

## ANALYSIS OF COMMUNITY SOCIO-ECONOMIC CHANGES AFTER LAND ACQUISITION ON THE PT SORIK MARAPI GEOTHERMAL POWER GEOTHERMAL PROJECT



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### Abstract

The development of geothermal projects brings about social changes in the community environment. PT Sorik Marapi Geothermal Power's policy through the construction of this geothermal power plant also has a big impact on changes in the economic level of the local community. This research uses a qualitative research method, a phenomenological approach, trying to explain or reveal the meaning of existing concepts or experiential phenomena based on the awareness that occurs from several individuals. The results of this research show that PT Sorik Marapi Geothermal plays a big role in improving the local community's economy, including: helping the community by providing fish farming businesses, helping village income, providing scholarships to local sons/daughters, and building village infrastructure. Land acquisition for the PT Sorik Marapi Geothermal geothermal project has had an impact on the socio-economic aspects of the community, as they have lost agricultural land. However, the company provides compensation money to people who clear their land with double the profits, and no party is harmed. This is based on the basic value of Islamic economics, namely responsibility. The responsibility given by the company is to provide the greatest good (*maslahah*) to the community. There are two types of PT Sorik Marapi Geothermal Power, namely: First, the negative impacts that occur after land acquisition on the PT Sorik Marapi Geothermal Power geothermal project are as follows: agricultural land is decreasing, clean water supply is decreasing, noise around the project area, air pollution, the roofs of residents' houses being easily damaged, gas leaks due to company negligence, which caused fatalities. Second, the positive impact, the positive impact after land acquisition on the PT Sorik Marapi Geothermal Power geothermal project is as follows: progress in the area, increased regional income, and reduced poverty land acquisition, many people, especially in the Puncak Sorik Marapi sub-district, suddenly became rich, expanding roads around the geothermal project area and creating jobs for the surrounding community.

**Keywords:** Community Socio-Economic Changes, Community Socio-Economics, Land Acquisition, Liberation Land According to Islamic Economics, Geothermal

## INTRODUCTION

Energy is an important component for the survival of a country because almost all of the country's activities depend on the availability of sufficient energy. There are two large groups of energy, namely renewable energy and non-renewable energy (fossil fuel). Dependence on (fossil fuels) causes several negative impacts such as depletion of fossil energy reserves, increasing environmental damage, and scarcity of fossil energy, therefore countries are starting to develop renewable energy, one of which is geothermal energy (Novita, 2018).

Geothermal or geothermal is a new, renewable energy that is formed in the earth's crust. Geothermal energy is heating energy stored in rocks and fluids below the surface. In contrast to oil and gas systems, the existence of geothermal resources is often indicated by geothermal surface manifestations.

Indonesia has great potential to develop Geothermal Energy. Indonesia's total geothermal resources are 25 GW spread across 349 locations throughout Indonesia. Of the total potential, the total installed capacity reached 2,132 MW and 15,128 MW, of which was identified as potential reserves for development.

In this regard, North Sumatra is also a region that has abundant natural resource potential, biodiversity and historical or cultural heritage. The abundance of existing natural resources can increase economic growth when these resources can be managed well in accordance with what the community is most interested in so that utilization of these natural resources will not waste time or material due to failure to manage a resource (Nasution et al., 2022). North Sumatra is one of the provinces that has the most geothermal energy potential, namely 1,857.00 MW in six districts, namely, Karo, Simalungun, North Tapanuli, South Tapanuli, Padang Lawas and Mandailing Natal (Gunawan, 2013). This shows that North Sumatra is an area with great potential to be used as a place for power plants, industry or tourism.

PLTP Sorik Marapi Geothermal Power (PT SMGP) is one of the geothermal producers with great potential in Mandailing Natal. The development of the Sorik Marapi Power PLTP with a total capacity of 240 MW is a national strategic project and is part of the 35,000 MW Program and Phase II of the 10,000 MW FTP Program. PT. Sorik Marapi

Geothermal Power (PT SMGP) as the developer has succeeded in connecting Unit I up to 45 MW and is targeting in 2020 to connect Unit II PLTP Sorik Marapi Power of 45 MW to PT's 150 kV network. PLN. Apart from that, PT. SGMP also continues to develop projects through drilling activities to obtain maximum results according to existing resource potential.

Meanwhile, in the Puncak Sorik Marapi sub-district area, geothermal energy began to exist in 2010. In 2010, outsiders began to come, marked by the presence of helicopters passing through the sky to survey near Mount Sorik Marapi. It is also starting to be heard that there will be construction of a geothermal power plant in this area and this is marked by the start of outreach to each village regarding the development that will be carried out. However, at that time many people rejected and opposed the government's plan to carry out this development. Rejection often raises socio-economic and environmental issues which are perceived by the community as a form of lack of geothermal energy which is still considered the same and is classified as mining. Like PT SMGP, of course it gave rise to various polemics in the community where in the early days of the PLTP company's establishment, many people rejected and opposed the government's plan to carry out this development, which resulted in conflicts between groups which resulted in the loss of life (Wardani et al., 2021).

To reduce conflict or rejection, many efforts are made companies such as intensive socialization, approaching the community in the form of corporate social responsibility activities towards the surrounding community which is usually called CSR as mandated in Law no. 40 Article 74 of 2007. More specifically, the implementation of CSR activities is regulated in Minister of Energy and Mineral Resources Regulation no. 41 of 2016 concerning community development and empowerment. Also refined in ESDM regulation no. 25 of 2018 concerning mineral and coal mining business, ESDM ministerial decree number 1824 of 2018 concerning guidelines for implementing community development and empowerment, ESDM regulation no. 26 of 2018 concerning the implementation of good mining rules and supervision of mineral and coal mining.

PT SMGP has a positive impact on society, including: increasing people's income, providing employment opportunities, reducing unemployment, improving the functioning

of unproductive land and so on. However, PT SMGP also has a negative impact on society. The negative impact caused by the company is the loss of life due to H<sub>2</sub>S gas leaks, reduced supply of clean water, polluted environment, and so on. For the negative impacts caused, the community hoped for accountability from the company, but initially the company ignored the community's requests. The company's response, which seemed to ignore it, led the public to give the perception that the company had lied to the public.

PT Sorik Marapi Geothermal Power's policy through the construction of this PLTP also has a big impact on changes in the economic level of the local community, this PLTP also has an impact at the level of employment opportunities for residents around the geothermal project, including the people of Puncak Sorik Marapi sub-district, many of whom previously worked as farmers and some even did not have jobs, but after the existence of PT Sorik Marapi Geothermal Power, it absorbed a number of workers thereby reducing the level of unemployment. which exists.

Interview conducted with Mr. R saying that before the existence of PT Sorik Marapi Geothermal Power, people's lives were still very dependent on the agricultural sector because most of the people worked as farmers so they were very dependent on having fertile land/land because land was a very important factor in people's lives in this field. agriculture, especially rural communities. With the entry of PT Sorik Marapi Geothermal Power, agricultural life began to change, where agricultural land or land that was previously used as a place for farming changed its function to become land for the construction of PLTP.

Fertile land/land is now starting to be affected where the exploration and exploitation process is starting to have an impact on the environment which causes pollution, resulting in a decline in environmental quality which directly threatens the continuity of life of the local community in the area and also the quality of the land is starting to decline such as drought which has an impact on life of agriculture.

Based on interviews conducted with the people of Puncak Sorik Marapi, they stated that after the PLTP was installed, the potential for air freshness around the project area had deteriorated. Apart from that, there are other negative impacts felt by the community, before the existence of PT Sorik Marapi geothermal power, people's lives went well where

people could rest by relaxing. It was good, but after the existence of PT Sorik Marapi Geothermal Power, the community began to be disturbed by the noise caused by the sound of the company's machines both during the day and at night, and community anxiety also arose when excavations/drilling were carried out by the company, such as earthquakes, which caused some people are afraid.

The negative impact of the company's existence also has an impact on social society, where even now there are still disputes between people who support it and people who reject the existence of the company. Apart from the impact of land acquisition on geothermal projects, PT Sorik Marapi Geothermal Power also plays a role in the socio-economic aspects of the local community, including helping the community by providing a fish farming business, which is useful for improving the family economy, helping village income by providing CSR funds, building infrastructure such as : Village gates, roads, footpaths, building mosques, providing football fields, and building village security posts, and so on.

Land acquisition for the PT Sorik Marapi Geothermal Power geothermal project has had an impact on the socio-economic aspects of the community, as they have lost agricultural land. However, the company provides compensation money to people who clear their land with double the profits and no party is harmed. This is based on the basic value of Islamic economics, namely responsibility. The responsibility given by the company is to provide the greatest good (*maslahah*) to the community. Therefore, the concept of responsibility gives rise to an attitude of concern for the social environment which has an impact not only on individuals, but on society in general.

Another impact is that progress has occurred in the area due to the development of geothermal companies which have an impact on the economy of the surrounding community. Islamic benefits here are often also called *maslahah murlah*, which is the benefit of avoiding harm. Indeed, the land that is currently being converted into geothermal project land is some of the productive land and there is also unproductive land. However, land acquisition provides more benefits than harm, where the people who carry out land acquisition use compensation money to change their land to another place, set up new businesses and have a big impact on the economy of the surrounding

community. Islamic prosperity is not prosperity in terms of economics, health and education. However, his religion, property, soul and honor are maintained and protected. So, the phenomenon that occurred became the focus point of the research, namely the analysis of socio-economic changes in the community after land acquisition at the PT Sorik Marapi Geothermal Power geothermal project in Mandailing Natal Regency, Puncak Sorik Marapi District.

## **RESEARCH METHOD**

This type of research is descriptive qualitative research, namely the data collected is in the form of words, images, not numbers (Danim, 2002). Qualitative research is research that intends to understand phenomena about what is experienced by research subjects, for example behavior, perceptions, motivations, actions, etc., holistically, and by means of descriptions in the form of words and language, in a special natural context and with utilize various natural methods (Moleong, 2018).

This research aims to reveal the socio-economic impact of communities after land acquisition for geothermal projects. What was originally community land used for farming and the majority's livelihood was farming has now turned into project land for geothermal energy. What initially had no noise is now starting to cause noise and anxiety for the local residents. Therefore, this research uses a phenomenological approach. Phenomenological research is a type of qualitative research that looks and hears more closely and in detail an individual's explanation and understanding of their experiences. Phenomenological research aims to interpret and explain the experiences a person experiences in life, including experiences when interacting with other people and the surrounding environment. In the context of qualitative research, the presence of a phenomenon can be interpreted as something that exists and appears in the researcher's consciousness using certain methods and explanations of how the process of something becomes clear and real. Phenomenological research prioritizes searching, studying and conveying the meaning of phenomena, events that occur and their relationship with ordinary people in certain situations. Qualitative research is included in pure qualitative research because its implementation is based on efforts to understand and describe the intrinsic characteristics

of phenomena that occur to oneself (Sugianto, 2015). This research seeks to enter the conceptual world of the research subject, how the community understands the impacts caused by land acquisition.

This research was conducted around the PT Sorik Marapi geothermal project area. Geothermal Power is in Puncak Sorik Marapi sub-district, Mandailing Natal district, North Sumatra. The object of this research is phenomena that occur in the area around the PT Sorik Marapi Geothermal Power geothermal project land in Puncak Sorik Marapi sub-district, Mandailing Natal district. The reason for choosing this object is as a data source in this research to get a clearer picture of the socio-economic impact of the community after land acquisition on the PT Sorik Marapi Geothermal Power geothermal project in the Puncak Sorik Marapi sub-district and its surroundings. The data source for this research is an oral data source. Verbal data was obtained from the people of Puncak Sorik Marapi sub-district and its surroundings.

Data sources can be defined as places to obtain data using certain methods, whether from humans (informants), artifacts (history) or documents (Putra, 2013). Data in qualitative research is not in the form of numbers, but narrative descriptions, even if there are numbers, the numbers are in relation to a description. In processing qualitative data there is no addition of data, so it leads to generalization (Sukmadinata, 2009). In terms of activities to obtain research data, if you use interviews to collect data, the data source is called an informant, namely a person who responds or answers questions either in writing or orally. When using observation, the data source is an object, movement or process. When using documentation, documents and notes are the data sources (Moleong, 2018). In this research, the primary data source was obtained through interviews with predetermined informants, namely the Puncak Sorik Marapi community. Meanwhile, the secondary data source in this research is in the form of documents related to the socio-economics of the Puncak Sorik Marapi sub-district community.

## RESULTS AND DISCUSSION

### **The Role of Sorik Marapi Geothermal Power in Improving the Community's Economy**

PT Sorik Marapi Geothermal Power plays an important role in improving the economy of the Mandailing Natal community, especially the Puncak Sorik Marapi community. It has been proven that after the existence of PT Sorik Marapi Geothermal, the community's economy began to improve and improve. This is as stated by Mr R:

*"PT Sorik Marapi Geothermal Power has had an influence on improving the economy of the people of Mandailing Natal, especially Puncak Sorik Marapi District, including:*

- a. Many people who previously made their living as farmers have now switched to becoming company employees, which of course improves the local economy.*
- b. The company also certainly has an influence on reducing unemployment in the Puncak Sorik Marapi sub-district.*
- c. People use land acquisition compensation money to buy new land elsewhere, repair houses, buy public and private transportation, set up businesses and so on.*
- d. "PT SMGP also provides scholarships to students and also students in the Puncak Sorik Marapi area from junior high school to university, which has been carried out since 2017 in accordance with the company's provisions or criteria."*

A similar statement was expressed by Mr. AN:

*"The company also helps the community by providing fish farming businesses, which are used to improve the family's economy. The company also builds infrastructure such as: Village gates, roads, footpaths, building mosques, providing football fields, and building village security posts, and others."*

This is further reinforced by the statement from Mr. AM that:

*"The company helps village income by providing CSR funds to each village, which is used for the welfare of the surrounding community. "The CSR funds are used for the construction of madrasas, given to people in need and also given to orphans, and are also used to improve village infrastructure."*

Strengthened by Mr M's statement that:

*"PT Sorik Marapi Geothermal Power plays a very important role in improving the economy of the people of Puncak Sorik Marapi sub-district. It has been proven that after the company was established, many people set up businesses in the trade and services sector, such as: laundry, restaurants, boarding houses/house rentals, transportation rentals and others."*

This is further strengthened by public statements which state that:

*"PT Sorik Marapi plays a very important role in increasing income. Before working at PT Sorik Marapi Geothermal Power, I worked as a farm laborer and only earned 1,000,000 - 2,000,000/month. Now after working at PT Sorik Marapi Geothermal Power, I earn an income of 3,500,000/month."*

From the statement above, it can be concluded that PT Sorik Marapi Geothermal Power plays an important role in improving the economy of the people of Mandailing Natal, especially the Puncak Sorik Marapi sub-district.

### **Land Acquisition Carried Out by PT Sorik Marapi Geothermal from an Islamic Economic View**

Property rights in Islam are aimed at realizing *maslahah* for the general public, apart from functioning for the benefit of the owner. It is necessary to calculate *mashlahah* between *mashlahah* for the owner of the right and the losses that befell other people in particular and the general public. If the loss that befalls another person is greater than *mashlahah* for the owner, then the property rights are limited in order to prevent losses that befell the other person.

Interviews conducted with Mr. R and other informants stated that:

*"Land acquisition carried out by PT SMGP was carried out with an agreement between the owner and the company where the compensation money given to the land owner did not harm the land owner and created benefits for the land owner. The community uses the compensation money for land acquisition for business, house repairs, children's education, and so on."*

A similar statement was also expressed by Mr J that:

*"The land acquisition carried out by PT Sorik Marapi Geothermal Power is in accordance with Islamic religious law and also in accordance with the law. Land acquisition does not harm both parties and creates benefits for both parties."*

From the statement above, it can be concluded that the land acquisition carried out by PT Sorik Marapi Geothermal Power is in accordance with Islamic law and does not harm either party and also the land acquisition has brought many benefits to the surrounding community.

### **Community Socio-Economic Changes after Land Acquisition in the PT Sorik Marapi Geothermal Power Geothermal Project**

After land acquisition and the implementation of the PT Sorik Marapi Geothermal Power geothermal project, this has led to socio-economic changes in the people of Mandailing Natal, especially the people of Puncak Sorik Marapi District. Changes that occur in the social economy of society include: livelihoods, income levels, wealth levels and so on. The existence of PT SMGP has had an impact on the socio-economic impact of the community, both positive and negative impacts.

From the interview conducted with Mr M that:

*"The existence of PT Sorik Marapi Geothermal Power provides changes to the socio-economic conditions of the Puncak Sorik Marapi community, the existence of this company improves the community's economy, namely:*

- a. Shifting livelihoods from farmers to becoming company employees*
- b. Agricultural land that was previously used by the community for farming is now being used as land for the PLTP geothermal project.*
- c. Absorbing labor and increasing employment opportunities for the community. PT Sorik Marapi Geothermal Power every year opens job vacancies for the community, both as employees, laborers and others, in an unspecified number.*
- d. The existence of the company also provides employment opportunities for the surrounding community by providing laundry services for the company's workers/employees.*

e. *Increase people's income by renting out their homes to company employees.*

Apart from that, the company has a negative impact

a. *Water supply is reduced*

b. *The noise from the project machines is starting to disturb the community*

This statement is also supported by the statements of Mr. AM and Mr. A:

*"PT Sorik Marapi Geothermal Power causes socio-economic changes in society, both negative and positive. The positive impacts include:*

a. *The social economy of the community increases*

b. *Community awareness of social relations between communities is starting to increase*

c. *Providing progress for the surrounding environment, seen from how social the community is, the transportation used and also the luxury goods owned by the community.*

*The negative impacts caused are:*

a. *Agricultural land is reduced*

b. *Abused roads (air pollution) around the project land*

c. *Water supply is reduced*

## **Discussion**

### **The Role of PT Sorik Marapi Geothermal in Improving the Economy of the Puncak Sorik Marapi Community**

This research is closely related to economic issues which after the establishment of the geothermal industry can certainly affect the economy of the surrounding community. An example that can be taken is that people who initially made their living as farmers have now changed professions as entrepreneurs or company employees. Changing professions certainly has an impact on the economy. Establishing a business, no matter how small, will always have an economic impact.

However, in order to get a clear picture, it is important for feasibility study practitioners to make an in-depth study of the economic impact. The economic impacts include:

- a. The large number of workers absorbed by the company is proven by the fact that PT Sorik Marapi Geothermal Power every year opens up job vacancies for the community, both as employees, laborers and others, in an unspecified number.
- b. PT Sorik Marapi Geothermal Power provides fish farming business to the community, which is used to improve the family economy. This assistance in the form of fish farming has been running since 2022 and has been given to 6 groups consisting of 2-4 people/group. The company/CSR provides assistance in the form of fish seeds and fish food to the community to be used as a business to improve the economy of the local community.
- c. Helping village income, by providing CSR funds to each village, which is useful for the welfare of the surrounding community and is still valid today.
- d. The community also has the opportunity to build trade and service businesses, such as restaurant businesses, laundry services, boarding houses/house rentals, transportation rental services and others around the company location.
- e. Ownership of living facilities. The existence of industry has an influence on the ownership of living facilities, both ownership of electronic devices and ownership of types of vehicles.

### **Land Acquisition Carried Out by PT Sorik Marapai Geothermal Power in the View of Islamic Economics**

According to Muhammad Abu Zahrah, all rights in Islam are limited by the principle of rejecting the emergence of harm and attracting the emergence of benefits for the general public. Property rights in Islam are aimed at realizing *maslahah* for the general public, in addition to serving to realize benefits for the owner. It is necessary to calculate *mashlahah* between *mashlahah* for the owner of the right and the losses that befall other people in particular and the general public. If the loss that befalls another person is greater than *mashlahah* for the owner, then the property rights are limited in order to prevent losses that befall the other person (Zahrah, nd).

With regard to land acquisition or revocation of land rights, according to Muhammad Abu Zahrah there are three conditions that allow forcible takeover of an individual's property rights, namely:

- a. Revocation of individual ownership in order to realize benefits for the people at large, such as revocation of ownership rights to land for the construction or widening of highways, expansion of mosques that can no longer accommodate worshipers. Land belonging to individuals in the surrounding area may be purchased by force, but at a fair and reasonable price so as not to cause major losses to the land owners.
- b. Revocation of individual property rights in order to pay debts when the owner of these property rights has sufficient means but is reluctant to pay the debt. The judge functions as a mediator with the debtors who report to him to pay the individual rights owner's debt.
- c. Buying other people's property by means of *syuf'ah*.

The land acquisition carried out by PT Sorik Marapi Geothermal Power was used for the construction of a PLTP which is beneficial for many people. Land acquisition is carried out at a reasonable price and does not cause losses to the land owner. From the compensation money for land acquisition, people use the compensation money to improve their economy, such as: repairing houses, paying debts, buying houses/land elsewhere, and others.

Land acquisition for the PT Sorik Marapi Geothermal geothermal project has had an impact on the socio-economic aspects of the community, as they have lost agricultural land. However, the company provides compensation money to people who carry out other exemptions with double the profits and no party is harmed. This is based on the basic value of Islamic economics, namely responsibility. The responsibility given by the company is to provide the greatest good (*maslahah*) to the community. Therefore, the concept of responsibility gives rise to an attitude of concern for the social environment which has an impact not only on individuals, but on society in general. Another impact is that progress in the area has occurred due to the development of geothermal companies which have an impact on the economy of the surrounding community. Islamic benefits here are often also called *maslahat mursalah*, which is the benefit of avoiding harm. Indeed, the land that is now being converted for geothermal project land is some productive land and there is also unproductive land. However, land acquisition provides more benefits than harm, where people who carry out land acquisition use compensation money to change their land to

another place, establish new businesses and have a big influence on improving the economy of the surrounding community and making the area a more developed area.

### **Community Socio-Economic Changes after Land Acquisition at the PT Sorik Marapi Geothermal Power Geothermal Project**

After land acquisition causes several impacts, both positive and negative impacts, this rarely occurs if there is no impact in the surrounding area. The impacts that occur after land acquisition have social and economic impacts. According to Soekanto, factors that influence socio-economic change include: work/livelihood, education, income, ownership, housing conditions and health. Socio-economic changes in the Puncak Sorik Marapi community affect:

a) Employment/Livelihood

The people's livelihood, which was previously dominant as farmers, has now shifted to being workers or employees of PT Sorik Marapi Geothermal Power.

b) Education

In terms of education, after the existence of PT Sorik Marapi Geothermal Power there has been an increase in education. Many residents of Puncak Sorik Marapi have continued their education to college level, and every year more and more high school students of the same level continue their education to college level.

c) Income

People's income changed after PT Sorik Marapi Geothermal Power started operating. Previously, people who worked as farm bearers only earned 1,000,000 - 2,000,000 per month, now people who changed professions to become laborers or company employees earned 3,500,000 - 5,000,000 or more. more per month.

d) Ownership

After the implementation of land acquisition on the PT Sorik Marapi Geothermal Power geothermal project, the Puncak Sorik Marapi community in particular saw a change in ownership of luxury goods such as: luxury cars, motorbike upgrades, luxurious home facilities and so on.

e) House Condition

The condition of houses has changed, where previously Puncak Sorik Marapi, which was known for its characteristic houses on stilts and "thatch" roofs, is now no longer common, and many residents have renovated their houses with a modern urban house style.

f) Health

Health in the project area has decreased, especially for people who have been exposed to poisonous gas from the project, people admit that their condition and body resistance are not as strong as before.

Every development certainly has an impact on the surrounding community, both positive and negative impacts, here are the problems that always arise in communities around geothermal producers:

a. Environmental Impact

According to Brown and Brown, the impact of PLTP construction is very dependent on the type of development and the characteristics of the geothermal fluid itself. In PLTP activities with a flash steam system, there are four main impacts on the environment, namely in the form of abiotic resource depletion, climate change, acidification and eutrophication. However, this impact is still far below the threshold set by the government.

b. Social Impact

According to De Jesus, the impact caused by the construction of PLTP on local communities can be divided into three groups, namely (Jesus, 1995):

- 1) The first group, physical and chemical changes, causes residential relocation, changes in land form, health problems and an increase in traffic in the environment. Some of the social problems that arise can be reduced productivity, skills that do not match the needs in the new place, destruction of the existing social order, and changes in existing values.
- 2) The second group, economic changes, which can result in the influx of capital/funds into the local area, and increase per capita income. The social changes that emerge from this can increase labor absorption, reduce the resources used by local

communities to carry out development in their area, and change the lifestyle of rural communities to communities with an industrial economy.

3) Institutional changes, the emergence of changes in the social order, changes in population, adaptation to local culture, and changes in other fields of humanity.

c. Provides Economic Benefits

Development with participation and partnership with the community is the latest trend in sustainable development. Practitioners in development now realize that the need for participation or participation from local communities is crucial in energy policy in rural areas. Partnerships can also be used as an effective tool to provide economic benefits to local communities. This is to strive for sustainable capabilities so that local communities in geothermal producing areas can support themselves over time. This is as stated in the Tool for Managing Partnerships in Development (Pantjadarma & Ed., 2001).

The results obtained from the explanation above that there are post-land acquisition impacts on the PT Sorik Marapi Geothermal Power geothermal project are as follows:

a. Negative impact

The negative impacts that occurred after land acquisition on the PT Sorik Marapi Geothermal Power geothermal project were as follows:

- 1) Agricultural land is becoming less and less, this can affect food yields which are decreasing in geothermal project areas.
- 2) The supply of clean water is decreasing
- 3) Noise around the project area
- 4) Air pollution
- 5) Residents' house roofs are easily damaged
- 6) There was a gas leak due to company negligence, which caused casualties.

b. Positive impact

The positive impacts after land acquisition on the PT Sorik Marapi Geothermal Power geothermal project are as follows:

- 1) There is progress in this area, because land acquisition and development support the economy of the community around the geothermal project area.

- 2) Increase regional income
- 3) Reducing poverty
- 4) Widening of roads around the geothermal project area
- 5) Create jobs

## CONCLUSION

The results obtained from the discussion above can be drawn as follows:

1. The role of PT Sorik Marapi Geothermal is also in improving the local community's economy, including: helping the community by providing a fish farming business, which is useful for improving the family's economy, helping village income, providing scholarships to local sons/daughters, building infrastructure such as: village gates, roads, footpaths, building a mosque, providing a football field, and building a village security post.
2. The land acquisition carried out by PT Sorik Marapi Geothermal Power was used for the construction of a PLTP which is beneficial for many people. Land acquisition is carried out at a reasonable price and does not cause losses to the land owner. In accordance with Muhammad Abu Zahrah's opinion, namely revocation of individual ownership in order to realize benefits for the people at large, such as revocation of ownership rights to land for the construction or widening of highways, expansion of mosques that can no longer accommodate worshippers. Land belonging to individuals in the surrounding area may be purchased by force, but at a fair and reasonable price so as not to cause major losses to the land owners.
3. There are two socio-economic changes in the community after land acquisition for the PT Sorik Marapi Geothermal Power geothermal project, namely: First, the negative impact that occurred after land acquisition for the PT Sorik Marapi Geothermal Power geothermal project is as follows: agricultural land is becoming increasingly reduced. , this can affect food yields which are decreasing in the geothermal project area, the supply of clean water is decreasing, noise around the project area, air pollution, roofs of people's houses which are easily damaged which usually last 10 years now in 3 years even the roofs of the houses have been damaged. It started to break down, there was a gas leak due to the company's negligence, which caused casualties. Second, the

positive impact, the positive impact after land acquisition on the PT Sorik Marapi Geothermal Power geothermal project is as follows: progress occurs in the area because land acquisition and development supports the economy of the community around the geothermal project area, increases regional income, reduces poverty after liberation land, many people, especially in the Puncak Sorik Marapi sub-district, suddenly became rich due to compensation money which was double the usual land price, the expansion of roads around the geothermal project area and creating jobs for the surrounding community.

### **Suggestion**

1. For companies, this research can be a reference for paying more attention to the surrounding community by minimizing the company's negative impact on the community and placing greater emphasis on the welfare of the local community.
2. For the government, this research can be a reference and consideration for local governments regarding further land acquisition.
3. The authors realized that there were many errors in his writing, this was due to the author's limited abilities. Therefore, the author hopes that the next author will further perfect this scientific work.

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