Asian Journal of Social Science and Management Technology
ISSN: 2313-7410
Volume 2 Issue 6, November-December, 2020
Available at www.ajssmt.com

Analyzing Business Performance at Tay Ninh Power Company

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ABSTRACT : Improving business performance is one of the important factors to contribute to increased competitiveness for businesses. In recent years, Tay Ninh Power Company has performed well in the role of ensuring electricity supply for socio-economic development needs in Tay Ninh province. However, Tay Ninh Power Company still has some limitations in production and business performance such as Electricity consumption, average electricity selling price, electricity loss rate, and labor productivity. This article aims to analyze the causes of these limitations, propose solutions to address the above limitations, thereby contributing to improving the business performance of Tay Ninh Power Company.

Keywords: business performance, power company, PCTN

1. INTRODUCTION

Follow the policy of Vietnam Electricity (EVN), the business performance of the electricity sector in the coming time will change operations into the market mechanism in the field of electricity distribution, so improving efficiency is an inevitable solution in accordance with the process of restructuring the electricity sector, thoroughly overcome the existence, ensure business performance and sustainable development. On the other side, the operation of Tay Ninh Power Company (PCTN) in the current period is very difficult to meet the demand for electricity consumption in the development of Tay Ninh province. Besides, the shortage of input materials for flour processing plants and rubber factories leads to decreasing in electricity sales. The Government's policy of encouraging solar power sources also creates pressure for the electricity sector to promptly invest in improving the power system. At the same time, PCTN has to increase income for workers as the targets assigned by Southern Power Corporation (SPC). Therefore, the study "Improving business performance at Tay Ninh Power Company" is essential for Tay Ninh Power Company and Southern Power Corporation.

Korhonen and Syrjanen (2003), described the process of evaluating the cost-effectiveness of power distribution companies based on Data Envelopment Analysis (DEA). The process consists of three main stages: describing the problem and understanding the main factors, finding the measurable quantity for the most essential elements, and selecting the final model used in the analysis. Especially the selection of environmental variables, which allow the comparison of distribution companies operating in different environments, plays an important role in the process. The selected model is used as part of the price regulation.

Anaya and Pollitt (2017) performed an analysis of the impact of weather factors on the efficiency of electricity distribution companies in Argentina, Brazil, Chile, and Peru, including 82 companies representing more than 90% of the energy distribution market provided between 1998 and 2008. Weather data was collected from

429 meteorological stations. A geographic information system (GIS) is used to locate the service areas and weather conditions. A combination of cost and quality models is proposed. For cost-only models, the results showed that on average there was a significant increase in measurable efficiency when the weather was combined in the production function. According to cost quality models, the average effect of the weather is much lower. This suggests that companies have adjusted themselves to the impacts of the weather and have adjusted their networks to the environment in which they operate.

According to Petridis and et al. (2019), electricity distribution companies have an important role in both households and industries. The standards of electricity distribution companies in the energy sector have become a widely studied topic today due to the impact of privatization policies on developing countries and due to the many production stages related to the process of producing and supplying electricity.

Ebrahim Mohammed Al-Matari, Abdullah Kaid Al-Swidi, and Faudziah Hanim Bt Fadzil (2014) have carried out studies to measure company performance. Performance measurement plays an important role in managing an organization's performance because only measurable things are manageable. Therefore, improving the performance of the organization requires some measurements to determine the impact of the organization's effectiveness on business performance. This study can be seen as a reference for researchers concerned with company performance measurements.

Nguyen Khac Hieu and Nguyen Thi Anh Van (2018) conducted a study that analyzed the impact of quality standard's certification on the performance of small and medium enterprises in Vietnam. The results of the study can help owners of small and medium enterprises have a scientific basis to consider pursuing and achieving quality standards certifications for their businesses. The analysis was conducted based on Vietnamese small and medium enterprises data in 2013 and 2015. The certifications studied include international quality certifications (ISO 9000, ISO 22000) and environmental standards certification. The performance of the business is analyzed and measured based on revenue, costs, return on access (ROA), and return on equity (ROE). In summary, many different factors affecting the results of the business performance of enterprises, especially those producing and trading electricity.

2. The theoretical basis for electricity production and business activities

Production and business efficiency is an integrated economic target that reflects the level of use of materials and financial resources of enterprises to achieve the highest efficiency (Nguyen Ngoc Huyen, 2013). Business efficiency also shows the skillful application between reasoning and reality of business executives in order to exploit most of the elements of the production process such as machinery, materials resources, workers to improve profits.

Improving business efficiency is one of the extremely important measures of enterprises to promote high growth economy in a sustainable way. On the other hand, business efficiency is also the target of evaluating the business results of enterprises, contributing to increasing the competitiveness for businesses in the market. The role of business efficiency is expressed on all three sides: For the national economy: If the business efficiency of each enterprise is improved, it will contribute to improving the efficiency of the national economy, contributing to creating the growth economically, improving social living standards, maintain order and social security. For enterprises: when production and business were effective, enterprises have the ability to reinvest to innovate technology, improve operational productivity, product quality, reduce costs to increase the competitiveness of enterprises in the market. For employees: when the business enterprise is effective, it will bring workers a stable job and income, material and spiritual life, conditions and working environment of employees are increasingly improved and enhance.

For electricity business enterprise (such as PCTN), in order to evaluate the production and business efficiency of enterprises, we need to evaluate 03 main targets such as:

The electricity consumption target (kWh): The electricity consumption target is electricity consumption output in KWh sold to electricity customers. This target will have the biggest direct impact on the revenue and profitability of the production and business activities of enterprises.

The average electricity selling price target (VND/kWh): The average electricity selling price target of the year is calculated by taking the total electricity sales revenue of the year divided by the total electricity consumption output of the year, the unit is calculated as VND/kWh. Just like the electricity consumption target, the average electricity selling price target will directly impact revenue and profit in electricity production and business activities of the electricity sector.

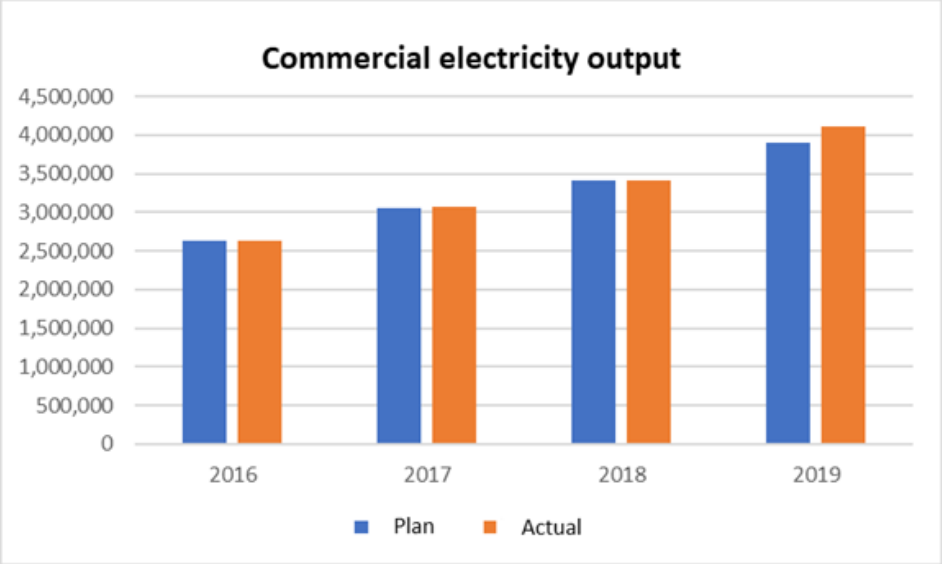
The electric loss rate target (%): The electricity loss rate is the power output rate is lost due to the transmission and distribution of electricity to customers. For an enterprise in the electricity sector, one factor that has a huge impact on business performance is power loss. There are two forms of power losses: Technical power loss: Due to the management of line systems, overloaded substations, backward, inappropriate distribution grid structure, seasonal uneven distribution load, timing,... ; Commercial losses: Due to consumers use theft hook by various measures, the power metering system is incorrect.

3. The production and business situation at PCTN

3.1 The electricity consumption target

The results of the implementation of electricity consumption output targets of PCTN in the period of 2016-2019 show that the growth rate of electricity consumption increased and reached the plan over the years (figure 1). In 2017, there was an increase of 17.16% compared to 2016, in 2018, there was an increase of 11.03% compared to 2017 and in 2019 increased by 20.27% compared to 2018. However, the output of electricity consumption implemented by PCTN is still low compared to the power company in southeastern provinces such as Long An, Binh Duong, Vung Tau. Specifically, in 2019, the output of electricity consumption of PCTN execution reached 4,105.38 million kWh, increasing 20.27% over accumulated in the same period in 2018, Long An Power company implementation reach 6,156.72 million kWh, increasing 19.37% over accumulated in the same period in 2018; Binh Duong Power Company achieved 13.627 million kWh, increasing 9.35% over accumulated in the same period in 2018. Therefore, the output of electricity consumption of PCTN implemented is lower than 2,051.34 million kWh compared to Long An Power Company; 9,521.62 million kWh lower than Binh Duong Power company. On the other hand, the Government has a mechanism to encourage the installation of solar systems on customer's roofs will have an impact on reducing electricity consumption and the average selling price of the unit. Therefore, PCTN should make efforts to implement reasonable solutions to increase electricity consumption output asymptotic compare to power company neighboring provinces in the Southeast to increase revenue and profitability in electricity activities.

Figure1: Electricity consumption output of PCTN in the period of 2016-2019



(PCTN Report Source)

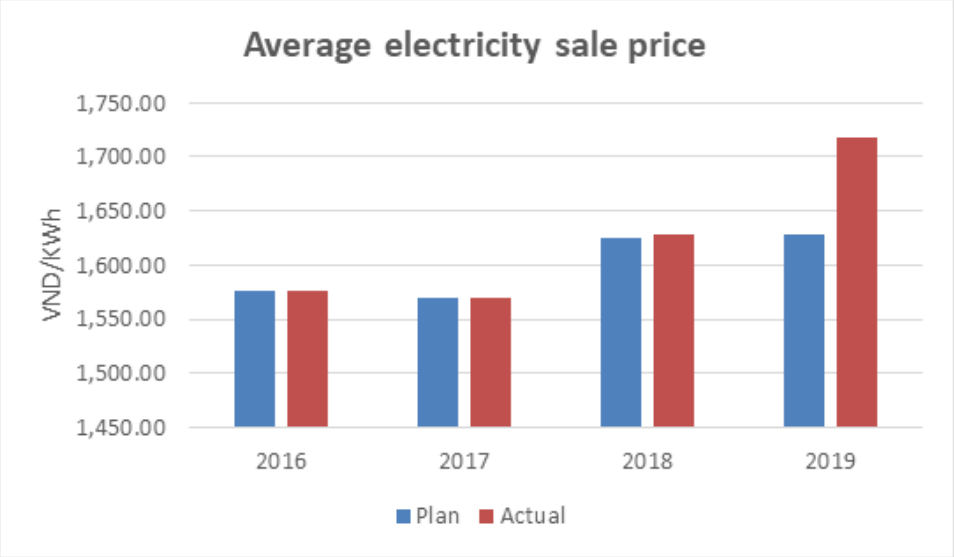
On the other hand, the growth rate of electricity consumption of PCTN is very high, has created difficulties. That makes some disadvantages for ensuring electricity supply to customers, the distribution grid system must be promptly upgraded and renovated with overhauled capital sources, investing in new construction to fully responding to customer growth needs. If the power grid is slowly renovated and upgraded in time will cause an overload of the distribution grid, increase technical losses on the grid, power source unstable, the low capacity reserve has the potential risk of supply-demand imbalance.

Therefore, improving the efficiency of investment in the construction of the grid annually is necessary to meet the schedule of putting into use the renovation, upgrading and construction of a new power grid to meet the very high growth rate of electricity consumption in Tay Ninh province.

3.2 The average electricity selling price target

Although the electricity sector is a special sector of the country, trading in especially goods is electricity. Electricity prices for each type of load issued by the Ministry of Industry and Trade from time to time, PCTN will comply with the electricity selling price to customers in accordance with the instructions of the Ministry of Industry and Trade, not allowed to decide the electricity price. But in the process of implementing electricity purchase contracts with each customer, in the process of managing the operation of the grid, PCTN still needs to implement reasonable solutions, in accordance with the law to increase the average electricity selling price.

Figure 2: Average electricity selling price in the period 2016-2019



(PCTN Report Source)

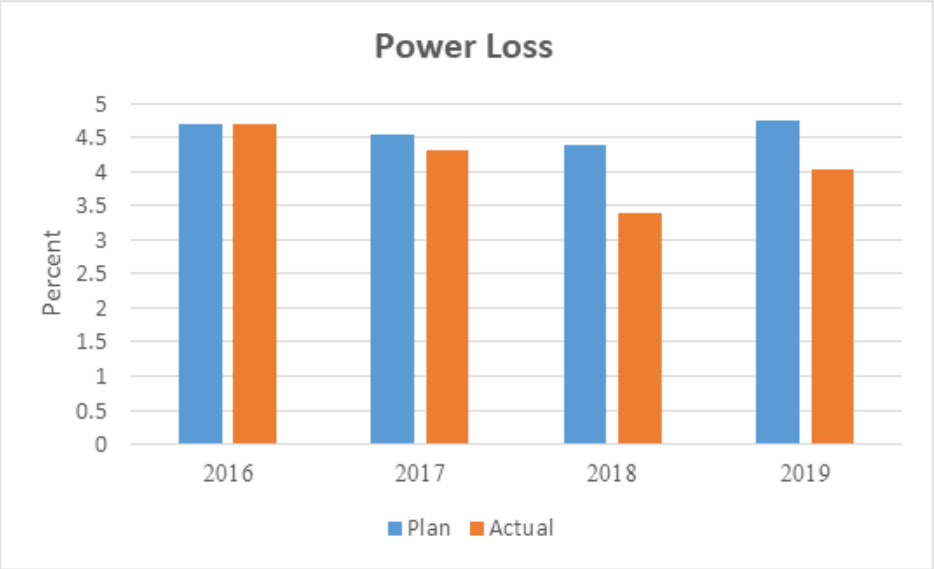
The results of the implementation of the average electricity selling price target of PCTN in the period of 2016-2019 are achieved the delivery plan (figure 2). However, this target carries a lot of risks of not reach the delivery plan, because the electricity selling price is still absolute dependent on the decision to increase the selling price issued by the Ministry of Industry and Trade and the results of the average electricity selling price in 2016, 2017, 2018 have only reached the delivery plan. Specifically, the average electricity selling price in 2016 was 1,576.01 VND/kWh, only 0.01 VND/kWh higher than the delivery plan (1,576.00 VND/kWh); the average electricity selling price in 2017 was 1,569.47 VND/kWh, only 0.47 VND/kWh higher than the delivery plan (1,569.00 VND/kWh) and 6.54 VND/kWh lower than in 2017; the average electricity selling price in 2018 is 1,627.40 VND/kWh, which is 2.5 VND/kWh higher than the delivery plan (1,624.90 VND/kWh). In 2019, the average electricity selling price reached higher than the delivery plan (90.09 VND/kWh higher than planned) issued by the Ministry of Industry and Trade (adjusted electricity price increased by 8.36% from March 2019). The average electricity selling price in 2019 SPC is 1,781.5 VND/kWh, (4.5 VND/kWh higher than the EVN delivery plan of 1,777 VND/kWh). Therefore, compared to the average electricity selling price of the whole SPC implemented in 2019 (1,781.5 VND/kWh), PCTN also performs much lower than the average of the

Corporation (lower than 62.6 VND/kWh). Hence, PCTN should make efforts to implement reasonable solutions to increase the average electricity selling price close to the average level of SPC, in order to increase revenue and profitability in electricity activities.

3.3. The electric power losses rate target

As the report of PCTN about electric power losses from 2016 – 2019 has completed following the target (figure 3). However, the ratio of electric power losses of PCTN still higher than the other Corporation in Southeast and the same as Binh Duong and Long An Province. Specifically, the ratio of electric power losses in 2019 of PCTN was 4.03%, 1.1% higher than the result of PCBD (in 2019 was 2.93%), and 0.62% higher than the one of PCLA in 2019 was 3.41%). Hence, compared to the Corporation in Southeastern Provinces with the same quality as Binh Duong and Long An Corporation lead to the ratio of electric power losses based on PCTN is still high and not optimal compared with the general premises in the area. Therefore, PCTN should be more effort in finding the best solution to reduce the rate of electric power losses so as to increase profit in Electrical Works.

Figure 3. The rate of Electric power Losses from 2016 to 2019



(PCTN Report Source)

4. Conclusion and solution

As the report of the company from 2016 to 2019, we can easily saw that PCTN still have some drawbacks compared with the target of SPC and still lower than the average corporation of the region and neighboring provinces such as Long An, Binh Duong, Tien Giang…That's made the direct effect on Electric Sales, Revenue and the Labor Productivity. The Company should offer methods to increase income for laborers and reach the target of the Corporation. In the research, the author showed some solutions to increase work efficiency at PCTN like:

Solutions for increasing Electric Sales.

Co-op with the local government to seize the socio-economic development planning, then build the plan for Electrical Grid development on demand of customers. Using effectively the annual budget of the Corporation building the Grid supply the needs in time of customers. In Managing and Operating the Grid have to be guaranteed the ability to provide uninterrupted power for the customers, especially is the customer who operating the industrial area, large production customers such as wood factory, latex factory, etc. Mainly focus on reform of electricity supply procedure so as to simplify the contract to reach the need of customers as fast as possible and exploit the high potential customers who use large capacity, high commercial electricity. Applicating technology in operation, maintenance, and fixing the hotline to reduce the power failure time.

Solution for the increase of Electric Average Price.

Regularly checking the Electric Average Price following Circular no. 16/2014/TT_BCT on May 29th, 2014, and Decision no. 648 /QD_BCT effected on March 20th,2019 of Ministry of Industry and Trade stipulate for all activities related to Electric Selling Price. Checking Electric Price of family customers having 02 households, business customers with two price ratios, administrative customers (like hospital, kindergarten, preschool, high school, administrative career…) with one kind of price. Checking the Electric Price of specific customers with a constant frequency. Installation 03 price electrical meter for service customers (eligible). Providing Priority Ensuring power supply for high-price customers and fixing trouble as fast as possible.

Solution for Reducing Electric Power Losses.

Calculating the ability to operate the electrical system and offer the Corporation investment in transformer 100kV substations so as to shorten the medium voltage power supplied radius, timely corrected all faults of transformer substation, and 110kV transmission line. Investing to upgrade and renovate the 22kV Grid, install more transformer in the residential area to shorten the power supplied line, reduce low voltage grid according to electrical standards. Completely Handling every green tree near the transmission line to avoid faults like electrical leaking, discharge, electricity stealing. Speeding up and using effectively major fixing construction, investing construction to reduce electric power losses. Installing the medium and low-voltage capacitor panel. Accomplish all the business targets like periodically replace and test the galvanometer, etc. Increase monitoring Electricity trading, Damaged meter detection, prevent electrical stealth. Set up a plan of Electric Power Losses in 2020 for the agencies and attached with responsibility and budget of each agency.

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How to cite this article: ***Nguyen Khac Hieu, Analyzing Business Performance at Tay Ninh Power Company, Asian. Jour. Social. Scie. Mgmt. Tech. 2(6): 01-06, 2020.***