The Effectiveness of Utilizing Electric Charging Station & Electric Car Charging Station to Increase Electricity Consumption

Studi ini merupakan penelitian yang dilakukan oleh PLN Research Institute dan sedang dalam tahap pengembangan lebih lanjut. Dimohon untuk tidak mengutip menyadur materi dalam penelitian ini tanpa seizin PLN Research Institute.
The Role of PLN

Provision of electricity charging infrastructure for battery-based electric vehicles

+7,000 Public Charging Station

However, has it been effective?
**Research Methodology**

**Types and data sources**
- Primary (seminars and questionnaires)
- Secondary: documentation and information from PLN

**Data collecting**
- Existing User= 126 respondent
- Potential User= 231 respondent

**Validity & Reliability Test**

**Research approach**
- Qualitative (Questionnaires, Seminar)
- Quantitative (Descriptive statistical analysis, Logit regression analysis)

**Analysis Technique**
Descriptive statistical analysis, Logit regression analysis
Profile of Respondents

01. All Respondents
02. Respondents of Existing Electric Charging Station for Electric Vehicle
03. Respondents of Potential Electric Charging Station for Electric Vehicle
04. Respondents of Existing Electric Charging Station for Non Electric Vehicle
05. Respondents of Potential Electric Charging Station for Non Electric Vehicle
06. Respondents of Existing Electric Car Charging Station
07. Respondents of Potential Electric Car Charging Station
36% of Electric Car Charging Station User Respondents from DKI Jakarta

36% which shows that the percentage of DKI Jakarta is spread across Central Jakarta, North Jakarta, South Jakarta, East Jakarta, and West Jakarta.

70% of Electric Car Charging Station users have an income of 3-5 million

There are only 4% of respondents with an income of more than 7 million, which means that for people with salaries between 3-5 million, SPKLU and electric vehicles are not prestigious things.
48% of Electric Car Charging Station user respondents were aged 31-40 years old

Most of the Electric Car Charging Station users were aged 31-40 and 41-50 years. This shows that Electric Car Charging Station users are productive age.

45% of Electric Car Charging Station users own an a car

Most of the Electric Car Charging Station users own electric vehicles in the form of cars (45%) and bicycles (27%). However, there were 14% of respondents who abstained. The brands owned by respondents are almost the same as Hyundai, Xiaomi Qi cycle, and others.
29% of Electric Car Charging Station user respondents know about electric vehicles from advertisements in electronic media.

Most of the respondents know about electric vehicles from advertisements in electronic media. However, there is clear information that some respondents received information from the Grab or BlueBird companies regardless of whether or not they have cooperation with PT PLN.
32% of respondents who use electric vehicles who have not used the Electric Car Charging Station come from DKI Jakarta.

51% of potential Electric Car Charging Station users have incomes of 3-5 million.
38% respondents of potential Electrical Car Charging Station users were aged 41-50 years old.

57% respondents who use the Potential Electrical Car Charging Station do not own an electric vehicle.
66% respondents use Electric Charging Station for Electric Vehicle to charge their electric vehicles while the remaining 3% is for businesses and electronic equipment respectively.

55% Respondents who use Electric Charging Station for electric vehicles come from DKI Jakarta
28% of respondents using Electric Charging Station for electric vehicles are aged 31-40 years old.

41% of Electric Charging Station for electric vehicle respondents have an income of 3-5 million.
52% of respondents who use Electric Charging Station for electric vehicles have electric vehicles in the form of bicycles.
23% of potential Electric Charging Station for electric vehicle users are from DKI Jakarta.

45% of potential Electric Charging Station for electric vehicle SPLU users are 20-30 years old.
4. Potential

52% of potential Electric Charging Station for electric vehicle users have an income of 3-5 million

51% of respondents who use potential Electric Charging Station for electric vehicles do not have an electric vehicle.
Of the 357 respondents who knew about Electric Charging Station/Electric Car Charging Station only 247, but there were 256 respondents who knew the location of the Electric Charging Station/Electric Car Charging Station.

52% of respondents know the location of the Electric Charging Station/Electric Car Charging Station from information of relatives/friends.
The number of the nearest Electric Charging Station/ Electric Car Charging Station

34% or 123 respondents who know the number of closest Electric Charging Station/ Electric Car Charging Station stated that the number of closest Electric Charging Station/ Electric Car Charging Station is 1-2

66% of the total respondents did not know the number of the closest Electric Charging Station/ Electric Car Charging Station
Distance between dwelling and the nearest Electric Charging Station/ Electric Car Charging Station

Of the 256 respondents who know the location of the Electric Charging Station/ Electric Car Charging Station, the majority of the distance between the respondents’ dwelling and the Electric Charging Station/ Electric Car Charging Station is 0-1 Km (32% of respondents).

Number of Respondents Agree to Increase Electric Charging Station/ Electric Car Charging Station

As many as 86% of the total respondents agreed if the number of Electric Charging Station/ Electric Car Charging Station was increased.
Recommendations for places to build Electric Charging Station/ Electric Car Charging Station, in public place by 30%, strategic place by 21%, and in every sub-district by 18%.

69% of the total respondents who know the Electric Charging Station/ Electric Car Charging Station know how to fill the token balance.
The majority of top up through Indomaret outlets is 28% and other 29% includes cash or cash, collected directly by street vendors, and credit counters.
Within a month, the majority of respondents visited the SPLU / SPKLU 1-5 times

Charging electric vehicles at Electric Charging Station/ Electric Car Charging Station is mostly done for 61-120 minutes or 1-2 hours.
PKL or street vendors use Electric Charging Station to charge their electronic equipment, as much as 82%.

Most of this Electric Charging Station is used to charge electricity for cellphones / tablets (49%) and lighting for trading or PKL (47%).
While waiting for the electric charging of their vehicle, all respondents use it to charge electronic devices in the form of HP / tablets.

56% of Electric Charging Station/ Electric Car Charging Station users have an average expenditure in one use of electricity from Electric Charging Station/ Electric Car Charging Station the majority is less than IDR 25,000
THANK YOU