International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 15s,2025
https://theaspd.com/index.php

Strategy Formulation Analysis For New Renewable Energy Business Development (Case Study Of Pt Pertamina)

Endro Hartanto[1], Surachman[2], Mintarti Rahayu[3], Wahdiyat Moko[4]
[1234]Management Science, Faculty of Economics and Business, Brawijaya University, ndroh@yahoo.com

Abstract
Indonesia faces significant challenges in energy transition with its 89% dependence on fossil fuels. As the largest state-owned energy company, PT Pertamina plays a strategic role in driving Renewable Energy (EBT) development. However, the company faces internal constraints such as fossil fuel dependency and technological limitations, along with external challenges including global energy price volatility and market competition. This study aims to formulate Pertamina's EBT business development strategy through SWOT analysis, IE Matrix, and QSPM approaches. Data were collected through in-depth interviews with Pertamina's directors, academics, and policymakers during 2022-2024, supported by document analysis and policy review. Internal factor evaluation (IFE score 3.05) revealed the company's main strengths in energy sector experience, skilled workforce, and extensive distribution networks. External evaluation (EFE score 3.94) identified major opportunities from government policy support and global clean energy demand. QSPM analysis yielded three priority strategies: (1) Product Development focusing on EBT diversification and technological innovation (TAS 7.07); (2) Market Development through segment expansion and digitalization (TAS 6.62); and (3) Market Penetration using pricing incentives and public education (TAS 6.29). Implementing these strategies requires increased R&D investment, strategic stakeholder collaboration, and adaptive management approaches.
Keywords: *Business Strategy, Energy Transition, Pertamina, Renewable Energy, SWOT Analysis, QSPM*

BACKGROUND

The transformation of the energy sector has become a global strategic agenda in facing the challenges of climate change, dependence on fossil fuels, and the need for sustainable development. Indonesia as a developing country with high economic and population growth has experienced an increase in energy consumption of around 7% annually (Ministry of Energy and Mineral Resources, 2023). Dependence on fossil fuels that dominate the national energy mix - 89% in 2019 - has given rise to various structural problems such as energy deficits, high carbon emissions, and pressure on the trade balance due to energy imports (National Energy Council, 2023).New and Renewable Energy (EBT) has emerged as a strategic solution in efforts to diversify energy sources, as well as an instrument for strengthening national energy resilience and independence. Indonesia's EBT potential is enormous, including hydro energy (75,000 MW), geothermal (29,475 MW), biomass (32,000 MW), solar energy (4.8 kWh/m²/day), and wind energy (3–6 m/s), but the level of utilization is still far from optimal (Ministry of Energy and Mineral Resources, 2018; Renewable Energy Indonesia, 2023). This imbalance emphasizes the urgent need for more targeted and data-based business strategy planning and implementation in developing the EBT sector. PT Pertamina (Persero), as a State-Owned Enterprise (BUMN) that has the main mandate in managing national energy, has a strategic position in driving the acceleration of the energy transition in Indonesia. Through its subsidiaries such as PT Pertamina Power Indonesia and PT Pertamina Geothermal Energy, this company has initiated various renewable energy-based projects, including geothermal, solar PV, green refinery, and biofuel. However, internal dynamics such as technological limitations, large investment needs, and the complexity of organizational governance, combined with external factors such as fluctuations in global energy prices, inconsistent regulations, and competition from private actors, present challenges in determining an effective and adaptive strategic direction (Endro Hartanto, 2025). In this context, the formulation of a renewable energy business development strategy based on a scientific framework is very important. The strategic management approach provides relevant analysis tools, one of which is SWOT (Strengths, Weaknesses, Opportunities, Threats), which allows the identification of the company's strategic position holistically from both internal and external aspects (Gürel & Tat, 2017). The SWOT analysis will be optimized through strategic priority mapping using the Quantitative Strategic Planning Matrix (QSPM) which provides a quantitative framework for assessing strategic alternatives

based on their relative attractiveness (David & David, 2017). The combination of these two tools has been proven effective in various studies to produce measurable and evidence-based strategies, especially in the context of strategic decision making in the energy sector (Ahmad & Nahavandi, 2012; Sumiarsih et al., 2018). This study places PT Pertamina as the main case study to formulate an EBT business development strategy using an integrated SWOT and QSPM analysis. The goal is to identify the company's internal strengths and weaknesses, explore external opportunities and threats faced, and formulate the most rational and implementable strategic priorities in supporting sustainable EBT growth. In addition, this study will also evaluate the organization's strategic capabilities in responding to the challenges of the increasingly dynamic and volatile energy transition era (VUCA environment). With this approach, the study not only contributes to the development of strategic management literature in the energy sector, but also produces practical recommendations for policy makers and corporate management, especially in formulating strategic renewable energy policies that support the achievement of the national target of 23% renewable energy mix by 2025 (DEN, 2018). This study also fills a gap (research gap) that has not been widely studied, namely the approach to formulating renewable energy strategies based on SWOT and QSPM in the context of state-owned companies.

Method

This study uses a case study approach to analyze the business strategy of Pertamina Power Indonesia (PPI) as a subsidiary of PT Pertamina (Persero). Case studies are chosen because of their ability to investigate contemporary phenomena in depth in real-life contexts, where the boundaries between phenomena and contexts are not always clear (Yin, 2014). This approach allows for the collection and analysis of qualitative and quantitative data in an integrated manner to produce a comprehensive understanding. The research was conducted in the PPI business environment with an observation period from 2022 to 2024. The research data consists of primary and secondary data. Primary data was obtained through in-depth interviews and Focus Group Discussions (FGD) with key informants, including the PPI board of directors (Board of Directors and Vice President), academics in the fields of energy and business, as well as representatives of the government and related associations. Meanwhile, secondary data comes from company reports, government regulations, and official publications of the Central Statistics Agency. The selection of respondents used the proportional random sampling technique to ensure adequate representation (Sumarwan, 2011). Data analysis was conducted through three main stages. The first stage is a situational analysis using the SWOT matrix to identify internal (strengths and weaknesses) and external (opportunities and threats) factors that influence the company's strategy (David, 2014). The results of the SWOT analysis are then integrated into the IE (Internal-External) matrix to evaluate the company's strategic position based on internal (IFE) and external (EFE) factor evaluation scores. The IE matrix groups strategies into three quadrants, namely growth, stability, and retrenchment (David et al., 2016). The final stage of analysis uses the Quantitative Strategic Planning Matrix (QSPM) to evaluate the relative attractiveness of various strategic alternatives. QSPM considers the importance weight and attractiveness score (1–4) of each strategic factor, resulting in strategic priority recommendations based on the calculation of the Total Attractiveness Score (TAS).

RESULTS AND DISCUSSION

Pertamina as one of the largest energy companies in Indonesia, is facing a crucial moment in the development of renewable energy. In this context, SWOT analysis is an important tool that can help Pertamina formulate an effective and sustainable strategy. This analysis begins by identifying Pertamina's strengths. As a company with decades of experience in the energy industry, Pertamina has skilled and experienced human resources. A team of experts consisting of engineers, scientists, and project managers is committed to driving innovation in the renewable energy sector. In addition, extensive infrastructure, including distribution networks and storage facilities, provides advantages in the implementation of renewable energy projects. Pertamina faces challenges such as dependence on fossil fuels and limitations in renewable energy technology. By identifying these weaknesses, Pertamina can design strategic steps to improve its capabilities, such as investing in research and development of new technologies.

The SWOT analysis also opens up horizons to various opportunities that can be utilized. With the increasing global demand for clean energy, Pertamina has the opportunity to expand its renewable energy

portfolio. Cooperation with the private sector and international institutions can help accelerate the development of renewable energy projects, as well as access the technology and funds needed. Pertamina must also be aware of threats that may hinder its growth. Competition from smaller and more agile renewable energy companies, as well as ever-changing regulations, can be challenges that must be faced. By understanding these threats, Pertamina can formulate effective mitigation strategies. Based on the information obtained, a description of the internal factors that affect Pertamina's current condition. The internal factors of Pertamina can be seen in Table 1.

Table 1 Important Factors in Pertamina's Strengths and Weaknesses

No	Strength	Weakness
1	Years of experience in the energy sector provide deep insight into market dynamics.	Still has a high dependence on fossil energy sources, which can hinder the transition to renewable energy.
2	Skilled and experienced workforce, including engineers and scientists in the energy sector.	Existing facilities may not fully support renewable energy development.
3	Existing distribution networks and facilities facilitate the implementation of renewable energy projects.	Limited experience in implementing new renewable energy technologies.
4	Access to sufficient financial resources for investment in renewable energy projects.	More financial resources are allocated to fossil fuel projects than renewable energy.
5	Commitment to research and development of renewable energy technology.	Difficulty in navigating the complexities of regulations and policies related to renewable energy.
6	Good cooperation with the government in green energy initiatives and supportive policies.	The level of public understanding and acceptance of renewable energy is still low.
7	Portfolio Diversification: Ability to develop various types of renewable energy, such as solar, wind, and bioenergy.	The emergence of new and more agile companies in the renewable energy sector.
8	Reputation as a company committed to transitioning to clean energy.	Renewable energy projects often have significant technical and financial risks.
9	Collaboration with technology companies and international institutions for innovation.	Limitations in available technology for efficiency and effectiveness in renewable energy projects.
10	Expertise in managing large, complex, high-risk projects.	The management structure is still more focused on fossil energy operations.
11	Ability to adopt and invest in new technologies that support renewable energy.	Lack of sufficient investment in research and innovation for renewable energy development.
12	Ability to quickly adapt to changing global energy demand and trends.	

Based on Table 1. it is known that there are 12 points of strength and 11 points of weakness of the company. All of these factors are considered important and affect the performance of the company. Basically, the strengths owned by the company need to be maintained so that the company can continue to exist in the energy business in Indonesia. Weaknesses are a form that can reduce the performance of a system. Both factors need to be assessed to determine the quantitative magnitude of each indicator forming each factor. The assessment is also carried out to obtain a definite position in the internal evaluation which can later be used to help formulate the best strategy for the company. The results of the assessment of the internal factor evaluation are in Table 2

Table 2 Evaluation of Internal Factors of Renewable Energy Business

No	Description	Weight	Rating	Total
Strength				

1	Years of experience in the energy sector provide deep insight into market dynamics,	0.060	3,870	0.232
2	Skilled and experienced workforce, including engineers and scientists in the energy sector,	0.053	3,880	0.206
3	Existing distribution networks and facilities facilitate the implementation of renewable energy projects,	0.049	4,000	0.196
4	Access to sufficient financial resources for investment in renewable energy projects,	0.050	3,820	0.191
5	Commitment to research and development of renewable energy technology,	0.050	3,780	0.189
6	Good cooperation with the government in green energy initiatives and supportive policies,	0.060	3,920	0.235
7	Portfolio Diversification: Ability to develop various types of renewable energy, such as solar, wind, and bioenergy,	0.049	3,920	0.192
8	Reputation as a company committed to switching to clean energy,	0.046	3,960	0.182
9	Collaboration with technology companies and international institutions for innovation,	0.047	3,980	0.187
10	Expertise in managing large, complex, high-risk projects,	0.051	3,900	0.199
11	Ability to adopt and invest in new technologies that support renewable energy,	0.048	3,860	0.185
12	Ability to quickly adapt to changes in global energy demand and trends,	0.047	3,930	0.185
Total Power				2.38
Weakness				
1	Still has a high dependence on fossil energy sources, which can hinder the transition to renewable energy,	0.040	2,000	0.080
2	Existing facilities may not fully support the development of renewable energy,	0.032	1,500	0.048
3	Limited experience in implementing new renewable energy technologies,	0.035	1,770	0.062
4	More financial resources are allocated to fossil fuel projects than renewable energy,	0.030	1,750	0.053
5	Difficulty in navigating the complexities of regulations and policies related to renewable energy,	0.045	1,760	0.079
6	The level of public understanding and acceptance of renewable energy is still low,	0.031	1,400	0.043
7	The emergence of new and more agile companies in the renewable energy sector,	0.031	1,500	0.047
8	EBT projects often have large technical and financial risks,	0.030	1,650	0.050
9	Limitations in available technology for efficiency and effectiveness in renewable energy projects,	0.041	1,890	0.077
10	The management structure is still more focused on fossil energy operations,	0.035	1,560	0.055
11	Lack of sufficient investment in research and innovation for renewable energy development,	0.040	1,870	0.075

Total Weakness		0.668
Number of Internal Factors	1	3.05

Table 2 shows that the results of the interviews and distribution of questionnaires were carried out with 9 The respondents to assess internal factors in the company got a final score of 3.05. This score was obtained from the contribution of the strength value of2.38 and a weakness value of 0.668. Internal assessment of Pertamina's factors in developing the EBT business shows that the company's condition has greater strength, so that management is required to be able to optimize its use.Based on previous information obtained, a description of external factors that affect the current condition of the company. The external factors are presented in Table 3.

Table 3 Important Factors in Opportunities and Threats

No	Opportunity	Threat
1	Government policies that support the transition to renewable energy can accelerate the development of renewable energy projects.	Global energy price volatility, including oil prices, may affect investment in renewable energy.
2	Growing international demand for clean energy sources is creating new markets.	Changes in government policies and regulations that could hinder the development of renewable energy projects.
3	The development of new technologies in renewable energy, such as energy storage and efficiency, opens up opportunities for investment.	Potential negative environmental impacts of renewable energy projects, such as land use for solar panels or wind turbines.
4	Opportunity to partner with technology companies and research institutions to enhance capabilities.	High dependence on government subsidies for renewable energy projects, which can change at any time.
5	Access to green finance and investment from international institutions focused on sustainable projects.	Communities who do not understand the benefits of renewable energy can create resistance to the project.
6	Increasing public awareness of the importance of sustainability can increase support for renewable energy projects.	Geopolitical tensions or a global energy crisis could disrupt supply chains and investments.
7	Opportunities to expand the energy portfolio by including various types of renewable energy, such as solar, wind and bioenergy.	Decreasing availability of natural resources needed for renewable technologies, such as rare minerals for batteries.
8	Opportunity to develop large-scale renewable energy projects, which can increase efficiency and impact.	
9	Investment in new infrastructure to support renewable energy development and distribution.	
10	Opportunity to enhance corporate image through projects focused on sustainability and social responsibility.	
11	Utilizing local resources, such as biomass and solar energy, for more sustainable renewable energy projects.	

Based on Table 3. it is known that there are 11 points of opportunities and 7 points of threats to the company. All of these factors are considered important and affect the company's performance. Basically,

the opportunities owned by the company are positive opportunities that can facilitate the company's business. Threats are things that can worsen the company's condition that come from the environment. The assessment is carried out to obtain a definite position in the external evaluation which can later be used to help formulate the best strategy for the company. The results of the assessment of the external factor evaluation are in Table 4

Table 4 External Factor Evaluation

No	Description	Weight	Rating	Total
Opportunity				
1	Government policies that support the transition to renewable energy can accelerate the development of renewable energy projects.	0.075	4,000	0.300
2	Growing international demand for clean energy sources is creating new markets.	0.065	4,000	0.260
3	The development of new technologies in renewable energy, such as energy storage and efficiency, opens up opportunities for investment.	0.060	3,870	0.232
4	Opportunity to partner with technology companies and research institutions to enhance capabilities.	0.060	3,850	0.231
5	Access to green finance and investment from international institutions focused on sustainable projects.	0.062	3,890	0.241
6	Increasing public awareness of the importance of sustainability can increase support for renewable energy projects.	0.046	4,000	0.184
7	Opportunities to expand the energy portfolio by including various types of renewable energy, such as solar, wind and bioenergy.	0.042	4,000	0.168
8	Opportunity to develop large-scale renewable energy projects, which can increase efficiency and impact.	0.059	3,900	0.230
9	Investment in new infrastructure to support renewable energy development and distribution.	0.056	3,980	0.223
10	Opportunity to enhance corporate image through projects focused on sustainability and social responsibility.	0.047	3,950	0.186
11	Utilizing local resources, such as biomass and solar energy, for more sustainable renewable energy projects.	0.075	3,900	0.293
Total Chances				2,548
Threat				
1	Global energy price volatility, including oil prices, may affect investment in renewable energy.	0.050	3,970	0.199
2	Changes in government policies and regulations that could hinder the development of renewable energy projects.	0.065	4,000	0.260
3	Potential negative environmental impacts of renewable energy projects, such as land use for solar panels or wind turbines.	0.055	3,980	0.219
4	High dependence on government subsidies for renewable energy projects, which can change at any time.	0.060	4,000	0.240
5	Communities who do not understand the benefits of renewable energy can create resistance to the project.	0.043	4,000	0.172
6	Geopolitical tensions or a global energy crisis could disrupt supply chains and investments.	0.040	3,760	0.150
7	Decreasing availability of natural resources needed for renewable technologies, such as rare minerals for batteries.	0.040	3,780	0.151
Total Threat				1,391
External Factor Amount		1		3.94

From Table 4 above, it is known that the total results of the external factor evaluation are 3.94. This value is quite large, which comes from opportunities and threats that also have a high proportion. It is known that the total opportunities are 2,548 while the threats are 1,391. On the other hand, it is known that Pertamina can take advantage of opportunities as a basis for business development that will be carried out. Pertamina's management must start responding more to existing threats, this is because there is still a gap value that is sufficient to improve the company's performance.

The calculations obtained from the Internal Factor Evaluation and External Factor Evaluation are then used as the basis for formulating the company's strategy. Mujahid et al (2018) explained that strategy can be formulated by finding the point between IFE and EFE. The Internal Factor Evaluation value is 3.05 and the External Factor Evaluation value is 3.94. Both values are then entered into the matrix of the approach used, as followspresented in Figure 1

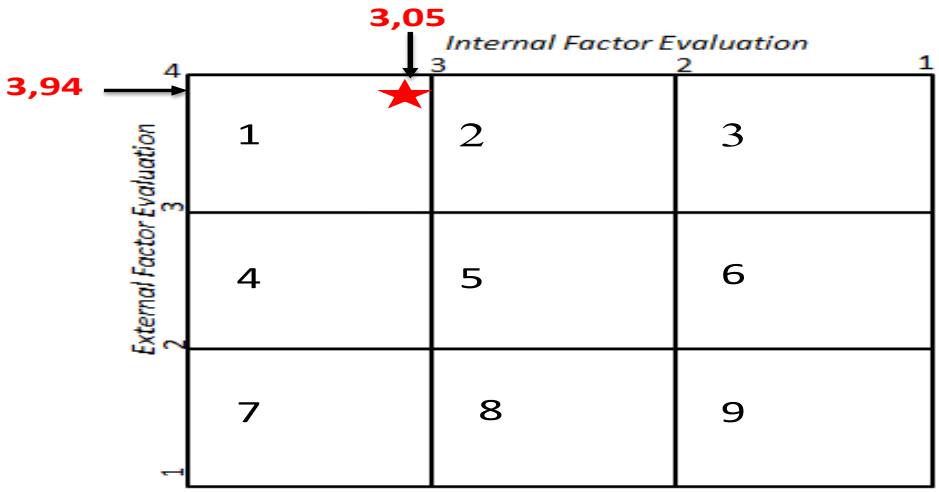

Figure 1 Pertamina's IE Matrix for New and Renewable Energy Development

Based on Figure 1, it is obtained information that the position of the company's strategy formulation is in the growth and build quadrant. David (2009) explains that cells 1, 2 and 4 provide a formulation for the company to carry out and implement the growth and build strategy. The company is advised to implement a fund-intensive strategy or an integrative strategy. Ilhan and Durmaz (2015) explain that in the growth and build strategy, growth must be carried out intensively, starting to diversify and acquire other companies. David (2009) has explained the strategic options that can be implemented when an organization or company enters quadrants 1, 2 and 4, including:

1. Product Development(product development)

   Product development is a strategy that seeks to increase sales by improving or modifying products or services. This strategy can be carried out by Pertamina if the company has the ability to create or develop new products, where the economy is growing and in conditions where competitors offer increasingly competitive products. This strategy usually requires a fairly large research budget. The company needs to apply several basics to implement this, namely: 1) The products offered have better quality at a competitive price structure 2) The industry can still grow and 3) The company has good development and R&D capabilities.

2. Market Development

   Market development involves introducing products or services into new geographic areas. In this case, Pertamina must begin to identify areas or regions that can be targeted to develop the company's market share. This strategy seeks to strengthen the distribution network and increase product distribution capacity. Some basic guidelines that can be carried out by Pertamina are: 1) New distribution channels are reliable, have potential and measurable costs. 2) New channels have not been touched or there are still few companies doing business. 3) The company has capital and sufficient human resources to manage the expansion.

3. Market Penetration

Market penetration strategy seeks to increase market share for a product or service in the market through greater marketing efforts. This strategy tries to increase market share for the same product. In this case, penetration is closely related to increasing the number of sellers, increasing promotional costs. Here are some guidelines that Pertamina can use in implementation, namely 1) The market is not saturated with the product. 2) Customer usage can be increased. 3) There are consumers who have not been touched by the product.

Based on the explanation of the results of the internal external matrix calculation, three alternatives were obtained as a benchmark in determining priority strategies for Pertamina. The process of determining the best alternative strategy uses the Quantitative Strategic Planning calculation. David (2010) explains that determining the best strategy can be determined using the QSPM approach, which is due to having the specialty of having a relative value for each of these alternatives.

Quantitative Strategic Planning Matrix analysis is a method used to decide on a strategy that will be used as part of the research. Based on information at the formulation stage, it is known that Pertamina's position based on the Internal Evaluation Matrix approach is in growth and development and the SWOT approach is in an aggressive position. Determination of alternative strategies analyzed using QSPM can be based on IE or SWOT (David 2010). Conceptually, QSPM attempts to determine the attractiveness of alternatives from each alternative to later be used as a basis for making decisions for the company (Albratt 1993 and Dibb 1995). Pertamina was offered three best alternative strategies that the company must implement. The summary of the calculation results is presented in Table 5

Table 5 QSPM Matrix Calculation

Description	Product Development	Market Development	Market Penetration
Strength	8,097	7,131	6,820
Weakness	1.26	1,182	1,300
Opportunity	7,697	7,403	6,703
Threat	2,000	1,801	1,541
Total BAG	19.05	17.52	16.36
Order	1	2	3

Priority based on information from Table 5 shows that Pertamina gets the best order to implement strategies in order to develop the company. The calculation results are obtained from the weights in the internal external evaluation calculation multiplied by the Attractiveness Score which then produces the Total Attractiveness Score. The total value is then sorted based on the value of the Total Attractiveness Score, the calculation results are as follows:

1. Product Development Strategy

The market development strategy has a value of 19.05. In this strategy, it is known that the strength and opportunity values are the largest compared to other strategies. This adds to the belief that this strategy is feasible to be implemented by Pertamina.

2. Market Development Strategy

The market development strategy has a value of 17.52. In this strategy, it is known that the strength, weakness and opportunity values are in the middle of other strategies but the threat has the highest value. This condition indicates that the implementation of the strategy needs to be very careful about external disturbances.

3. Market Penetration Strategy

The market penetration strategy has a value of 16.36. In this strategy, it is known that all the constituent values are at the bottom, meaning that the implementation of this strategy is very suitable if Pertamina does not want a big risk.

Alternatives of the 3 strategies then made several programs that are able to provide recommendations for the best implementation. The description that can be implemented in order to achieve the objectives of Pertamina's strategy includes:

1. Product Development Strategy
   Pertamina has undertaken several initiatives in developing renewable energy, but there are still challenges to be overcome, such as dependence on fossil fuel sources, inadequate infrastructure, and lack of public awareness of the importance of renewable energy. Therefore, a comprehensive strategy is needed to strengthen Pertamina's position in the renewable energy sector. Here are some strategies for product development:

a. Diversification of Energy Sources

Developing various renewable energy sources such as solar, wind, biomass, and hydroelectric. Pertamina can invest in research and development of new technologies to utilize the potential of local resources.

b. Partnership and Collaboration

Building partnerships with government agencies, universities, and private companies to share knowledge, technology, and resources. This collaboration can accelerate innovation and adoption of renewable technologies.

c. Investment in R&D

Increase funding allocation for research and development in the field of renewable energy. Focusing on developing more efficient and environmentally friendly technologies can produce more competitive products in the market.

d. Education and Public Awareness

Conducting educational campaigns to raise public awareness about the benefits and importance of renewable energy. Training programs for employees and local communities are also important to create a skilled workforce in this sector.

e. Supporting Infrastructure

Building the necessary infrastructure to support renewable energy development, such as renewable energy distribution networks and energy storage facilities. Investment in smart grid technology can improve the efficiency of energy distribution.

f. Regulations and Policies

Collaborate with the government to create policies that support the development of renewable energy, such as fiscal incentives and regulations that facilitate investment in this sector.

2. Market Development Strategy
   With increasing awareness of environmental issues and the need for sustainable energy, the renewable energy market in Indonesia shows significant growth potential. However, challenges such as inadequate infrastructure, complex regulations, and limited consumer understanding must be overcome to maximize this potential. Here are some alternative strategies:

   a. Market Segmentation

   Identify and analyze different market segments, including industrial, household, and public sector. Product offerings tailored to the specific needs of each segment can increase market appeal and acceptance.

   b. Product Innovation

   Develop innovative renewable products, such as integrated solar panel systems, energy storage solutions, and energy efficiency technologies. Diverse product offerings can attract more customers and meet various energy needs.

   c. Strategic Partnership

   Building partnerships with technology companies, government agencies, and non-governmental organizations to expand distribution networks and increase accessibility of renewable products. This collaboration can also help in the development of new technologies and innovations.

   d. Marketing and Education

Conducting effective marketing campaigns to raise awareness of the benefits of renewables. Consumer education programs on how to use and optimize renewable technologies can increase customer adoption and loyalty.

e. Utilization of Digitalization

Using digital platforms to expand market reach, including e-commerce and applications for energy management. Digitalization can help in providing better services and improving customer interactions.

3. Market Penetration Strategy

The renewable energy market in Indonesia has great potential, supported by abundant natural resources, such as sunlight, wind, and biomass. However, challenges such as high initial costs, inadequate infrastructure, and lack of public understanding of renewable energy technology are obstacles to market penetration. Therefore, Pertamina needs to formulate an effective strategy to overcome these challenges. Some market penetration strategies are presented as follows:

a. Competitive Product Offerings

Developing EBT products with competitive prices and attractive business models, such as financing schemes that make it easier for customers to access EBT technology. Offering affordable products can increase appeal to a wider market segment.

b. Incentive and Subsidy Programs

Implementing incentive programs, such as subsidies for the installation of renewable energy systems, which can help lower the initial costs for consumers. This financial support will encourage more consumers to switch to renewable energy.

c. Education and Public Awareness

Launching an educational campaign to increase public understanding of the benefits and how to use renewable technologies. Seminars, workshops, and training programs can help educate consumers and increase technology adoption.

d. Strategic Partnership

Building partnerships with government agencies, non-governmental organizations, and the private sector to expand market access. This collaboration can strengthen distribution networks and facilitate renewable energy projects in various regions.

CONCLUSION

PT Pertamina (Persero) has strong strategic capabilities to develop the New and Renewable Energy (EBT) business. The results of the internal factor evaluation (IFE score: 3.05) show that the company has advantages in energy sector experience, skilled human resources, extensive distribution networks, and access to financing. However, several weaknesses such as dependence on fossil fuels, limitations of EBT technology, and suboptimal investment allocation are challenges that need to be addressed immediately. On the external side, the EFE score (3.94) indicates great opportunities that can be utilized, including supportive government policies, global demand for clean energy, and potential partnerships with international institutions. However, threats such as fluctuations in global energy prices, community resistance, and competition with new, more agile companies also need to be watched out for. Strategic priorities based on the Quantitative Strategic Planning Matrix (QSPM) place Product Development as the main strategy with the highest Total Attractiveness Score (TAS) (19.05), followed by Market Development (TAS: 17.52) and Market Penetration (TAS: 16.36). Product development strategies can be realized through diversification of EBT sources, investment in research and development, and collaboration with technology institutions. Meanwhile, market development strategies can be focused on expanding the industrial and household segments, utilizing digitalization, and educating the public. Market penetration can be done through price incentives, subsidy programs, and partnerships with stakeholders.

Pertamina needs to accelerate the energy transition with concrete steps. First, the company must increase budget allocation for R&D and innovation of renewable energy technology, including the development of solar, wind, and bioenergy. Second, collaboration with universities, technology startups, and international institutions can strengthen technical capabilities while reducing dependence on imported technology. Third, public education campaigns on the benefits of renewable energy need to be

strengthened to increase public acceptance. Fourth, optimization of regulations and fiscal incentives from the government must be utilized to create a more attractive investment climate. Finally, Pertamina needs to adopt an adaptive management approach in dealing with the dynamics of the fluctuating energy market, including monitoring geopolitical risks and policy changes. Pertamina will not only strengthen its position as a major player in Indonesia's energy transition, but also contribute to achieving the national renewable energy mix target of 23% by 2025. In addition, these steps will also increase the company's competitiveness in facing increasingly tight global competition in the VUCA era (Volatility, Uncertainty, Complexity, Ambiguity).

BIBLIOGRAPHY

1. Ahmad, S., & Nahavandi, S. (2012). Strategic Management in the Energy Sector.
2. David, F.R. (2009). Strategic Management: Concepts and Cases. Pearson Education.
3. David, F.R. (2010). Strategic Management: Concepts and Cases. Pearson Education.
4. David, F.R. (2014). Strategic Management: Concepts and Cases. Pearson Education.
5. David, FR, & David, FR (2017). Strategic Management: Concepts and Cases: A Competitive Advantage Approach. Pearson.
6. David, F.R., David, F.R., & David, M. (2016). Strategic Management: Concepts and Cases. Pearson Education.
7. National Energy Council. (2018).
8. National Energy Council. (2023).
9. Dibb, S. (1995).
10. Gürel, E., & Tat, M. (2017). SWOT Analysis: A Theoretical Review. Journal of International Social Research, 10(51), 994-1006.
11. Ilhan, A., & Durmaz, M. (2015). The Strategic Importance of Internal-External Matrix (IE) and Grand Strategy Matrix in Determining Strategies of Enterprises: A Study of the Cement Industry in Turkey. Journal of Economics and Social Studies, 5(2), 1-14.
12. Ministry of Energy and Mineral Resources. (2018).
13. Ministry of Energy and Mineral Resources. (2023).
14. Lindgren, M., & Bandhold, H. (2003). Scenario Planning: The Link Between Future and Strategy. Palgrave Macmillan.
15. Mujahid, M., Suryadi, K., & Suparman, S. (2018). Analysis of Business Development Strategy Using IE Matrix and QSPM (Case Study: PT. XYZ). Journal of Islamic Business Management, 2(2), 1-15.
16. Renewable Energy Indonesia. (2023).
17. Sumarwan, U. (2011). Consumer Behavior: Theory and Its Application in Marketing. Ghalia Indonesia.
18. Sumiarsih, I., Purwati, I., & Sujono, J. (2018). Formulation of Business Strategy Using SWOT and QSPM Matrix on PT. X. International Journal of Scientific & Technology Research, 7(12), 12-16.
19. Yin, R. K. (2014). Case Study Research: Design and Methods (5th ed.). Sage Publications.