Paper ID: IA-ICSSHUSA-20037-3151

INTERNATIONAL ACADEMY OF SCIENCE, TECHNOLOGY, ENGINEERING AND MANAGEMENT

International Conference on

Social Science and Humanities

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This is to certify that Tanuphiya Srikaew has presented a paper entitled "The use of biogas as a renewable energy case study: Swine small" at the International Conference on Social Science and Humanities (ICSSH) held in San Francisco, USA on 20th-21st March 2017.

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ISBN: 978-93-86291-88-2

PROCEEDINGS OF

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Date: 20th-21st March, 2017 | Venue: San Francisco, USA

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Proceedings of

49TH IASTEM INTERNATIONAL CONFERENCE

SAN FRANCISCO, USA

ISBN- 978-93-86291-88-2

Organized by

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Date of Event:
20th-21st March, 2017

Event Co-Sponsored by

Corporate Address
IRAJ Research Forum
Institute of Research and Journals
Plot No- 161, Dharma Vihar, Khandagiri, Bhubaneswar, Odisha, India
Mail: info@iraj.in, **www.iraj.in**

Publisher: **IRAJ**

ISBN- 978-93-86291-88-2
Edtn: 22

Type set & printed by:

R. K Printers
Bhubaneswar, India

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EDITORIAL

It is my proud privilege to welcome you all to the IASTEM International Conference at San Francisco, USA in association with The IIER. I am happy to see the papers from all part of the world and some of the best paper published in this proceedings. This proceeding brings out the various Research papers from diverse areas of Science, Engineering, Technology and Management. This platform is intended to provide a platform for researchers, educators and professionals to present their discoveries and innovative practice and to explore future trends and applications in the field Science and Engineering. However, this conference will also provide a forum for dissemination of knowledge on both theoretical and applied research on the above said area with an ultimate aim to bridge the gap between these coherent disciplines of knowledge. Thus the forum accelerates the trend of development of technology for next generation. Our goal is to make the Conference proceedings useful and interesting to audiences involved in research in these areas, as well as to those involved in design, implementation and operation, to achieve the goal.

I once again give thanks to the Institute of Research and Journals, IASTEM, The IIER for organizing this event in San Francisco, USA. I am sure the contributions by the authors shall add value to the research community. I also thank all the International Advisory members and Reviewers for making this event a Successful one.

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THE USE OF BIOGAS AS A RENEWABLE ENERGY CASE STUDY: SWINE SMALL.

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Abstract— This article is intended to *1)* the benefits of using biogas as a renewable energy and *2)* to study the problem and. Barriers of biogas as an alternative energy source in small farms. Using Qualitative Research (Qualitative Research) in-depth interviews (In depth interview) by a study from research related to public policy aspects of biogas, both at home and abroad. Other research About biogas Websites and information about the public policy aspects of renewable energy in Thailand. The check-depth interviews among households with small farms.

The results showed that the imports in biogas as a renewable energy base.

1. Government support for farm produce renewable fuel and the cost can be developed into a major power in the future.

2. The economy of the biogas potential, because high heat can produce renewable energy seriously worthwhile economically, thus enabling farmers to build to the future income from the investment to sell electric power and do not require. investments with the sewage system.

3. In the social production of biogas as a way to reduce water waste. Bring something useful waste Reduce global warming, reduce the impact of pollution on the community to solve environmental problems. reduce sewage discharge into the river reduced public stench of the sludge after treatment. Provides nutrients for the plants as well.

4. The production technology is very important because the use of technology for wastewater treatment. And gas production has increased the efficiency of wastewater treatment and biogas utilization. And must have a low cost. Require little maintenance

Index Terms— biogas, renewable energy, small-scale pig farms.

I. INTRODUCTION

One challengeable mission of organizations nowadays is how to improve and develop them continuously so that the organizations can efficiently continue [1]. And now the current global crisis, energy issues, the escalating violence more likely. (Department of Alternative Energy Development And energy conservation in 2557: 3), and before the year 2030 the world will run out of energy by the year 2050 the world is entering the era of oil scarcity. At the meeting, the price will be much higher, causing a negative impact on the economic life of the population worldwide. So many countries around the world turned their attention to renewable energy from "biogas", which is a yield economically the best. (Office of Policy and Planning, Ministry of Energy, 2557: online). For this reason, the parties have tried to accelerate the use of renewable energy such as biogas, the biogas can also help reduce the amount of carbon dioxide that contributes to global warming and has no impact on the core areas of agriculture, which is the main factor. food production and the creation of food security (Food security) Department of energy (2558: online). The country is experiencing problems with water pollution from agricultural activities. The pig, which has a very high amount of waste. When the drain into natural bodies of water without a treatment, thus causing serious pollution problems. Especially if the water is small. You have to fix the problem. The cooperation of the government and private sectors. A well-developed system of farm management. Using appropriate technology for wastewater treatment. The management of waste or sewage drains or dumped into the environment. Some of it is no management of any (honorable Krai old Ryan, and the 2548: 43) The government has no policy. The law is good enough to force operators which control or reduce the amount of waste entering the water to drain. Take into account the impact that will occur as the economy and society is appropriate and effective. The farm has also helped a great deal more. This will be good for the pigs to be sustainable development if not managed properly can cause odor problems and disease. For modified to cause the greatest benefits is the implementation of all waste to produce biogas renewable energy sector. (Department of Alternative Energy Development and Energy Conservation 2556: 80).

Biogas is a renewable energy farm. Renewable energy And thermal energy as well. Therefore, the use of

biogas in pig farms in Thailand that focuses on bringing production to a steel arm power due to the amount of biogas that can save significant amounts of electricity since. 20000-120000 baht and there is also no need to buy gas. The Saver Income 60,000 baht per month.

From the foregoing, It was concluded that the issue of energy. And environmental pollution problems caused by livestock is a problem that should find ways to fix it. The import of waste from the cattle used to make renewable energy a good choice. To import waste from livestock used to make gasoline. This will reduce the cost of production. Will also reduce imports of fossil energy from Thailand. It also helps to protect the environment. Prevent global warming Arising from the use of energy-consuming than necessary. The electric power demand so that it may be sold to the public in the vicinity. Which would bring benefits to all parties involved as well.

literature review

The study is based on concepts and theory, at least two concepts: 1) the theory of public policy and 2) the idea that the internal and external environment analysis (SWOT). including research on biogas. Adopt a renewable energy both domestically and overseas only human, too.

Research Methodology

This article explores Data collection and analysis of relevant documents. The study of texts and documents. The study from research related to public policy aspects of biogas. And other research On biogas in the country and abroad. Websites and information about the public policy aspects of the energy Thailand. Including in-depth interviews among households with small farms. From the literature, it can discriminate. And build relationships between variables are consistent with the objectives of the study of this article, including: 1) the government support 2) Economic 3) 4) technology.

Results and Discussion

Support from Government In Thailand, there is no energy source used to generate sufficient economic growth and demand for energy at a higher number. The oil reserves are not enough to use it to rely on imports from abroad, which affect energy security. Therefore, the government has adopted a policy of public support for renewable energy by the government to solve the crisis. The government's policy and energy development plan, which is to build a sufficiently thorough and fair use of energy by creating awareness on energy saving to the public more effectively. This policy and the plan is to build a self-reliant energy security. reduce risk, stable power supply.

a reasonable level of stability and fairness to the public by the price structure that reflects the true cost and management through the use of market mechanisms to conserve energy.

Therefore, the government should support low-interest loans to small farmers to make a small investment in farms occurred widely. After the investment analysis and see the possibility that the return on investment is clearly a worthwhile investment. Benefits include higher investment in other areas. The government should be to educate small farmers. Because most farmers have no knowledge of biogas and also have a negative perception about the manure which cannot be used any longer.

The economic potential of biogas heat. Which can be used to produce renewable energy seriously worth and value in economic expansion for the commercial production and expanding to different areas. Not difficult to finish farmers can make money in the future. Again,

there is no need to invest to build wastewater treatment, water systems. wastewater treatment systems. which have a high cost of treatment.

The use of energy as fuel. Biogas can reduce the use of fossil fuel, which controls the amount of carbon dioxide being released into the atmosphere. which will help to save costs down. The biogas can be used as fuel as well. Using alternative fuels such as LPG. And used engines or tractors for agriculture. And used as energy or thermal energy instead of oil.

The use of biogas from pig farms in the commercial will benefit the economy as much as the price of crude oil on world markets has been higher every day.

Community biogas from pig farming as a way of finding new energy sources because pigs are a lot more water and reduce waste, what is the benefit of global warming is another way. The small farm is not a great deal about the sewage to discharge pollutants into nearby communities. The social impact is huge. Moreover, Thailand is a waste of pigs, cattle, poultry, there is a lot of waste into the river. canal Park Cause environmental problems Wastewater treatment using aeration requires energy, which makes the need wasteful. Thus, biogas systems are useful in helping to reduce environmental problems. Reduce sewage discharge into rivers reduce the stench public also has fertilizer use in agriculture. Renewable energy and reduce global warming, too. This minimizes the impact on the surrounding farms.

Technology The development of technology is very important because it is different for each medium. Farm is located has no knowledge or information dissemination to the market.

Biogas is comprised of modular components solids from settling pond water. And will be sent to the landfill to anaerobic digestion. The selection of an

appropriate waste water treatment system for farm sizes to consider the appropriateness of the size of the farm, including the location of the farm. The quality of the environment in the vicinity. The biogas formed by fermentation with other gases as well. The introduction of biogas as a vehicle fuel is a gas composed primarily of methane and bio-methane. which will be taken through a process of quality improvement to eliminate contaminants out. The cold contaminants that cause engine wear.

Therefore, the government should support the production of biogas at the household level. Or industrial pig farming is small. This will reduce the cost of living Reduce the burden on national power by It also yields a byproduct. Organic fertilizers, such as with the development of biogas technology to be suitable for application to the pig farm in the community.

The internal and external environment analysis (SWOT) of biogas. The gas still has many limitations, the small farm operators are reluctant to invest in the construction of Biogas Treatment. It analyzes internal and external environment (SWOT) to adopt a recommendation for policy biogas for small farms. Can be analyzed as follows:

Strength [1] waste manure can be used to make fertilizer. [2] Biogas can be used as a renewable and cost-effectively. [3] Reduce pollution around. [4] Compatible with engine	Weakness Use space to store it. Small farmers lack knowledge of biogas. Smell gas inhalation lot will be a headache.
Opportunity State support to biogas. Renewable energy policies The national agenda The future can be developed into a major power.	Threats 1. Stable gas production depends on the pig. 2. No government incentives 3. Some people still have a negative perception about the pig.
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Strength	Weakness
• Waste manure can be used to make fertilizer. • Biogas can be used as a renewable and	• Use space to store it. • Small farmers lack knowledge of biogas. • Smell gas inhalation lot
Opportunity	**Threat**
• State support to biogas. • Renewable energy policies The national agenda	• Stable gas production depends on the pig. • No government incentives

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