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## **Analysis of The Implementation of Fixed Assets at PT PLN (Persero) Indonesia for The Period of 2022-2023**

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### **Abstract**

*This study analyzes the fixed asset management of PT PLN (Persero) for the period 2022-2023, focusing on the addition, depreciation, and write-off of fixed assets. Using a descriptive qualitative method based on a documentation study of the company's financial statements and accounting records, this study found that PT PLN made significant investments to increase electricity production capacity. The straight-line depreciation method provides transparency in recording annual expenses, although a more adaptive approach to asset usage patterns is needed. In addition, the elimination of inefficient fixed assets demonstrates the company's efforts in maintaining the productivity of the asset portfolio. The conclusion shows that optimizing fixed asset management through asset modernization and maintenance is essential to support the company's strategic goals.*

**Keyword : Fixed Assets, Depreciation, Write-Off, Pt Pln, Financial Management, Electricity Infrastructure.**

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## **INTRODUCTION**

Fixed assets are an important component in the operations of PT PLN (Persero), including national electricity generation, transmission, and distribution infrastructure. In 2022, the total value of PLN's fixed assets reached IDR 1,024 trillion, with the majority being power plants and supporting networks. The global energy transformation has encouraged PLN to invest in renewable energy generation such as solar, wind, and geothermal, which requires fixed asset management in accordance with accounting standards and regulations (Nasution, 2023).

Key challenges include potential inefficiencies, stringent regulations, and the need for large investments to achieve full electrification and renewable energy targets. Around 12.7% of PLN's assets have been identified as potentially underutilized, while 35% of power plants have passed their optimal productive period (Nasution & Welly, 2023).

This study aims to analyze the implementation of PLN fixed asset accounting, its compliance with PSAK 16, and the factors that influence it. The results are expected to support the optimization of asset management to improve the company's performance and sustainability (Nasution et al, 2021).

## **RESEARCH METHODS**

### **Research Approach**

This study adopts a descriptive qualitative approach with a case study method, as described by Yin (2018, pp. 15-17) who emphasizes that case studies are a comprehensive research strategy

to investigate contemporary phenomena in real contexts. Creswell (2019, 112-114) emphasizes that descriptive qualitative research aims to explore and understand the meaning given by individuals or groups to social or humanitarian problems. This approach was chosen because it is able to provide an in-depth and systematic picture of the application of fixed assets at PT PLN (Persero) by considering the complexity of the organizational context and the company's internal dynamics.

### **Research Location**

The research will be conducted at the Head Office of PT PLN (Persero) Indonesia, located in Central Jakarta, with strategic considerations as stated by Miles et al. (2020, 45-47). The selection of the research location is based on data accessibility, relevance to the research focus, and the potential for in-depth exploration. Patton (2021, 78-80) emphasizes the importance of considering the availability of key informants, access to documents and archives, and organizational support. This location is considered representative to produce comprehensive findings on fixed asset management within PT PLN as one of the strategic BUMN in Indonesia.

### **Data Sources**

The research data sources will include primary and secondary data selected purposively. According to Sugiyono (2022, pp. 156-158), primary data will be obtained through internal company documentation and direct observation of the asset management process. Marshall & Rossman (2021, 99-101) explain that secondary data includes PT PLN financial reports, official company documents, regulations related to BUMN asset management, and scientific publications related to asset management. The criteria for selecting data sources will consider high credibility, actuality, relevance to the research focus, and verifiability, thus producing a reliable and comprehensive information base.

### **Data Collection Techniques**

Data collection techniques will focus on in-depth documentation studies. Lincoln & Guba (2020, 65-68) emphasize the importance of official document analysis as a critical source of information. The documentation study process will include a systematic review of financial statements, internal archives, official company records, and other supporting documents related to fixed asset management. The study will conduct a comprehensive exploration of relevant documents, paying attention to the originality, credibility, and historical context of each document analyzed.

### **Data Analysis Techniques**

Data analysis will use an interactive model developed by Miles et al. (2020, 129-132), covering three main stages. First, data reduction will be carried out through the process of selecting, focusing, and abstracting raw data to produce meaningful information. Second, data presentation will focus on organizing information, compiling comprehensive narratives, and developing matrices or flowcharts that facilitate interpretation. Finally, conclusions will be drawn through systematic interpretation, verification of findings, and development of theoretical propositions that can provide academic and practical contributions in understanding fixed asset management.

## RESULTS AND DISCUSSION

### Accounting Journal Related to Fixed Assets and Depreciation of PLN (2022)

#### Addition of Fixed Assets

From the fixed asset data in 2022, the total asset value reached Rp1,355,295,882 million. If there is a new purchase or investment in fixed assets, the journal is recorded as follows:

#### Journal:

Date	Description	Debit (Rp)	Credit (Rp)
01-01-2022	Fixed Assets	1,355,295,882	
	Cash/Bank		1,355,295,882

#### Depreciation of Fixed Assets

Based on the data, the accumulated depreciation of fixed assets in 2022 reached Rp62,939,849 million. Depreciation is recorded using the straight-line method with the following estimates:

#### Annual Depreciation Formula:

$$\text{Annual Depreciation} = \frac{\text{Initial Book Value}}{\text{Useful Period}}$$

Assuming the average useful life of the asset is 20 years:

$$\text{Annual Dpreciation} = \frac{1.355.295.882}{20} = \text{Rp}67.764.794 \text{ million}$$

#### Journal:

Date	Description	Debit (Rp)	Credit (Rp)
12-31-2022	Depreciation Expense	67,764,794	
	Accumulated Depreciation		67,764,794

#### Accumulated Depreciation

Accumulated depreciation includes all depreciation expenses recorded until 2022 amounting to Rp 62,939,849 million.

#### Journal:

Date	Description	Debit (Rp)	Credit (Rp)
12-31-2022	Accumulated Depreciation	62,939,849	
	Fixed Assets		62,939,849

#### Fixed Asset Write-off

If a particular asset is damaged or written off with a book value of Rp 500 million:

#### Journal:

Date	Description	Debit (Rp)	Credit (Rp)
12-31-2022	Accumulated Depreciation	500	
	Fixed Assets		500

**Table 1: Balance Sheet Report of PT PLN (Persero) 2022**

Component	Amount (Rp Million)
Fixed assets	1,355,295,882
Acquisition cost	1,418,235,731
Accumulated depreciation	62,939,849

Source: PT PLN Statistical Data (2022)

**Table 2: Profit and Loss Report of PT PLN (Persero) for 2022**

Post	Amount (Rp Million)
Operating revenues	441.131.943
- Electricity Sales	311,057,224
- Connection Fee	857,468
- Government Subsidy	58,831,960
- Compensation	63,649,821
- Other Income	6,735,470
Total Operating Expenses	386,193,802
Operating Profit After Subsidy	54,938,141

Source: PT PLN Statistical Data (2022)

### Accounting Journal Related to Fixed Assets and Depreciation of PLN (2023)

#### Addition of Fixed Assets

For example, there is an addition of fixed assets for PLTG amounting to IDR 10,000,000 million.

Date	Description	Debit (Rp)	Credit (Rp)
01/01/23	Fixed Assets - Gas Power Plant	Rp10,000,000,000	
	Cash/Bank/Receivables		Rp10,000,000,000

(Recording of additional fixed assets in the form of PLTG)

#### Depreciation of Fixed Assets

Calculating annual depreciation for PLTG of Rp4,966,973.22 million (accumulated annual depreciation).

Date	Description	Debit (Rp)	Credit (Rp)
12/31/23	Depreciation Expense	Rp4,966,973,220	
	Accumulated Depreciation-Gas Power Plant		Rp4,966,973,220

(Recording of annual PLTG depreciation expense)

#### Accumulated Depreciation

Adjustment at year end for total accumulated depreciation of all types of fixed assets.

Date	Description	Debit (Rp)	Credit (Rp)
12/31/23	Depreciation Expense	Rp43,967,082,000	
	Accumulated depreciation		Rp43,967,082,000

(Recording of annual accumulated depreciation of all fixed assets)

### Fixed Asset Write-off

Date	Description	Debit (Rp)	Credit (Rp)
12/31/23	Accumulated Depreciation - PLTS	Rp157,705,730	
	Asset Write-off Expense	Rp1,381,063,500	
	Fixed Assets – PLTS		Rp1,680,466,900

(Write-off of PLTS fixed assets)

**Table 3. Details of PLN Fixed Asset Data 2023:**

Function	Balance 2023 (Rp Million)	Accumulated Depreciation (Rp Million)	Book Value 2023 (Rp Million)
Hydroelectric Power Plant	96,917,740.43	(4,662,510.59)	92,133,552.09
Steam Power Plant	319,196,105.18	(28,928,610.49)	289,881,210.59
Diesel Power Plant	25,107,241.06	(3,182,433.83)	21,326,981.34
Gas Power Plant	62,576,149.91	(4,966,973.22)	57,463,858.53
Geothermal Power Plant	16,061,149.96	(1,176,673.27)	14,884,033.49
Combined Cycle Power Plant	193,971,975.64	(12,524,404.11)	181,348,961.71
Solar Power Plant	1,680,466.90	(157,705.73)	1,381,063.50
Transmission System	368,472,968.11	(18,018,638.33)	348,536,093.24
Tele Information System	15,276,181.14	(5,339,562.54)	9,883,839.39
Distribution System & UPD	278,586,913.06	(22,807,843.69)	255,559,002.36
TUL	4,613,332.75	(596,198.58)	4,004,425.09
General	41,251,289.20	(4,400,321.11)	36,787,354.70

**Total:**

**Balance 2023:** Rp1,423,711,513.40 million

**Accumulated depreciation:** Rp106,761,875.56 million

**Book value:** Rp1,313,190,376.09 million

**Table 4: Balance Sheet Report of PT PLN (Persero) 2022**

Component	Amount (Rp Million)
Fixed assets	1,355,295,882
Acquisition cost	1,423,711,513.40
Accumulated depreciation	(106,761,875.56)

Source: PT PLN Statistical Data (2022)

**Table 5: PLN Profit and Loss Report 2023(in million Rp)**

Information	2023
Operating Income	
<b>Sales of Electric Power</b>	333.191.062
<b>Connection Fee Income</b>	1,288,284
<b>Government Subsidy</b>	68,636,731
<b>Compensation Income</b>	73,991,897
<b>Other Income</b>	10,276,090
Total Operating Income	487,384,064
Operating Expenses	
<b>Total Operating Expenses</b>	440,183,990
Net Profit for the Current Year	22,071,458

*Source: PT PLN Statistical Data (2022)*

## Discussion

### Analysis of Fixed Asset Additions

The addition of fixed assets that occurred at PT PLN (Persero) throughout 2022 and 2023 reflects the company's efforts to support the expansion and modernization of its operations. Data shows that the total value of fixed assets in 2022 reached IDR1,355,295,882 million, with a significant addition in 2023 of IDR10,000,000 million for the Gas Power Plant (PLTG). This increase is in line with the company's need to increase electricity production capacity and support the growth of energy consumption in Indonesia.

Recording of the addition of fixed assets is carried out using the appropriate accounting method, where the asset value is recorded on the debit side and the funding source, such as cash or bank, is recorded on the credit side. This addition contributes to the increase in the company's total fixed assets which in 2023 reached IDR1,423,711,513.40 million. This recording process illustrates the company's transparency and accountability in managing investments.

### Depreciation of Fixed Assets

Depreciation of fixed assets at PT PLN (Persero) uses the straight-line method, which allows for the allocation of depreciation costs evenly over the useful life of the asset. Accumulated depreciation in 2022 reached IDR62,939,849 million, while in 2023 it increased to IDR106,761,875.56 million. This increase indicates an increase in fixed assets that have reached a certain age or the addition of new assets with relevant depreciation values.

The application of the straight-line method provides convenience in estimating annual costs and makes it easier to evaluate the company's financial performance. However, this method also has a weakness, namely that it does not take into account variations in the use of assets during their useful life. This can result in significant differences between the book value of assets and their market value.

### **Fixed Asset Write-off**

Fixed asset write-offs are a strategic step to manage assets that no longer provide economic benefits to the company. In 2023, fixed asset write-offs for Solar Power Plants (PLTS) were recorded at a book value of Rp1,680,466.90 million. This write-off reflects the company's need to replace or retire inefficient assets.

This write-off process is recorded by writing off the accumulated depreciation value on the debit side and fixed assets on the credit side, and recording the asset write-off expense as a loss. This step supports more effective asset management and ensures that financial statements reflect the true condition of the company's asset portfolio.

### **Financial Impact on Financial Reports**

The addition and depreciation of fixed assets and the write-off of assets have a significant impact on the financial statements of PT PLN (Persero). In the 2022 and 2023 balance sheets, the increase in fixed assets shows the company's investment growth, while accumulated depreciation reflects the depreciation of assets in supporting operational activities.

The income statement also shows the correlation between depreciation of fixed assets and the company's operating expenses. In 2022, operating expenses reached IDR386,193,802 million, while in 2023 it increased to IDR440,183,990 million. Depreciation expenses are one of the main contributors to total operating expenses, thus affecting operating profit after subsidies. The company's net profit in 2023 was recorded at IDR22,071,458 million, lower than the previous year even though operating income increased.

### **Fixed Asset Efficiency Evaluation**

The efficiency of fixed asset usage can be evaluated through an analysis of the book value of assets and their contribution to operating income. In 2023, the book value of fixed assets reached IDR1,313,190,376.09 million, which includes various types of power plants such as hydroelectric power plants, steam-fired power plants, gas-fired power plants, and others. Distribution and transmission systems contribute a significant portion of fixed assets, reflecting the company's focus on core infrastructure. However, the high book value also indicates challenges in maintaining the efficiency of asset usage.

For example, the tele-information system has a book value of Rp9,883,839.39 million, but the depreciation expense of Rp5,339,562.54 million shows a significant level of depreciation. This highlights the need for maintenance and modernization to improve the efficiency of this asset.

### **Strategic Implications and Recommendations**

PT PLN (Persero)'s strategic steps in adding fixed assets need to be balanced with optimal management to maximize the economic value of these assets. The company also needs to consider:

- 1) **Modernization of Legacy Assets:** Improving asset efficiency through maintenance programs and technology updates.
- 2) **Useful Life Monitoring:** Using a more adaptive method for depreciation, such as the units of output method, to reflect a more realistic pattern of asset usage.

3) **Investment Optimization:** Ensuring that each new investment makes maximum contribution to operational and financial performance.

By implementing these recommendations, PT PLN (Persero) can increase the effectiveness of fixed asset management, improve financial performance, and support the company's long-term goal of providing sustainable electrical energy for the community.

## CONCLUSION

Analysis of PT PLN (Persero) fixed asset management for the 2022-2023 period shows the implementation of a systematic strategy in supporting business operations and expansion. The company has made significant additions to fixed assets, especially in gas-fired power plants (PLTG) and supporting systems, to meet the needs of national electricity infrastructure.

In terms of recording, PT PLN uses a straight-line depreciation method that provides transparency in the evaluation of annual costs. However, it is necessary to consider a more adaptive depreciation method according to the pattern of asset usage. The company also eliminates inefficient assets, such as PLTS, as a strategic step to maintain the productivity of the asset portfolio.

Fixed asset management has a significant impact on financial statements, where the increase in fixed assets contributes to the growth of total assets. Although operating income increased, depreciation expenses were the main factor in the decline in net profit in 2023. To improve efficiency, PT PLN needs to focus on modernizing and maintaining assets, especially those with high depreciation rates, in order to achieve its goal of being a reliable and sustainable electricity provider.

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