

Effectivity Of Prabayar System Implementation At PT PLN (Persero)ULP NATAR

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Abstract

The purpose of this study was to determine the effectiveness of implementing a prepaid system, as well as reducing the number of postpaid customer arrears. This research is a qualitative research conducted at PT PLN (Persero) ULP Natar because PT PLN (Persero) ULP Natar as a whole uses quite a lot of electricity, but the use of prepaid system electricity is still not effective in reducing the amount of arrears caused by the postpaid system. The research was conducted by directly interviewing the team leader and office employees. The results showed that the implementation of the prepaid system of PT PLN (Persero) ULP Natar was less successful / less effective. This research provides recommendations to PT. PLN (Persero) ULP Natar on how to prioritize this issue to encourage more customers to switch to a prepaid electricity system for consumers in the area. This can be done by engaging clients in programmatic socialization, which includes education about prepaid electricity through campaigns featuring more engaging messages, promoting token top-ups through social media, websites, and banners. In addition, it is important to increase face-to-face interactions with customers to reinforce their beliefs about the benefits of using electricity.

Keywords: Income, Migration, Postpaid, Prepaid



INTRODUCTION

Electricity is a basic need for everyone to carry out daily activities, in accordance with the Minister of Energy & Mineral Resources Regulation No. 28/2016 on Electricity Tariffs provided by PLN. Electricity is essential for all human activities, whether performed alone, with others, in business, or for other purposes that require electricity to function (Sitompul *et al.*, 2023). According to the Minister of Energy & Mineral Resources, (2009) on electricity which states that energy plays an important and strategic role in realizing national development goals, the state is responsible for the business of providing electricity. To provide electricity in sufficient quantity, evenly, and quality must be continuously improved in line with development.

One of the branches of the PLN company that still accepts prepaid and postpaid payments is PT PLN (Persero) ULP Natar, which began using a prepaid system in 2013. With this prepaid system, users can more easily optimize energy consumption by setting their own schedule and amount of electricity purchases. Users can also discipline themselves to use electricity according to their budget. Customers no longer need to deal with meter recording, which is usually done once a month, or be tied to a monthly electricity payment schedule (Cahyani & Yuliani, 2019). To increase the stability of the company's revenue and prevent it from being affected by arrears of bills from the company (Sitompul *et al.*, 2023). Employees of PT. PLN (Persero) ULP Natar are helped in carrying out their duties by the use of prepaid meters by the company. With the implementation of this prepaid system, employees are no longer required to count meters from house to house as in the postpaid system (Wilantara & Eriyanti, F, 2019).

The problem with this prepaid system is that it can block electricity or prepaid meters if the wrong electricity token code is entered three times in a row Kompas.com (2023). The client has not completed the application, including changing the power. This implies that completing the application process is a prerequisite Flip.id (2023) Prepaid electricity users are asked to verify their previously entered electricity token, as the entered electricity token has already been used Umsu acid (2023). The prepaid system has been implemented, but there are still problems at PT. PLN (Persero) ULP Natar. For example, customers complain that the prepaid system has errors when entering the 20-digit electricity token into the kwh meter and when the words "CHECK" appear on the prepaid KWH, the token input fails.

There is inconsistency in research from several studies on related topics Research by Sitompul *et al.*, (2023) showed that the income from postpaid electricity is higher than



the income from prepaid electricity. According to the study, postpaid electricity revenue is higher than prepaid electricity revenue (Palisungan, 2022). However, in contrast to research conducted by Wilantara & Eriyanti, F, (2019) based on the results of his research, the prepaid system policy at PT. PLN (Persero) ULP Indarung Indarung ULP working area has been running effectively. According to research by Asdianto, (2012) the prepaid system at PT PLN (Persero) Rayon Wonogiri can also be said to be effective, but there are still not enough sellers of tokens or prepaid system pulses in rural areas.

The researcher's interest in conducting new research on the topic "Effectiveness of Prepaid System Implementation at PT. PLN (Persero) ULP Natar" stems from the existence of this research gap and is supported by the novelty of the research object. The research will be conducted at PT. PLN (Persero) ULP Natar. Because PT. PLN (Persero) ULP Natar as a whole uses quite a lot of electricity, but the use of prepaid system electricity is still not effective in reducing the amount of arrears caused by the postpaid system, this is because the use of electricity is still large postpaid system electricity compared to the prepaid system. In their research, Sitompul *et al.*, (2023) used the object of research at PT. PLN (Persero) ULP Binjai Timur. Palisungan, (2022) at PT. PLN (Persero) ULP Sungguminasa. Wilantara & Eriyanti, F, (2019) At PT. PLN (Persero) Indarung ULP. Then in his research, Asdianto, (2012) used the research object of PT. PLN (Persero) Rayon Wonogiri.

This study aims to determine the effectiveness of the implementation of the prepaid system at PT. PLN (Persero) ULP Natar and reduce the number of postpaid customer arrears. By comparing the postpaid and prepaid system revenues of PT. PLN (Persero) ULP Natar, this prepaid system service will make consumers more comfortable because they have paid in advance to use electricity and will make PT. PLN (Persero) ULP Natar able to reduce arrears that occur due to the postpaid system. It is hoped that customers will appreciate the prepaid system, which tends to be overlooked by consumers, namely the wider community, and that customers can easily control electricity usage so that PT. PLN (Persero) ULP Natar gets better income.

LITERATURE REVIEW

Prepaid System

Prepaid electricity is a method of obtaining electricity where customers pay an upfront fee or use a token system to obtain electrical energy for use. This relieves customers of the burden of monthly electricity payments and allows them to better



manage their energy consumption. Prepaid electricity is also anticipated to reduce the rate of late payments, otherwise known as arrears (Lestira Putri Warganegara & Septiadi, 2022). Prepaid systems refer to payments made prior to usage. People are considered to be able to reduce their expenses by using prepaid electricity. Customers can purchase a certain amount of credit to use electricity based on their needs; with each additional watt of electricity used, the credit balance will decrease. Prepaid systems have several advantages over postpaid systems, one of which is that it is easier for customers to organize and control their daily electricity use, and customers can also estimate the total electricity consumption each month (Irianto, 2023). According to Khairani Harahap & Siregar, (2023) customers can buy credit according to their ability to use electricity on a prepaid basis. Usually, the credit is inserted as a token number into the electricity meter. If successful, the credit will increase, and electricity can be used. It is believed that consumers are responsible for how much electricity they use. According to Azwar, (2012) a prepaid system is an advance purchase of electricity that uses a "pulse" purchase system that contains the amount of electrical energy to be consumed and allows the customer to control his electricity consumption.

According to Bariroh & Yuliyanti, (2017) the objectives of implementing a prepaid system are to: increase the security of electricity sales revenue; accelerate cash flow revenue; reduce customer complaints related to meter reading; improve customer service; reduce the incidence of electricity theft; reduce operational costs by streamlining business processes; and provide opportunities for customers to regulate their own electricity usage. For these reasons, PT PLN (Persero) implements a prepaid electricity system. The benefits of implementing a prepaid system, according to Kusmarlina, (2016) are the ability to monitor and control energy use, flexibility in purchasing electricity based on individual needs and budgets, and the absence of unexpectedly inflated bills. According to Sitompul *et al.*, (2023) prepaid electricity users feel safer because they only use electricity according to the number of vouchers they buy and do not have to worry about fraud in the calculations, and they can more easily control their electricity use because they can monitor how much electricity they use through tokens, and there is no monthly bill.

A comparison of the revenue generated by postpaid and prepaid systems can be used to assess how well the prepaid system is being implemented. In addition, revenue comparisons can show the usage patterns of postpaid and prepaid systems (Sitompul *et al.*, 2023). Program success, target success, program satisfaction, and goal attainment



are ways to measure an effective program (Wilantara & Eriyanti, F, 2019). According to MS, (2020) sales realization and sales budget can be used to measure revenue effectiveness. Budi *et al.*, (2021) revealed that it is measured based on three indicators of measuring program effectiveness: program success, target success, and satisfaction with the program.

Postpaid System

Silalahi *et al.*, (2022) stated that a postpaid system is an electricity sales service in which users pay for electricity only after it is used. Among the disadvantages of using postpaid electricity are as follows: (1) Electricity will be disconnected if payment is not made on time. (2) Unable to regulate the level of electrical energy usage. (3) The meter reading officer cannot read the amount of electricity used in the house if the fence is locked. Prepaid systems allow users to use electricity for as long as they need before making payments within a month. Minister of Energy & Mineral Resources, (2009) At each consumer's residence, a measuring device will be installed to determine the amount of electricity used. These payments are due at the end of each month; if they are not paid, they will be deducted from the amount of the electricity bill to be paid. Khairani Harahap & Siregar, (2023) Since the postpaid system has no limits, it can sometimes result in higher electricity usage. Therefore, uncontrolled usage can result in a spike in monthly expenses. Fortunately, users of postpaid systems are protected from unexpected power outages. The electricity will only go out if there is a fault.

RESEARCH METHOD

This research was conducted at PT PLN (Persero) ULP Natar. Direct interviews with sources or employees of PT PLN (Persero) ULP Natar were used to collect primary data. Electricity revenue from the postpaid system and prepaid system of PT PLN (Persero) ULP Natar in 2020, 2021, and 2022, as well as literature reviews that support the findings of this research, are used to collect secondary data. This research will be analyzed qualitatively by comparing the results of this research with the results of interviews and supporting literature reviews. The revenue results will be calculated and compared, along with the percentage of total revenue and the difference in revenue between the postpaid system and the prepaid system. Sitompul *et al.*, (2023) The revenue from prepaid and postpaid systems can be compared to determine how effective the implementation of the prepaid system is.



DISCUSSION

PLN (Persero) ULP Natar has so far measured the success rate of its business only by referring to financial statements, which can be measured from the profits and losses obtained from the results of the business that has been carried out. Thus, it can be said that the company has not calculated the effectiveness of the application of the prepaid system using the postpaid system and the prepaid system revenue comparison technique, which aims to compare revenue in the current year with revenue in the previous year in order to determine the development and progress in the application of the prepaid system.

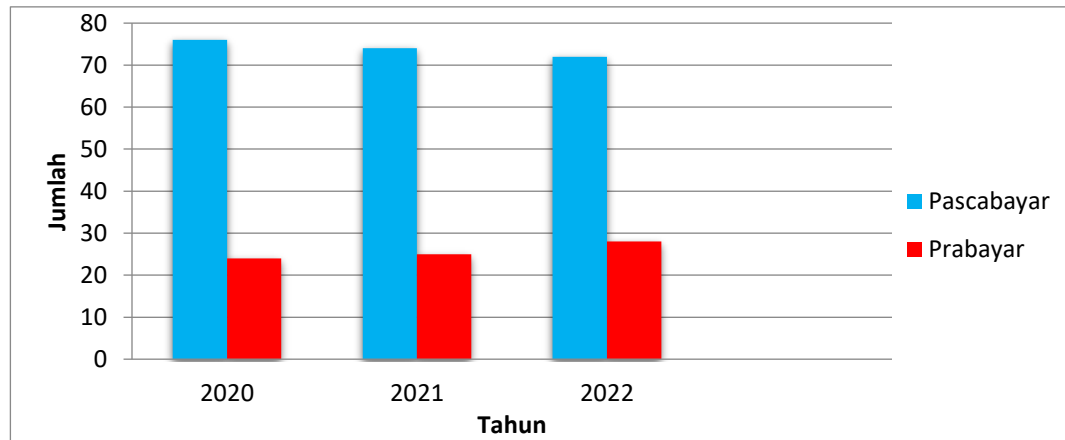
The company benefits if it calculates the effectiveness of the application of the prepaid system by using the technique of comparing the revenue of the postpaid system and the prepaid system so that it can find out whether the application of the prepaid system is effective or ineffective. Based on the results of the calculation of the comparison of postpaid and prepaid system revenues in 2020, 2021, and 2022, the data can be presented in the form of tables and bar charts as follows:

Table 1. Recapitulation of Postpaid and Prepaid Revenue Comparison at PT PLN (Persero) ULP Natar

Year	Revenue Postpaid (Rp)	Percentage (%)	Year	Revenue Prepaid (Rp)	Percentage (%)
2020	178.517.169.707	76	2020	55.254.884.547	24
2021	191.453.466.487	74	2021	65.368.819.445	25
2022	205.257.077.652	72	2022	79.619.420.552	28
Total	575.227.713.846	222/3 = 74	Total	200.243.124.544	77/3 = 26

Source: Data Processed (2023)





Gambar 1. Comparison of Revenue at PT PLN (Persero) ULP Natar

Source: Data Processed (2023)

Based on the graph above, the prepaid system has reduced the amount of arrears generated from the postpaid system by 24%, while the postpaid system accounts for 76% of the total electricity revenue in 2020. Under this scenario, the 2020 revenue ratio of postpaid and prepaid systems is 52%, indicating that electricity users in the Natar area of South Lampung still prefer postpaid systems to prepaid systems. This is because postpaid system users prefer to use electricity without having to pay in advance, and the majority of postpaid system users are long-term residents in the area because electricity in the Natar City area is dominated by households.

74% of electricity revenue from the postpaid system in 2021 came from the migration of customers to the prepaid system. This indicates that in 2021, compared to the previous year, the prepaid system will reduce the amount of arrears arising from the postpaid system by 25%. This revenue differs by IDR 126,084,647,042. In this case, the revenue ratio between prepaid and postpaid systems in 2021 dropped to 49%, indicating that although most electricity users in the Natar area of South Lampung still use the postpaid system, some have switched to the prepaid system. Due to customer migration to prepaid systems, 72% of electricity revenue from postpaid systems in 2022 came from this source. This indicates that, compared to the previous year, the prepaid system has reduced the amount of arrears from the postpaid system by 28% in 2022. The difference in revenue amounts to IDR 125,637,657,100. In this case, the selectivity of the revenue

comparison between postpaid and prepaid systems in 2022 drops to 44%, indicating that although most electricity users in the Natar area of South Lampung continue to use the postpaid system, some are switching to the prepaid system.

Based on the findings mentioned above, electricity in PT PLN (Persero) ULP Natar is still a significant contributor to the postpaid system in terms of revenue from electricity usage. This is further demonstrated by the magnitude of the revenue gap; comparing postpaid and prepaid electricity revenue from 2020 to 2022, a gap of 74% to 26% was found. It can be said that the implementation of the prepaid system of PT PLN (Persero) ULP Natar is less successful or less effective. This is because the company prioritizes customers who are in arrears to migrate to the prepaid system, so it does not question customers who use postpaid or prepaid systems, and the company has no definite target for implementing the prepaid system. Based on the results of interviews with several postpaid electricity users, the reasons why customers still feel comfortable with the postpaid system are (1) easier electricity payment; (2) more savings; (3) from the payment method; (4) efficient; (5) free to use electricity without worrying about running out of credit in the middle of the night and timely payment of electricity bills; (6) cost constraints to migrate; (7) do not understand about the prepaid system; (8) have been using the postpaid system for a long time; (9) because of the prepaid system; (10) the prepaid system is not much different. Overall, the company's efforts to implement a prepaid system have not been successful due to material constraints. The company cannot provide goods on time, so it must first check with the UP3 warehouse to find out whether the required goods are available or not. If they are available, then there will be no problem in implementing the prepayment system.

CONCLUSION

This research is very important to assess the successful implementation of the prepaid system at PT. PLN (Persero) ULP Natar. The main finding of this research is that, based on the recapitulation of electricity revenue at PT. PLN (Persero) ULP Natar, the postpaid system still dominates with a ratio of 74% postpaid and 26% prepaid. This shows that although some electricity users in the Natar region of South Lampung still use the postpaid system, the prepaid system has succeeded in reducing the number of arrears caused by the postpaid system by 26%. This research suggests that PT. PLN (Persero) ULP Natar should make this situation a goal in order to attract more customers to switch to the prepaid system for use by consumers in the area. This will assist the company in



reducing the number of arrears and revenue losses at PT PLN (Persero) ULP Natar caused by postpaid system receivables to increase company revenue. Customer response can be done by conducting programmatic socialization with customers, namely by delivering messages about prepaid electricity through campaigns with more interesting message content and holding token charging promotions through social media, websites, and banners. In addition, face-to-face interaction with customers also needs to be improved so that customers are more convinced of the benefits of using prepaid electricity.

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