ANALYSIS OF MARKET CHARACTERISTICS AND PROMOTION STRATEGY OF ROOFTOP PV IN INDONESIA

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Introduction

Solar panel technology achieved grid parity between 2013 and 2020 in some developed countries (Yan, Yang, Elia Campana, & He, 2019). The occurrence of grid parity means the time at which the kWh electricity costs generated by solar panels are the same as the costs generated from conventional electricity (R. Bhandari & Stadler, 2009). If this spreads to developing countries, it means that the potential for developing solar panels will be even higher in this year, including Indonesia. One of the parties that will be significantly affected is PLN as the state-owned electricity company.

With the grid parity, PLN needs to take action in dealing with this disruptive technology. PLN needs to enter the PV Rooftop market as an anticipation of the decline in sales of PLN's main business, namely conventional electricity due to the rapid growth of the PV Rooftop business. The reason behind the importance of PLN in entering the PV Rooftop market is that there has been an increase in PV Rooftop users by 36.7% since January 2019 in Jakarta (PLN, 2020). Moreover, PLN can encourage the acceleration of the target of achieving the use of the EBT level of 23% in 2025 and as a solution to meet customer demand for Green Energy. Because in reality, not all Indonesians consume conventional energy, some of them have switched to green energy. So, this is the right time for PLN to take a role to meet their needs. Based on this background, a more in-depth study is needed to analyze how the characteristics of the PV Rooftop market in Indonesia, the current position of PLN in the PV Rooftop market in Indonesia, and the benefits for each customer who installs PV Rooftop by knowing the amount of converted kWh savings.

This study focuses in examining market characteristics and promotion strategy of rooftop pv in Indonesia. Based on the literature review conducted by the author, currently there are no research that analyzed the market characteristics and promotion strategy both in household and industry size especially in Indonesia. Therefore, this study is the first study that examines the characteristics and promotion strategy of rooftop pv in Indonesia.

Methods

This research uses qualitative and quantitative approaches. The qualitative approach was carried out by means of focus group discussions, questionnaires, and in-depth interviews with related informants or resource persons. Qualitative research (semi-structured, in-depth interview) editors generalize the results of the entire population, but will have the aim of collecting data that supports the phenomenon under study (Neuman, 2014). While the quantitative approach is used to analyze data from the survey results using descriptive statistical analysis.

Results and Conclusions

From 323 respondents, overall the largest respondents came from Jakarta, male, age range 21-30 years, has house which is located in the middle of the city, graduated from bachelor's degree, has 4 household members, the majority work as entrepreneurs, monthly income is less than 5 million, has a form of an individual company, the type of business is service business, and the distance from the business location to the city center is as far as 1-5 kilometers. As for users of PV Rooftop Existing, both from the household and industry side, it shows that the largest respondents come from Bali and Jakarta.

The use of rooftop solar electricity or PV Rooftop can provide benefits in the form of savings, namely a reduction in electricity bills from PLN. Based on the results of the factor analysis, the reason why customers install PV Rooftop

is due to cultural factors, environmental awareness, technological knowledge and loyalty. The consumer satisfaction of PV Rooftop users, both household and industrial, can be seen from several indicators, most of which show high satisfaction with the use of PV Rooftop. On the point of customer satisfaction, it is also clearly explained that 78% of respondents claim to be satisfied with the PV Rooftop services they have. The PV Rooftop business model plan that will be offered by PLN includes three packages, including the Sapphire, Ruby, and Emerald packages. Each package has different benefits and types of services. Based on the results of the SWOT analysis, PLN is in a very strong position because apart from having very good strength, PLN also has ample opportunities to expand the rooftop solar PV project. The strategy that can be applied in this condition is an aggressive strategy because PLN has a great opportunity to become a market leader. PLN can carry out an aggressive strategy by carrying out vertical integration and diversifying conglomerates.

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