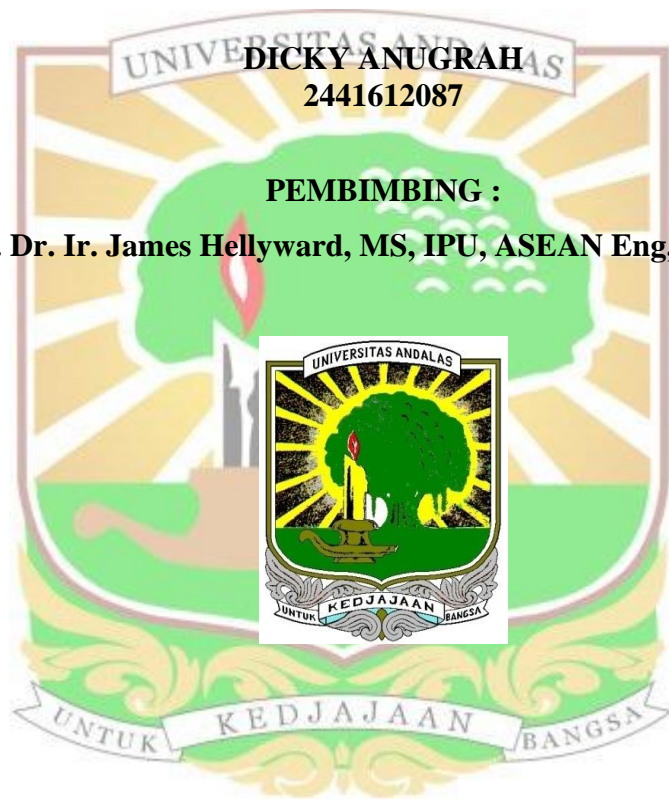


**PROGRAM PENGGANTIAN KWH METER TUA PLN UID
JAKARTA RAYA UP3 CEMPAKA PUTIH UNTUK MENGURANGI
JUMLAH RESIKO KESALAHAN PENGUKURAN PADA ALAT UKUR
DENGAN USIA PRODUKSI DIATAS 15 TAHUN**

LAPORAN TEKNIK



PEMBIMBING :

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**PROGRAM STUDI PENDIDIKAN PROFESI INSINYUR
SEKOLAH PASCASARJANA
UNIVERSITAS ANDALAS
2024**

ABSTRACT

The demand for electricity in Indonesia has significantly increased over the past four years. As an electricity provider, PT PLN (Persero) is required to ensure the accuracy of energy measurement through the use of kWh meters. Based on the Minister of Trade Regulation No. 68 of 2018, electromechanical/dynamic kWh meters must be recalibrated every 15 years to maintain measurement accuracy. In the UP3 Cempaka Putih area, 16,046 kWh meters have exceeded the recalibration age, which poses a risk of inaccurate energy measurements.

This report aims to analyze the impact of old kWh meters on measurement accuracy, evaluate the effectiveness of the old kWh meter replacement program, and identify risks caused by inaccurate measurements. The research method uses a quantitative approach with an experimental design, involving data collection of electricity consumption before and after the replacement of kWh meters, as well as direct testing using calibration tools on samples of old kWh meters. The results of the study indicate that out of 85 kWh meter samples tested, 64% fell into the error category, either as negative or positive errors, which could harm both PLN and consumers. Data from 6,600 customers' electricity consumption showed a significant change after the kWh meter replacement, with 55% of customers experiencing an increase in energy consumption. The kWh meter replacement program has proven effective in improving measurement accuracy and minimizing the risk of miscalculation, thereby ensuring regulatory compliance and maintaining fair transactions between PLN and its customers.

Keywords: kWh meter, measurement accuracy, replacement of measuring instruments, recalibration.

