especially the lower layers and the ability of small businesses, the government provides stimulus through electricity instruments. This stimulus policy philosophy is driven by the mandate of Law Number 2 of 2020 related to State Financial Policy in dealing with the Pandemic COVID-19 and supports the National Economic Recovery Program (PEN). Electric stimulus policy consists of two types, namely electrical discounts for certain groups and stimulus for the exemption of minimum account provisions and expenses/ subsidiaries.

In line with the government's focus on protecting lower-class people, electricity tariff discount policies are given to 450 VA power household customers, 900 subsidized VA, and to Micro and Medium and Medium Enterprises (MMMEs) Business and Industry 450 VA. This policy is outlined in the Decree of the Minister of Energy and Mineral Resources Number 139K/26/MEM/2020 concerning the Determination of PT PLN (Persero) Electricity Rates in Facing Covid-19. Giving discounts on tariffs is given with the following mechanisms:

1. Household Consumer 450 VA (R.1/450 VA), Small Business 450 VA (B.1/450 VA), and Small Industry (I.1/450 VA)

a. Prepaid consumers, given an electricity token of 100% the highest month of use among the use of December 2019, January 2020, and February 2020
b. Regular consumers, given an electricity account discount of 100%

2. Household Consumer 900 VA Subsidized (R.1/900 VA)
a. Prepaid consumers, given electricity tokens of 50% of the highest month of use among the use of December 2019, January 2020, and February 2020
b. Regular consumers, given an electricity account discount of 50%

Household customers both 450 VA and 900 subsidized VA are given a discount on April 2020 - December 2020. Furthermore, for the 450 VA business and small industry customer class, a tariff discount from May 2020 - December 2020. Electricity tariff discounts are given to Customers who also receive electricity subsidies so that the payment mechanism is included in the mechanism of regular electricity subsidies according to the Minister of Finance Regulation (PMK) Number 174/ PMK.02/ 2019.

The policy on exemption of the minimum account provisions and the cost of burden/ abonnement is given to protect and maintain the economic sustainability of business actors for customers of the industry, business, and social groups. In contrast to the electric discount whose funding is together with Budget Section (BA) 999.07 electricity subsidies, this policy is regulated and implemented by BA 999.08 Other expenditure although based on PMK Number 136/PMK.02/2020 This expenditure is also managed by Authorized Budget Users (KPA) held by the Director of PNBP SDA-KND. This policy was determined by the Ministry of Energy and Mineral Resources through the Director General of Electricity Number 1458/23/DJL.3/2020 and PMK Number 136/02/2020 with the following provisions criteria:

1. Assistance is borne by the government for the difference in lack of real use with the provisions of the minimum account as it should be applied to:
a. Industry Empowers> 1300 VA (I.1/1,300 VA s.d. I.4/> 200 kVA)
b. Business Empowerment> 1300 VA (B.1/1,300 VA s.d. B.3/> 200 kVA)
c. Social Empowerment> 1300 VA (S.2/1,300 VA s.d. S.3/> 200 kVA)

2. Exemption of load or subsidiary costs, given to:
a. 900 VA Industry (I.1/ 900 VA)
b. 900 VA Power of Business (B.1/ 900 VA)
c. Social Empowerment 200 VA (S.1/ 220 VA), 450 VA (S.2/ 450 VA), and 900 VA (S.2/ 900 VA)

In the implementation of electricity subsidy policies and electrical stimulus, the government realizes a budget of Rp 62,791,560,036,909 with the following details:

Table 1
Electricity Stimulus COVID-19

Tahun	Jenis Belanja	Jumlah
2020	Subsidi Listrik Reguler	49,655,080,902,612
	Diskon Listrik	11,448,439,134,297
	Belanja Lain-lain Pembayaran Dana Bantuan (Pembayaran Tagihan Listrik BA 999.08)	1,688,040,000,000

Source: Processed from LK BUN 2020

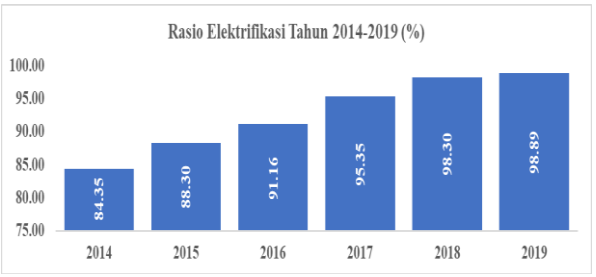
Based on Table 1, regular electricity subsidies and electric discounts are part of the 2020 electricity subsidy payment sourced from BA 999.07. Another expenditure payment of aid funds is used to finance the policy of the stimulus for the exemption of the minimum account provisions and the expense/ subsidiary costs sourced from BA 999.08.

The 2020 electricity subsidy consists of regular and electric discounts of Rp61.1 trillion or an increase of 16.02% compared to 2019 of Rp52.6 trillion. This increase is primarily due to the existence of an electricity tariff discount program for 450 VA power household customers, 900 subsidized VA, and 450 VA business and industry MMMEs. Based on the Decree of the Minister of Energy and Mineral Resources Number 139K/26/MEM/2020 concerning the Determination of PT PLN (Persero) Electricity Rates in Facing COVID-19. Electricity subsidies in 2020 are not given to 900 VA-RTM or capable household customers who are not included in the Integrated Social Welfare Data (DTKS).

c. Reform of Electricity Subsidies Policy in Indonesia

The burden of significant electricity subsidies to the country's fiscal capabilities every year is a challenge for the government, especially with the desire to increase electrification ratios throughout Indonesia (Figure 2).

Figure 2
Electrification Ratio in Indonesia
in 2014-2019



Source: BPS (2021)

Although the subsidy budget is large, this policy still needs to be maintained with a record used to help the poor and small and medium businesses (Handoko & Patriadi, 2005). In public finance theory, incentive public policies can cause moral hazard potential to the

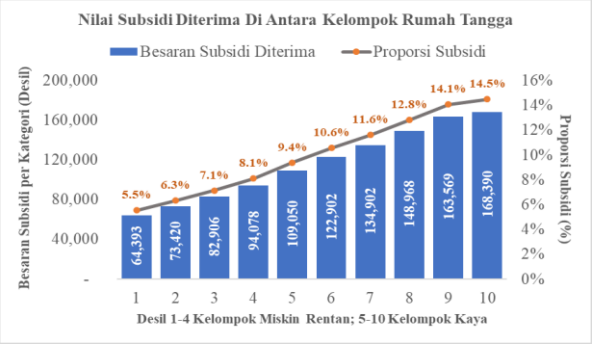
community that can be a risk burden for the government so it needs to be considered and considered (Jonathan, 2016). In the case of this subsidized policy, moral hazard can occur if the subsidy recipient community is not aware of using electricity so there is a waste because there is no limitation on the maximum amount of subsidies for each recipient.

The government always strives for reforms to provide subsidies to be more targeted to low-income people and small and medium businesses. This reform continues to be implemented in particular targeting the majority of customers of PT PLN (Persero), namely households that receive subsidies, namely 450 VA and 900 VAs unable.

The electricity subsidy policy on targets the meaning of the provision of electricity subsidies given to the poor and unable to refer to the Integrated Database of the Poor Poor Handling Program (DTPPFM) or now named DTKS owned by the National Team for the Acceleration of Poverty Reduction (Jarman, 2016)

Based on the presentation of the results of matching TNP2K (TNP2K, 2016) together with PT PLN (Persero), only around 20% of 900 VA customers registered in integrated data, and around 64% of 450 VA customers registered in integrated data. By the 2013 BPS Susenas in the study of TNP2K (TNP2K, 2021b), the inaccuracy of electricity subsidies was also shown by the gap in the proportion of subsidized consumption consumed by the rich group community where the household community was decal 5-10 consumed 74% of electricity subsidies while the vulnerable community was vulnerable to the poor 1- 4 only consume 26% as shown in (Figure 3).

Figure 3
Graph of Subsidy Value Between Household Community Groups



Source: processed from the 2013 BPS Susenas in TNP2K (2021)

This gap is caused by a pattern of subsidies before reforms that are still given commodity-based to all groups of people regardless of the welfare of the recipient group and are caused by the lack of power used by the vulnerable group of poor when compared to rich groups.

In its implementation, this target accuracy policy does not necessarily be imposed significantly but slowly. Policies with a slow approach are shown by the issuance of 9 regulations since 2014 specifically regulating electricity including subsidies, for example in 2017, a gradual tariff adjustment was applied for household customers 900 VA Able (R.1M/ 900 VA) by the Minister of Energy and Mineral Resources Regulation No. 18 of 2017.

Although the accuracy of subsidies remains always pursued by the government, some things remain a consideration such as the economic and purchasing power of the people to electrical energy such as the policy of providing electricity subsidies for household customers 900 VA capable (R.1M/ 900 VA) that occurred in 2019 given to 21.4 million household customers capable. To see the trend of electricity usage for household customers, you can use a data sample of the use of the 1st quarter of 2019 as follows:

Table 2
Volume Calculation per Household Customer

Triwulan I Tahun 2019 (Januari-Maret)		
Golongan Pelanggan	Volume Penggunaan (kWh)	Rata Rata per Pengguna (kWh/ ID Pel)
R.1 / 450 VA	5,864,707,005	**82.86**
R.1 / 900 VA	2,029,797,398	**99.87**
R.1M / 900 VA	6,567,528,919	**102.03**
R.1 / 1.300 VA	4,601,726,511	138.80
R.1 / 2.200 VA	2,349,461,679	270.78
R.2 / 3.500 VA s/d 5.500 VA	1,658,820,381	483.47
R.3 / 6.600 VA keatas	971,762,510	1,343.19
Total	24,043,804,403	**119.35**

Source: Processed from the subsidy bill of PT PLN (Persero) Quarter I 2019

Based on the sample of the calculation, it is shown that the use of subsidized households of 450 VA and 900 VA does not exceed the overall use of household electricity. Besides that, between the 450 VA group and 900 VA of poor class (R.1/ 900 VA), there is no overlapping of the amount of use even though the number of customers is almost 4 (four) times so it can be concluded that subsidized users can still be controlled and cannot be said there is an indication of moral hazard in the form of waste of electricity use. Of course, this must be a consideration for the government to maintain the electricity subsidy policy as long as the use of the recipient community is not excessive and burdening state spending.

In 2020, although amid the Pandemic COVID-19 the government also continued to strive for 900 VA-RTM customer allowances or households able to receive subsidies to ease the burden on the state and achieve the accuracy of subsidized targets for the community in need. Customer movement of PT PLN (Persero) both subsidies and non -subsidies listed in (Appendix) as well as showing reforms of the implementation of electricity subsidies from year to year.

5. CONCLUSION

Based on data from the realization of audited electricity subsidy spending (2015-2020) starting in 2015 there was a decoration of spending as the start of the reform of electricity subsidy policies that were more targeted.

This policy reform begins with the issuance of Minister of Energy and Mineral Resources Regulation Number 9 of 2015 concerning Amendments to the Regulation of the Minister of Energy and Mineral Resources Number 31 of 2014 which regulates the mechanism of tariff adjustment and issuing 10 tariff groups from recipients The recipient of the subsidy and in 2017 a gradual sweep of the 900 VA household group was able to adjust the tariff every 3 (three) months so that the subsidy load could be reduced.

Although the subsidized reform policy was carried out continuously, the declining trend only lasted for 3 years (2015-2017). From 2018 to 2019, electricity subsidy expenditure increased due to an increase in the cost of providing electricity (BPP) due to the changes in macro assumptions and the addition of the number of subsidized household customers of 450 VA as many as 36,500 customers in 2018.

Furthermore, in 2019 there was a change in policy where 900 VA household customers were able to 21.45 a million customers again given subsidies that caused an increase in the need for electricity subsidies. In 2020, the government consistently continued the reform of subsidies on target by issuing 900 VA-RTM customers from subsidized recipients.

To overcome COVID-19 throughout 2020, the government assisted the community and the business world through the stimulus of electricity so that the purchasing power and economy of the community and energy needs were maintained.

In the mechanism of providing subsidies, each user does not have a maximum quota of the insured subsidy by the government. These conditions tend to be incentives for subsidized electricity service users to maximize the use of power above fair usage because the difference in tariffs will be borne by the government.

The formulation of electricity subsidy policies that are not only based on commodities and welfare status but also the level of reasonableness of electricity consumption of subsidized users. One way that can be implemented is to apply the maximum limit on the fairness of the volume of electricity consumption (kWh) subsidies for each group of tariffs so that subsidized electricity consumption can be controlled.

In addition, smart electric infrastructure using the prepaid meter (MPB) owned by PT PLN (Persero) can also be used to distribute electricity subsidies in the form of "electric tokens" of several reasonable subsidies. With this mechanism, the distribution of subsidies will be more targeted. It can only be used by names by customer ID/ number meter and exactly the number both in planning and implementing because it is done prepaid.

This mechanism is necessary to collaborate with merchants or token distribution agents. With this mechanism, business entities are also more facilitated in the administration of electricity bill payments because postpaid subsidized customers can be minimized.

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APPENDIX

Number of subsidized and non-subsidized PT PLN (Persero) customers

Jumlah Pelanggan PLN

	2014	2015	2016	2017	2018	2019	2020
GOLONGAN TARIF	JUMLAH PELANGGAN	JUMLAH PELANGGAN	JUMLAH PELANGGAN	JUMLAH PELANGGAN	JUMLAH PELANGGAN	JUMLAH PELANGGAN	JUMLAH PELANGGAN
S.1 / 220 VA	90,765	72,364	58,638	22,815	3,303	525	198
S.2 / 450 VA	431,497	451,172	461,482	475,953	485,494	494,576	500,833
S.2 / 900 VA	379,389	410,067	435,469	470,986	513,618	552,230	607,757
S.2 / 1.300 VA	145,775	154,702	177,039	201,186	218,982	234,833	262,382
S.2 / 2.200 VA	76,508	81,751	88,947	96,755	109,801	123,399	141,388
S.2 / 3.500 VA s/d 200 kVA	103,464	113,058	125,010	140,483	167,316	196,104	227,837
S.3 > 200 Kva	1,196	1,279	1,415	1,605	1,780	1,941	2,175
JUMLAH S	**1,228,594**	**1,284,393**	**1,348,000**	**1,409,783**	**1,500,294**	**1,603,608**	**1,742,570**
R.1 / 450 VA	21,846,479	22,734,222	23,137,024	23,171,253	23,277,663	23,592,577	24,066,888
R.1 / 900 VA	19,704,093	21,916,040	22,937,415	23,914,759	6,011,259	6,774,907	7,755,639
R.1M / 900 VA					20,039,543	21,455,190	23,545,623
R.1 / 1.300 VA	6,518,573	6,629,008	7,717,323	9,499,004	10,329,368	11,051,436	11,879,850
R.1 / 2.200 VA	2,175,068	2,276,606	2,392,649	2,511,392	2,678,939	2,892,230	3,324,452
R.2 / 3.500 VA s/d 5.500 VA	777,451	832,873	881,703	940,850	1,025,607	1,143,685	1,477,975
R.3 / 6.600 VA keatas	164,543	177,295	190,404	202,751	220,168	241,157	269,875
JUMLAH R	**51,186,207**	**54,566,044**	**57,256,518**	**60,240,009**	**63,582,547**	**67,151,182**	**72,320,302**
B.1 / 450 VA	355,547	375,122	392,484	406,444	442,960	453,468	457,469
B.1 / 900 VA	442,256	499,376	561,630	691,737	797,456	842,148	833,268
B.1 / 1.300 VA	445,773	476,996	569,266	640,384	690,946	717,749	743,421
B.1 / 2.200 VA s/d 5.500 VA	754,972	811,361	884,261	959,171	1,031,291	1,094,733	1,192,655
B.2 / 6.600 VA s/d 200 kVA	424,806	455,385	482,194	516,985	554,738	587,592	638,732
B.3 / > 200 kVA	5,817	6,261	6,790	7,199	7,525	7,815	8,198
JUMLAH B	**2,429,171**	**2,624,501**	**2,896,625**	**3,221,920**	**3,524,916**	**3,703,505**	**3,873,743**
I.1 / 450 VA	142	153	154	233	319	352	378
I.1 / 900 VA	532	583	816	1,478	2,177	3,320	4,631
I.1 / 1.300 VA	602	655	1,474	2,205	3,379	4,614	7,827
I.1 / 2.200 VA	1,059	1,186	2,533	3,915	5,834	9,042	18,542
I.1 / 3.500 s/d 14 kVA	10,896	11,800	13,172	14,719	17,053	20,512	42,084
I.2 / > 14 kVA s/d 200 kVA	31,808	33,090	34,355	36,066	37,914	39,925	42,601
I.3 / > 200 kVA	11,408	11,922	12,393	12,866	13,296	13,662	14,203
I.4 / 30.000 kVA keatas	70	75	81	91	96	99	100
JUMLAH I	**56,517**	**59,464**	**64,978**	**71,573**	**80,068**	**91,526**	**130,366**
P.1 / 450 VA	13,965	14,304	14,611	14,601	14,973	15,515	15,288
P.1 / 900 VA	29,499	32,093	33,640	35,302	38,735	42,979	46,679
P.1 / 1.300 VA	23,958	25,385	30,120	34,891	38,772	42,182	45,869
P.1 / 2.200 VA s/d 5.500 VA	36,439	38,101	40,402	43,345	46,619	50,170	55,459
P.1 / 6.600 VA s/d 200 kVA	35,015	37,732	40,430	43,425	46,484	49,218	52,907
P.2 / > 200 kVA	1,282	1,335	1,414	1,504	1,604	1,694	1,781
P.3	161,313	174,516	189,530	208,946	230,664	256,893	295,095
JUMLAH P	**301,471**	**323,466**	**350,147**	**382,014**	**417,851**	**458,651**	**513,078**
T / > 200 kVA	42	44	51	52	65	70	77
C /TM > 200 kVA	30	31	30	32	26	25	23
L	7,546	25,291	50,234	51,231	61,379	70,097	82,996
	7,618	25,366	50,315	51,315	61,470	70,192	83,096
JUMLAH	**55,209,578**	**58,883,234**	**61,966,583**	**65,376,614**	**69,167,146**	**73,078,664**	**78,663,155**
Catatan Proses Reformasi Penerima Subsidi Listrik	Seluruh pelanggan masih diberikan subsidi	Mulai kenaikan tarif untuk beberapa gol pelanggan daya besar (10 gol) dan dikeluarkan dr penerima subsidi	Mulai kenaikan tarif untuk 12 gol pelanggan daya besar dan dikeluarkan dr penerima subsidi	Mulai kenaikan tarif bertahap 900 VA Mampu	900 VA RTM tidak subsidi	900 VA RTM kembali diberikan subsidi, menyesuaikan kondisi perekonomian dan daya beli	900 VA RTM tidak subsidi

Cel Abu-abu	: pelanggan non subsidi
Cel Putih	: pelanggan subsidi

Source: Data from Directorate General of Budget – Ministry of Finance (2021) *data as of 21 February 2021