

## PERCEPTION OF PRABUMULIH' VILLAGE INSTALLATION OF NATURAL GAS TO HOUSEHOLD

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### ABSTRACT

*This study aims to determine the public perception of the mounting Prabumulih' Village natural gas for households in the District of West Prabumulih. This type of research method uses descriptive qualitative, and the subjects were 10 participants as informants. Data collection that used through observation, interviews, and documentation. Data were analyzed using an interactive model that includes data reduction, presentation of data display, and verification. The results of this study indicate that the perception of consumers who have used natural gas has a positive value to the purchasing decision. The research showed that 90% of public perception disclose the use of natural gas can save costs for fuel and then people do not have to suffer anymore looking for fuel if it runs out while cooking and get a clean fuel, environmentally friendly, so it's good for health and safe. For further research, researchers suggest to look deeper about the level of efficiency and safety of natural gas usage in a wider area.*

**Keywords:** Fuel, Natural Gas, Public Perceptions

### A. INTRODUCTION

Energy is the source of life, energy, natural resources Oil and gas plays an important role in the global economy, and national levels. Energy derived from oil and natural gas is the energy that is most widely used by man on earth this is caused due to oil and natural gas in addition to liquid and gas are also easily drained and packed to be sent to various locations (Anthony and Prawoto, 2017).

Natural gas is a fossil fuel formed gas. Natural gas is often also referred to as a natural gas or marsh gas. Natural gas has the highest contribution in the national energy mix, resulting in replacing

petroleum fuels with natural gas to decrease CO<sub>2</sub> emissions (Hafeznia, 2017).

Natural gas is a high thermal and low-emission energy. Expanding natural gas consumption cannot only meet the growing demand for energy consumption but also optimize energy consumption structure (Xu et.al, 2019). Natural gas can be found in oil fields, natural gas, and coal mines (Lestari, and Aliasuddin, 2016). The main component in natural gas adalah methane (CH<sub>4</sub>). Methane is a chain hydrocarbon molecules shortest and lightest. Methane is a greenhouse gas to create global warming when released into the atmosphere

(ESDM). Based on Li, et.al (2019) said that the measures to develop natural gas and reform gas market have been put forward, including deepening market-oriented reform of natural gas system, perfecting the construction and management of pipeline transportation and encouraging the consumption of natural gas. The study finds that the long-run relationship between natural gas consumption and economic growth is positive and statistically significant (Hassan, et al , 2018) (Zhi-Guo, et al, 2018) ( Apergis, et al, 2010).

Gas from natural gas can be a solution because Indonesia has large natural gas reserves. As the population grows, energy needs especially for households will continue to increase (Satriaperdana and Saputra, 2018). Natural gas also emits a little ash particles into the air when burned. As with all fossil fuels, natural gas combustion produces carbon dioxide, a greenhouse gas (Lee, 2013). Many scientists believe that increasing levels of carbon dioxide in atmosphere, caused largely by the use of fossil fuels, can have long term effects on the global climate (Valentino, 2012: 8).

According Walgito (2016) "Perception is a process which is preceded by the sensing process, ie a process of acceptance of the stimulus by the individual by means of sensory or sensory well". In the perspective of science communication,

perception can be regarded as the core of communication, while interpretation (interpretation) are the core of perception that is synonymous with the provision of back (decoding) in the communication process.

According to (Dey, 2013: 1303-1316) "is a human community that is an integral fixed-related group and have the same interests. Such as: schools, families, societies, countries all society". Attention, perception is required to hold their attention that concentration or concentrations of all individual activities directed at something or set of objects (Walgito, 2016).

"Perception is an integrated activity within the individual then what lies within the individual will participate actively in the perception" (Davidoff in Walgito, 2016). With perceptions of individuals will be aware of his surroundings and also the state itself. Based on this, the perception can be expressed as a feeling, thinking skills, experiences are not the same individual, in perceiving something stimulus, perception results will differ between one individual with another individual.

Prabumulih is one area in South Sumatra which have natural resources such as petroleum and natural gas. Increased utilization of natural gas through the development of city gas is one way to

reduce dependence on oil while reducing the subsidy for kerosene, purpose built network of natural gas for households that energy supply clean, cheap, safe and friendly environment that can be enjoyed by people of Prabumulih.

As for the success factors of the development of city gas is knowing the public response after the use of natural gas as well as the public interest towards the use of natural gas, for people who do not understand on the use of natural gas assumed that natural gas is dangerous and can cause a fire at any time and risk to health. According to the results of field observations on the 1st of February 2019, for urban areas Prabumulih already installed natural gas for households, the Prabumulih'village while other areas are still in the process of installation that takes a long time about 5-10 months.

Prabumulih village has 17 RT (Rukun Tetangga) and 5 RW (Rukun Warga) is located in the Prabumulih' Village, west Prabumulih. In the village Prabumulih not all houses have been using natural gas facilities to meet the needs of the household as a substitute fuel for cooking there are still people who do not use natural gas.

There are two types of installation of natural gas for households, some use token and using ampere with a cost of Rp 4,500 cubic count per cubic are directly paid to

the post office while for prepaid society must reload it first and can use gas nature and if at any time it runs out the fire pulse will not turn on, the distance to buy prepaid far enough and is only available in natural gas marketing office then there are people who do not understand to enter the number of token for prepaid lack of socialization of the government.

With the installation of natural gas for households can save more people for less expense. But in the fact, there are still people who still use firewood and LPG which is available around their living area, because when cooking using natural gas released a very small fire if used simultaneously by many houses.

## **B. MATERIALS AND METHODS**

This study uses qualitative descriptive method with the aim to describe the public perception using natural setting, with the intention of interpreting phenomena. The research subject is infroman derived from Prabumulih' villagers.

### **1. Data source**

Source of the data obtained in this study are primary data and secondary data. The primary data obtained directly from informantsRT and RW Village Prabumulih, PGN employees and villagers Prabumulih. While

secondary datamay include magazines, publications of various organizations, appendices from official agencies such bodies in the Village Prabumulih, the results of the study, the results of the survey, historical studies and so forth.

## **2. Data collection technique**

There are several data collection techniques are observation, interviews, and documentation. Observation is used to determine participation involved with daily activities is observed or used as a source of research data. Then, the researcher has prepared interview questions related to the public perception of the natural gas installation. Furthermore, the documentation used to obtain data on the description of the study area is the village Prabumulih.

## **3. Data Analysis Technique**

Based Sugiyono (2012), the researchers conducted an analysis of data with an interactive model include Data Reduction, Data Display, and Verification. Data reduction is carried out by the authors by focusing on public attitudes towards the village Prabumulih installation of natural gas for households.

Further, the display data is done to facilitate understand what is happening, to plan further work based on what has been understood. Lastly, verification in the analysis of qualitative data according to the Sugiyono Miles and Huberman (2012: 343) is the conclusion and verification.

## **C. RESULTS AND DISCUSSION**

After conducting research in the village Prabumulih obtained the following results:

### **a. Public Perceptions About Natural Gas Network Installation For Household**

From interviews conducted by the researchers to the people in the Prabumulih' village, people have the response that is not too much different. With the installation of natural gas for households and communities find it helpful to use natural gas fuel people get cheap, environmentally friendly and safer than other fuels. According to informants initials RN on Wednesday, 23 June 2019 says that:

*“It has been almost 100% Prabumulih villagers have installed natural gas though there are one or two people who are not yet installed telewat natural gas”.*

Together with a statement initials AF informant said:

*“Prabumulih not been completely installed natural gas, inshaallah adding more next year. But if the village is almost 100% Prabumulih fitted all”.*

From the above informant opinion to the Village area Prabumulih've all installed natural gas for households and village communities Prabumulih can enjoy and take advantage of natural gas for cooking. According Kartika (2014: 208) consumption of natural gas is as an alternative energy is something that is very reasonable, considering the natural gas reserves in Indonesia is still very large. Through this program, especially the village of Prabumulih expected to get fuel that is cleaner, safer, and cheaper. As well as the opinion of the informants said:

*“I am very pleased with the installation of natural gas because we as a society greatly helped by the government's program”.* (Lis on Friday, 24 June 2019)

*“With the installation of natural gas I felt helped and no longer cares'.”* (Santi on Friday, 24 June 2019)

*“We are pleased to be installed natural gas, felt helped.”* (Kartini on Saturday, 1 July 2019)

From the opinion of the informant above it is obvious with

the installation of natural gas for households villagers of Prabumulih very happy and feel helped because they no longer cares to look for gas if at any time running out, because before using natural gas people usually use liquefied petroleum gas, kerosene or firewood for cooking which is currently hard for get.

#### **b. Community Response Against Natural Gas Installation with 2 types, the type of amperage and type of token (prepaid)**

Installation of natural gas in Prabumulih done with two types of ampere type and the type of token (prepaid). Figure 1 is a picture of the type of installation and token ampere / prepaid.



**Figure 1.** Installation Type Ampere And Token

From the above picture can be seen the different types of natural gas installation. As well as the informant opinion berinsial Si,Ia and Yi said:

*“With the installation of natural gas with 2 types of people can choose according to their respective needs”*

From the above informant opinion with their natural gas installation with 2 types made to facilitate the public to choose according to their respective needs, because every individual is different usage requirements. Then, similarly to the opinion of the initials Ki informant said:

*"We agree with the installation of two types, it's profitable for us."*

As the opinion initials Ls informant said that:

*"I agree about the installation of natural gas with 2 amperes and pulse type, if the contents of any pulse if you want to use it, so may prefer to suite the needs of their household."*

From the above informant opinion using public ampere must pay load and added to the cost of usage each day.

### **c. Differences After Using Natural Gas Cooking For Customers**

According to the informant opinions after use natural gas for cooking said:

*"After using natural gas for cooking it can be easier not fear running out of what ran in the night." (Lis and Ida)*

*"It's easy and not difficult anymore to replace the gas that is exhausted." (Kartini)*

From the opinion of informants above that there is a difference after using natural gas, namely, people can cook more easily because they no longer fear running out of gas while cooking at midnight, and further facilitate the community because the community is not hard anymore to change the gas cylinder in case time runs out , As well as the opinions of the informants said:

*"That certainly easier for us, do not bother looking for LPG gas if it runs out." (Si, Friday June 24, 2019)*

*"If the use of natural gas is not afraid of running out, no longer need to search for gas to stall for LPG gas is hard to find now in Prabumulih, often step." (Yi, Friday 30 June 2019)*

From the above opinion can be concluded there is a difference after using natural gas, people feel cooking using natural gas more easily, do not worry about running out of gas while cooking for natural gas flow 24 hours so that even when cooking at night they do not fear running out.



**d. Costs incurred when using natural gas**

In the opinion of the informant about the cost of natural gas use to say:

*“If I find the cheaper and more efficient gas as well as usually I used 1 month LPG gas canister it 1-3 usually to Rp 50,000, but when using natural gas only Rp 35,000 per month.” (Si on Friday, 24 June 2019)*

*“Yes more efficient because it is usually for 1 month that I used 2 gas cylinders containing 3kg Rp. 44,000 but if natural gas pakek only Rp. 30,000 difference is more efficient.” (Ls on Friday, 24 June 2019)*

From the statement Santi and Lis, it is clear there are differences in the current cost of natural gas use, by using natural gas villagers of Prabumulih get cheap fuel and saving as before using natural gas people use LPG gas price is quite expensive, while using natural gas public can save the cost of gas usage.

**e. Benefits Has Obtained After Using Natural Gas**

A network of natural gas for households provide benefits for people who use them, especially people. Then the natural gas has many advantages over other fuels

such as environmentally friendly, cook more quickly and safely. Figure 2 is an example of a state picture cooking using natural gas.



**Figure 2.** Fire Issued By Natural Gas Not Causing Smoke

From the above picture can be seen natural gas is a much cleaner fuel because it does not emit a lot of smoke and leaves no soot. As well as the initials informant opinion Si on Friday, 24 June 2019 said:

*“It must be because cooking using natural gas and not taking out smoke and also the kitchen is not black, do not look dirty so it is better for the health. Certainly.”*

Just as the informant opinion initials He, Yi and Ki said:

*“Cooking using natural gas does not emit smoke so good for health and environmentally friendly.”*

He had the initials of the informant opinion, Yi and Ki above that the utilization of natural gas for

households is also environmentally friendly.

**f. Problems That Occurred While Using Natural Gas To Households**

According to informants initials Hs, Monday 03 July 2019 said:

*“There's just the beginning of it the community complained of natural gas supply from Pertamina to petro prabu because natural gas was stopped short due to perlihan natural gas lines, but those issues are not lasting only a few minutes of natural gas is active again.”*

From the above named Husril informant opinion as chairman of RT 04 Prabumulih village at the beginning of the use of natural gas for households there are problems, people complain because natural gas is not alive it is because perlihan gas lines that disrupt household activities. According to the informants said:

*“Until now there has been no serious problems but sometimes like no one lives next door, is not a problem because they can cook stove menggunakan only.” (Lis on Friday, 24 June 2019)*

*“For until now there has been no serious problems most small fire ...” (Yi on Friday, 30 June 2019)*

From the above opinion informants problems that occur

when the use of natural gas for households are issued frequently fire small, but this problem is not too serious because not interfere with daily activities for the community.

According to previous studies conducted by Anggari in 2013 with the title “Analisis Persepsi Konsumen Terhadap Pengalihan Pengaruh Harga Safety atau Keamanan Dan Layanan Gas Bumi Di Wilayah Beji Depok”.

The results of this study indicate that the perception of consumers who have used natural gas has a positive value to the purchasing decision. For the price factor into the most influential factor or dominant in the purchase decision, for the factor of safety or security of natural gas, this factor is not too dominant, but there is little linkage of consumers to use natural gas because of its safety. Similarly, a study conducted by researchers now is to know how to “Public Perception Prabumulih village Against Natural Gas Installation For Home Appliances”.

From this research it is known that at the beginning of the use of natural gas there are problems when using natural gas, as the gas does



not want to live. This is due to the transition path and if used simultaneously by many house fires are issued very small, but this problem is not too serious because not interfere with daily activities Prabumulih Village community.

In this research, it is known there are some differences after the use of natural gas for households after cooking using natural gas faster, more efficient, more practical and more time saving than cooking before using natural gas. This is caused by the natural gas flowing directly Prabumulih Village community. After the use of natural gas for households villagers of Prabumulih felt helped and after the use of natural gas cooking so much easier for the villagers of Prabumulih no longer need to find fuel for cooking. Then from the data get from informants that cooking using natural gas is safer compared LPG gas. Due to the natural gas installation system created by standardization of DIKJEN Oil and Gas (Valentino, 2012).

Based on the analysis of the data shows that people savings on fuel after use natural gas for

cooking. It can be seen from Table 1 below.

**Table 1.** Comparison of Prices

Type of Gas	Unit	Unit Price
Natural gas	m <sup>3</sup>	Rp. 4.500,00
LPG	kg	Rp. 7.300,00

The above table price comparison menunjukkan use natural gas and liquefied petroleum gas, and exceptional views of the real benefits of a price comparison of natural gas use. If using LPG gas a month could spend 1-3 tubes per month at a cost of Rp 22.000 pertabung 3kg, while the use of natural gas for households costs less because the cost for natural gas Rp.4.500 per cubic.

With the natural gas for households is particularly Prabumulih Village community can save costs on fuel. The used of energy is found in many households. The application of energy-efficient homes can be used as a solution to overcome these problems (Wiranata, 2017).

In general, before the use of natural gas for households msayarakat have to buy kerosene, LPG or firewood, but since the installation of natural gas for households people no longer need

to buy these fuels if discharged because of the natural gas flowing between 24 hours and can be directly used . With the installation of natural gas to households in the community Prabumulih be helped because of the presence of natural gas installation is not difficult people are looking for fuel for cooking.

#### D. CONCLUSION

Based on the description above can be concluded that in every public perceptions, many have revealed differences in pemikirannya against the installation of natural gas for households. In the perception here people see many things that when using natural gas for households, using natural gas that people can save money on fuel and then people do not have to suffer anymore looking for fuel if it runs out while cooking and get a clean fuel, environmentally friendly so it is good for health and safe.

The Prabumulih' community felt helped and received well and feel with the installation of natural gas for households with two types is because people can choose according to their household needs daily to the costs incurred each month. With the installation of natural gas for

households villagers of Prabumulih get cheap fuel, environmentally friendly and safe to use.

An then, for further research, researchers suggest to look deeper about the level of efficiency and safety of natural gas usage in a wider area.

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