

THE NATIONAL STRATEGIC PLANNING FOR PRODUCING AN ALTERNATIVE ENERGY

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THE NATIONAL STRATEGIC PLANNING FOR PRODUCING AN ALTERNATIVE ENERGY

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Abstract: The background of this research are 1) The average velocity (in some bigger cities) of the public transportation and private cars in toll road that is slow, 2) The ratio between number of private cars and total length of the road is high. 3) Everybody can drive and go anywhere and many places easily. 4) Just go out site and have no target or destination because the fuel price is cheaper. The research objectives are to design the strategy planning for producing the alternative energy, to describe, and to explain the strategy planning for producing the alternative energy. This research method is a qualitative approach. The research results reveals, there are: 1) The vision is empowering the communities (the people in the villages) to sustain and to produce the bio-fuels and to concern the environment. 2) The mission is everyone participate in planting the Singkong (Manihot Esculenta) and Jatropha Curcas also producing the bio-fuels.

Keywords: *Energy alternative, Mission, Strategic planning, Vision*

1. Introduction

Road vehicles, and particularly automobiles, are among the most comfortable and important means of transport worldwide. In recent years, the environmental impact of fuel combustion by motor vehicles has garnered increased attention, and a growing number of markets have started to put in place regulations to curb emissions from such vehicles.

The increasing of the road construction is not proportional to the increasing amount of the car. As a result the average velocity (in some bigger cities) of the public transportation and private cars in toll road that is slow or only 19 km/hour (Table 1). Or known as the ratio between number of private cars and total length of the road is high.

Another reason is everybody can drive and go anywhere and many places easily. Just go out site and have no target or destination because the fuel price is “cheaper.”

There are many problems in this topic, include: a) Increasing the energy subsidy for rich people (subsidy for fuel), b) Increasing the energy price, c) Increasing the utilization of the energy every year, d) Switching the energy alternative has not optimally, and e) How to design the strategic planning for shifting the alternative energy? Figure 1 shows the budget and subsidy allocation, shifting the allocation from fuel subsidy to construct the infrastructure and health.

Table 1. Number of car [thousand unit]

No.	Year	Number of car [thousand unit]
1	2017	13,968.20

2	2018	14,830.70
3	2019	15,592.42
4	2020	15,797.75
5	2021	16,413.35

Source: www.statista.com/statistics

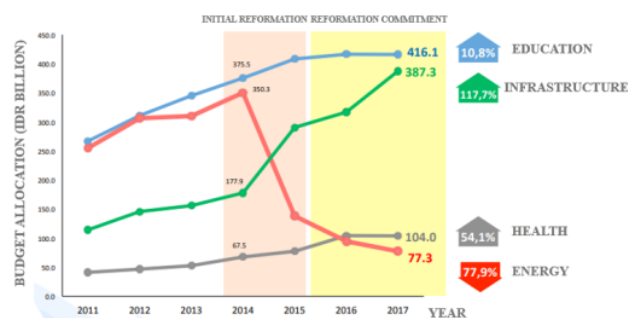


Figure 1. Budget and Subsidy Allocation

Source: <https://mediakeuangan.kemenkeu.go.id>, www.bps.go.id

Table 2. Biofuel mandatory in Indonesia

No	Year	Realization [M kl]	Save in foreign exchange		GHG Conversion [M tonnes CO ₂]
			USD billion	IDR trillion	
1	2018	3.75	1.89	26.27	5.61
2	2019	6.36	6.36	42.05	9.51
3	2020	8.59	-	-	-
4	2021	9.21	4.54	64.92	14.34

Source: www.esdm.go.id, www.ebtke.esdm.esdm.go.id, <https://databoks.katadata.co.id>.

The target of the Biofuel production capacity in the year of 2025 is 25%.

Table 2 shows the realization of the biofuel production in 2021 is 9.21 million kl and have saved in the foreign exchange is used 4.54 billion and conversed the Green House Gas (GHG) about 14.34 million tons of CO₂.

The objective of this research is to design the strategy planning for producing the alternative energy, and to describe, and to explain the strategy planning for producing alternative energy.

Strategy is (strategos - Greek) the combination from two words “stratos” means “army” and “ago” means “leading/guiding/moving to.” Strategy means the art of the military operation planning and management in big scale and to direct to benefit position before the real battle with the enemy occurred.

Thomas Wheelen stated that: “A strategy of a corporate forms a comprehensive master plan stating how the corporation will achieve its mission and objectives.”

Strategy is defined as a manner or plan selected to result in a desired destiny, including fulfillment of a motive or choice to a problem. Or technique is the art and science of making plans and marshalling sources for his or her maximum green and effective use. The term is derived from the Greek word for generalship or primary an military. Scenario is defined as a description of possible actions or events in the future.

Stephen P Robbins defined management is the process of coordinating and overseeing the work activities of others so that their activities are completed efficiently and effectively.

James AF Stoner defined management is the process of planning, organizing, leading, and controlling the work of organization members and of using all available organization resources to reach stated organizational goals

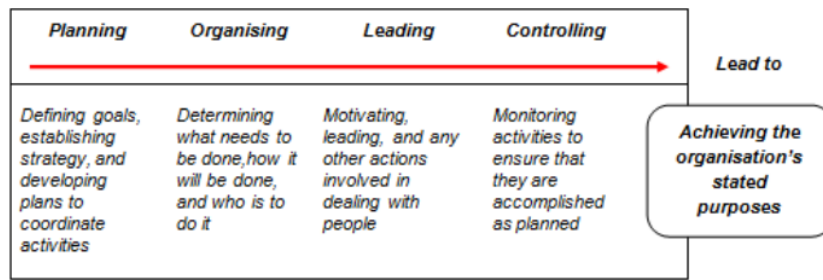


Figure 2. Management Functions

Source: Stoner, J. A. F., Freeman, R. E., & Gilbert, D. R. (1995). *Management*. Sixth edition, Prentice-Hall International, Inc. New Jersey

Figure 3 shows there are eight (8) steps for designing the Strategic Planning of the organization. This figure explained about the hierarchy between vision to procedures and vice versa. Two strategies explained, i.e.: Strategy implementation include: Program, Budgets, and procedures and Strategy formulation include: vision, mission, objectives, strategy, and policy. Two approaches, include: top-down approach and bottom-up approach also the designer can inform and get the data using deployment and feedback.

Stephen P Robbins stated that: “The function of management consists of planning, organizing, actuating or leading, and controlling (POALC) (Figure 2).

Strategic planning is a part of the planning function. Harold Koontz and Heinz Weihrich stated that the strategic planning steps are Purposes or Missions, Objectives, Strategies, Policies, Procedures, Rules, Programs, and Budgets.

The BUFE methods or eight steps designing the strategic planning that anyone can design their own strategic planning using these eight steps. The steps are: Vision, Missions, Objectives, Strategies, Policy, Program, Budgets, and Procedures.

Figure 4 shows the definition of each step, e.g. vision define to realize the impossible dreams.

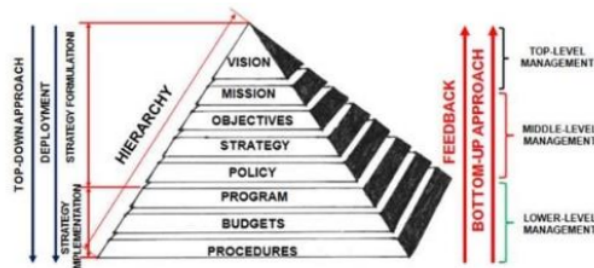


Figure 3. The Eight steps designing the Strategic Planning



Figure 4. The definition of each steps in the Strategic Planning
 Source: <https://www.atlantis-press.com>

2. Research Method

This research method is a qualitative approach. The informants including: Ministry of Energy and Mineral Resources (staff and vice minister), Person in Charge (PIC) in Agency for the Assessment and Application of Technology, Indonesia (BPPT), the producers of alcohol, and managers of cooperative institutions.

3. Results and Discussion

Researcher met and interviewed the participants and recorded it. And the results of this transcript has been recapitulated.

3.1. The Vision Statement of the Strategy Planning

Figure 5 shows the statement of the vision is: “Empowering the communities (the people in the villages) to sustain and to produce the bio-fuels and to concern the environment.” It means the community in the villages (farmers and their family) worked hard to plant, cultivate, and harvest, also produce the bio-fuel and oil the manihot esculenta (Singkong) and Jatropha Curcas (Jarak) and try to increase the quality of the product.

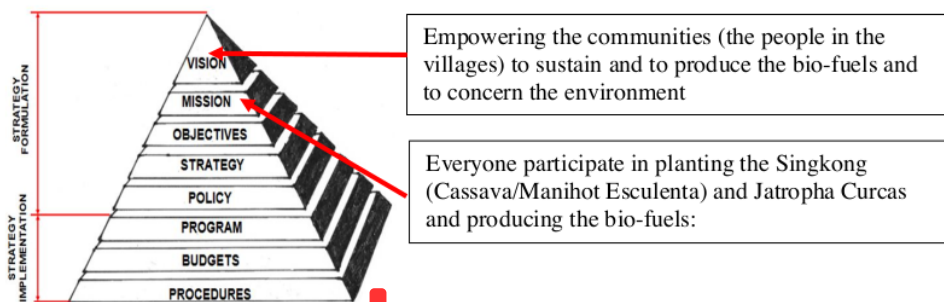


Figure 5. Vision and Mission statement

3.2. The Mission Statement of the Strategy Planning

The mission statement of the strategy planning are:

Everyone participate in planting the Singkong (Manihot Esculenta) and Jatropha Curcas and producing the bio-fuels:

1. To develop our natural resources efficiently
2. To protect our environment
3. To increase energy conservation and efficiency
4. To solve the energy problems holistically not partially
5. To socialize and train the community for producing the bio-fuels energy
6. To use and commercialize the results of the bio-energy
7. To improve and to create the wealth of the people in the village (the welfare of the community) through bio-fuels continuously

Some senior lecturers and trainer has to combine their (a part of) working days to improve the knowledge of the people in villages. They try to improve how cultivate the plant to produce bio-fuels as well as possible.

3.3. The Objective Statement of the Strategy Planning

The objective statement of the strategy planning are:

1. To socialize the community (people in the village) about the purpose of the bio-energy in a certain villages
2. To train the community (some of young people in a certain villages) for producing the bio-fuels and fertilizer using the natural resources and bio-technology (plants: Jatropha, Singkong, bio-mass; micro-bacteria: plankton, algae; waste: cassava residual, residual of sugar cane factory, etc),
3. To use and to commercialize the bio-fuels energy results as a household's consumption and transportation
4. To create the wealth of the people in the village (the welfare of the community) continuously

The farmers has to sale the bio-fuel smartly, then the will “create” or increase their income and increase their welfare continuously.

3.4. The Strategy Statement of the Strategy Planning

The strategy statement of the strategy planing divided by three level:

1. Corporate strategy (Stability, Growth, and Retrenchment)
Empowering the communities in order to have a bio-fuels production continuously
2. Business strategy (competitive and cooperative)
Emphasizing the quality and price strategy to produce and commercialize the bio-fuels to increase the communities' welfare/prosperity
3. Functional strategy (technology leadership and followership)
Converting the raw material into product using the appropriate technology till high technology at the same quality under the same brand

3.5. The Policies Statement of the Strategy Planning

The policies statement of the strategy planning are:

1. Need the political will from the leader and legislators
(The leader not just talk to much, but realize for producing the bio-fuel.
2. To introduce and make a pilot project in a several communities and guide them daily
3. Researchers and lecturers should spend minimum 15% of their time working for training, guiding the communities to produce bio-fuels.

3.6. The Program Statement of the Strategy Planning

The program statement of the strategy planning are:

1. Producing the bio-fuel reactors
2. Training the people in certain communities about how to produce bio-fuel
3. Training the people in certain communities about how to manage the reactors
4. Planting the plants (SJC, Singkong, Sugar cane) as a raw materials and producing others raw materials (bacteria)

3.7. The Budgets Statement of the Strategy Planning

The budgets statement of the strategy planning are:

1. Decreasing and shifting (a part) the fossil energy's budgets (subsidies) to produce bio-fuel
2. Allocating the budgets for producing and commercializing the bio-fuel

3.8. The Procedures Statement of the Strategy Planning

The procedures statement of the strategy planning are:

1. To design and write the standard operating procedure (SOP)
2. To increase the number of young people to produce the bio-fuel
3. To design the cross-functional team works
4. To cut marketing expenses using the networking and cooperatives
5. To reduce the operating cost using high technology and efficiency
6. To give a tax holiday for the investors
7. To diversify the raw materials
8. To reduce the processing and manufacturing time

4. Conclusion

The research results reveals, there are:

- a. The Vision is Empowering the communities (the people in the villages) to sustain and to produce the bio-fuels and to concern the environment
- b. The Mission is Everyone participate in planting the Singkong (Manihot Esculenta) and Jatropha Curcas and producing the bio-fuels

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References

- Koontz, H., & Weinhrich, H. (1988). *Management*. McGraw_Hill Book Co., New York.
- Purwono, B.S.A., Salim, U, Djumahir, & Solimun. (2009). *Expose the National Companies Strategic Planning: 8 Steps to design the Strategic Planning*. Post Graduate Program, University of Brawijaya, Malang.
- Purwono, B. S. A., Sudarmadji, Irawan, B., & Sadar Wahyudi. 2019. *Strategic Management Of The Wind Turbine's Simulation*. Proceedings of the 1st Annual Management, Business and Economic Conference (AMBEC 2019). <https://www.atlantispress.com/proceedings/ambec-19/125938798>.
<https://doi.org/10.2991/aebmr.k.200415.041>.

- Purwono, B. S. A., Rahbini, Salim, U., Djuwahir, & Solimun. (2015). *Analysis of dominants' factors of national renewable energy strategy*. Journal Elsevier – Energy Procedia. 2015: 68, pp 336–344. <https://doi.org/10.1016/j.egypro.2015.03.264>
- Purwono, B.S. A., Setiawan, A., Adhisuwignjo, A., & Masroni. (2019). *The Strategy of Simulation Effect of the Water Flowrate, Turbine Type, and Its Interaction to the Power Generated by MHPP*. International Journal of Mechanical and Production Engineering Research and Development (IJMPERD). ISSN (P): 2249–6890; ISSN (E): 2249–8001. Vol. 9, Issue 6, Dec 2019, pp. 1091–1102. http://www.tjprc.org/view-archives.php?keyword=bambang+sugiyono+agus+purwono&jtype=2&from_date=&to_date=&journal=67
- Purwono, B.S.A. (2011). *National Renewable Energy Strategic Planning (Bio-Fuel) in Indonesia*. Dissertation. Post Graduate Program, University of Brawijaya, Malang.
- Purwono, B. S. A., Rahbini, Salim, U., Djuwahir, & Solimun. (2014). *Analysis of Dominants' Factors of National Renewable Energy Strategy*. 2nd International Conference on Sustainable Energy Engineering and Application, ICSEEA 2014. Energi Procedia. doi: 10.1016/j.egypro.2015.03.264
- Purwono, B. S. A., Maskan, M., & Suardika, I. B. (2014). *Design the Strategic Planning for Engineers*. NN Press, Malang. ISBN: 978-602-99272-5-2.
- Robbins, S. P., Bergman, R., Stagg, I., & Coulter, M. (2009). *Management*. Pearson Education. New South Wales.
- Stoner, J. A. F., Freeman, R. E., & Gilbert, D. R. (1995). *Management*. Sixth edition, Prentice-Hall International, Inc. New Jersey.
- Wheelen, T. L., & Hunger, J. D. (2004). *Strategic Management and Business Policy*. Ninth Edition, Pearson-Prentice Hall, New Jersey
- <https://www.bps.go.id/>. Accessed 18 October 2022.
- <https://databoks.katadata.co.id>. Accessed 18 October 2022
- <https://www.esdm.go.id>; Accessed 18 October 2022
- <https://www.ebtke.esdm.esdm.go.id>; Accessed 18 October 2022
- <https://mediakeuangan.kemenkeu.go.id/article/show/ini-dia-rincian-rapbn-2023>. Accessed 18 October 2022.
- <https://www.statista.com/statistics/978871/indonesia-number-of-cars-use/>. Accessed 18 October 2022.

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