

# **Innovation of Self-reliant Solar Energy Community Nongtatam Subdistrict Administrative Organization Pranburi District, Prachuap Khiri Khan Province**

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## **1. Introduction**

Banwangwon , Moo 8, a village in Nongtatam Subdistrict, Pranburi District, Prachuap Khiri Khan Province, has been the area with electricity scarcity, which was an important problem of Nongtatam Subdistrict. The suffering and trouble of people without electricity to use resulted in their living, not only difficulty in doing the family activities at night, but also insecurity of life and property. Electricity is a basic public utility the government should provide the people with equality and equity, and is also a basic right of people to have good quality of life. Nongtatam Subdistrict Administrative Organization (SAO) is aware of the responsibility to solve this problem for the people according to SAO's authority. Nongtatam SAO has, therefore, created the project on self-reliant solar energy electricity community under the context of the area proper to implementation. In this report, the project implementation, from the beginning to the successful end, will be described. The contents consist of problems, challenges, objectives, operational method, success indicators, problems and barriers in performance, problem and barrier solution, performance results, transfer of knowledge, and lesson learned.

The project's operation team hopes that this report on Innovation of Self-reliant Solar Energy Community can yield benefit in solving the problem for people in any areas with electricity scarcity. Moreover, it will be useful if the innovation in this report is adapted and improved for developing the growth in other areas. Any interested ones are willingly invited to study the report which has been well arranged and organized in the following contents.

## **2. Problems**

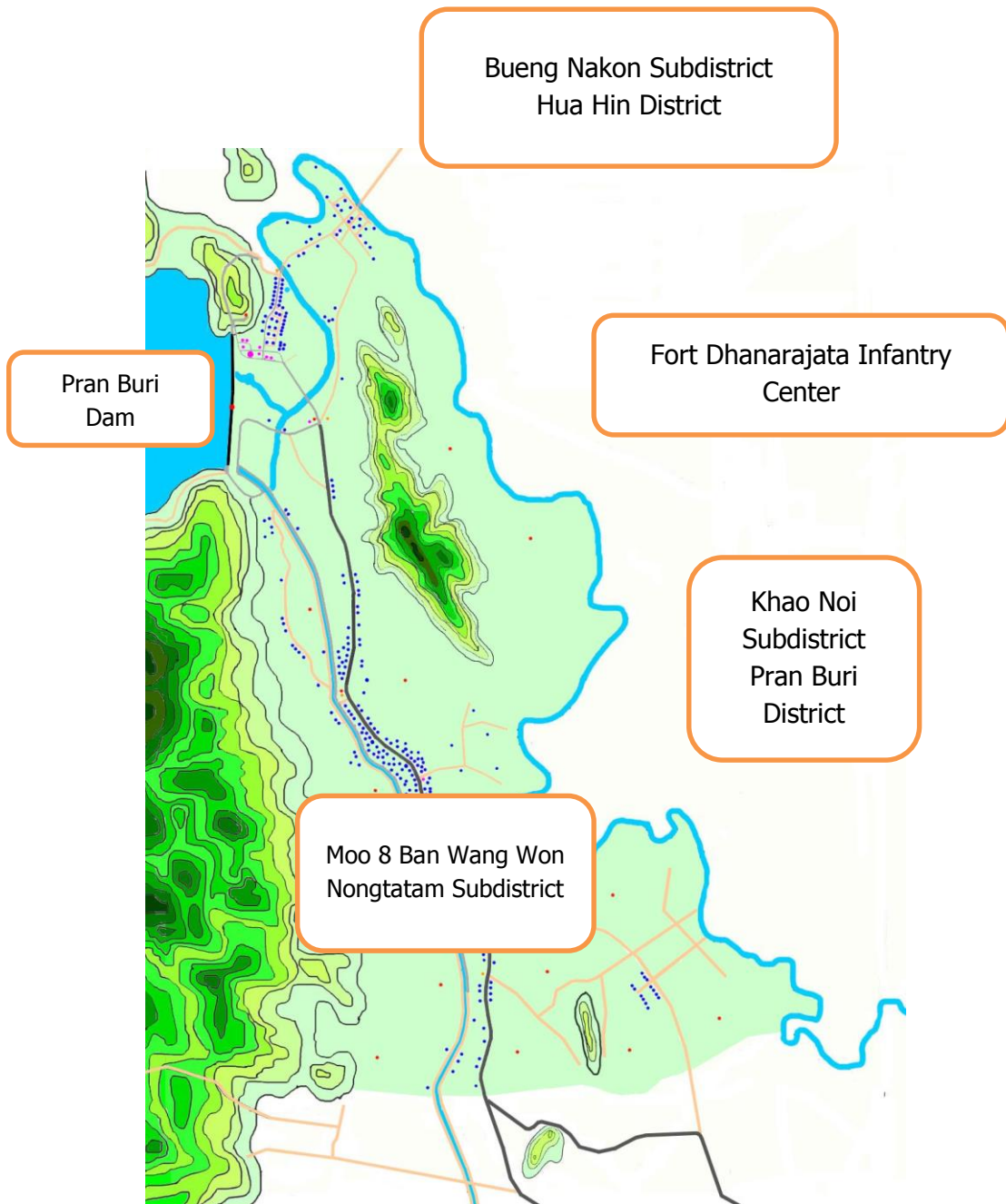
Banwangwon Chonprathan, Moo 8 , Nongtatam Subdistrict, Pranburi District, Prachuap Khiri Khan Province covers the area of 21,784 rai with the following boundary:

North: connecting to Bueng Nakhon Subdistrict, Hua Hin District

South: connecting to Moo 4 and 5, Nongtatam Subdistrict

East: connecting to Pranburi River and Fort Dhanarajata Infantry Center

West: connecting to Tey Mountain and Water Reservoir of Pranburi Dam



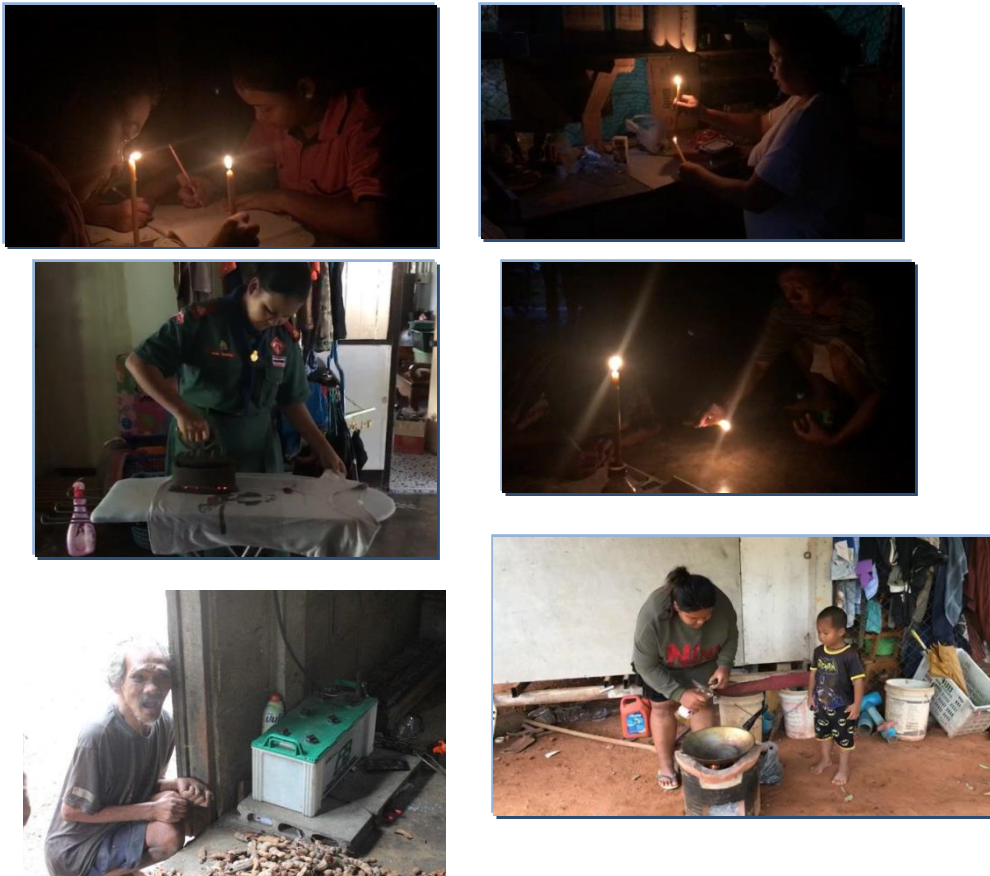
**Figure 1 Map of Moo 8 Banwangwon**

Formerly, Banwangwon (whirlpool village) was an area where the Pranburi River flew through. This part of the river had many natural deep water whirlpools. And, there were people settling there until now it becomes a village. The people have built their houses on two sides of the road from Petchkasem Road to Pranburi Dam, or distributing into groups in their own areas. Due to the mountainous and plain terrain connecting to the Pranburi irrigation dam, most of the people in the area are farmers planting pineapple, guava, aloe vera, oil palm, banana, napier grass, tomato, etc.. For the livestock, most of the people raise pigs, cows, and goats. The rest earn living by being contemporary or daily employees. Banwangwon in overall faces a drought in a certain period. There are 1,767 people in 905 households, people in 505 households already having electricity for using in daily life and 400 households living without electricity.



## Figure 2 Area and living condition of people in Moo 8 Banwangwon

The shortage of electricity was a problem in the area of Moo 8 Banwangwon, Nongtatom Subdistrict, Pranburi District, Prachuap Khiri Khan Province. It had been the problem affecting people's quality of life for more than 60 years. The people in 400 households had no access to public services in case of the expansion of the household electricity. It was an area where Nongtatom SAO could not use the method of extending the electricity area to cover the area because it was the area with legal limitation. **To resolve the legal limitation took many years.** As a result, the people suffered from the lack of opportunities to receive services. At night, people lit candles for the children to read books and do their homework. The electrical appliances and facilities could not be used in the households in this area. The shortage of electricity resulted in the lack of access to government services. The community and local leaders recognized and then proposed this problem to Nongtatom SAO for solving.



**Figure 3 Condition of electricity shortage problem of people in Moo 8 Banwangwon**

Nongtatam SAO, being aware of the responsibility to solve the problem for the people, initiated, the way to solve the problem **with efficiency and low cost**, without legal effect. And, it had to be the best alternative **to have people get household electricity service quickly, and they could take care of household electricity generation by themselves**. This can be a sustainable solution with this concept, Nongtatam SAO has, therefore, set a policy to operate **a self-reliant solar energy community project using solar energy electricity generating system to effectively solve the problem of the community with low cost**. People can use electricity in the households quickly and can rely on themselves in managing the electricity generating system. It is also **appropriate for the context in the area where expansion of the electricity is not possible, but there is appropriate solar radiation throughout the year**. **The key mechanism** resulting in success of project implementation is the creation of people participation in giving opinion, making decision, performing, and monitoring and evaluation of performance

### **3. Challenges**

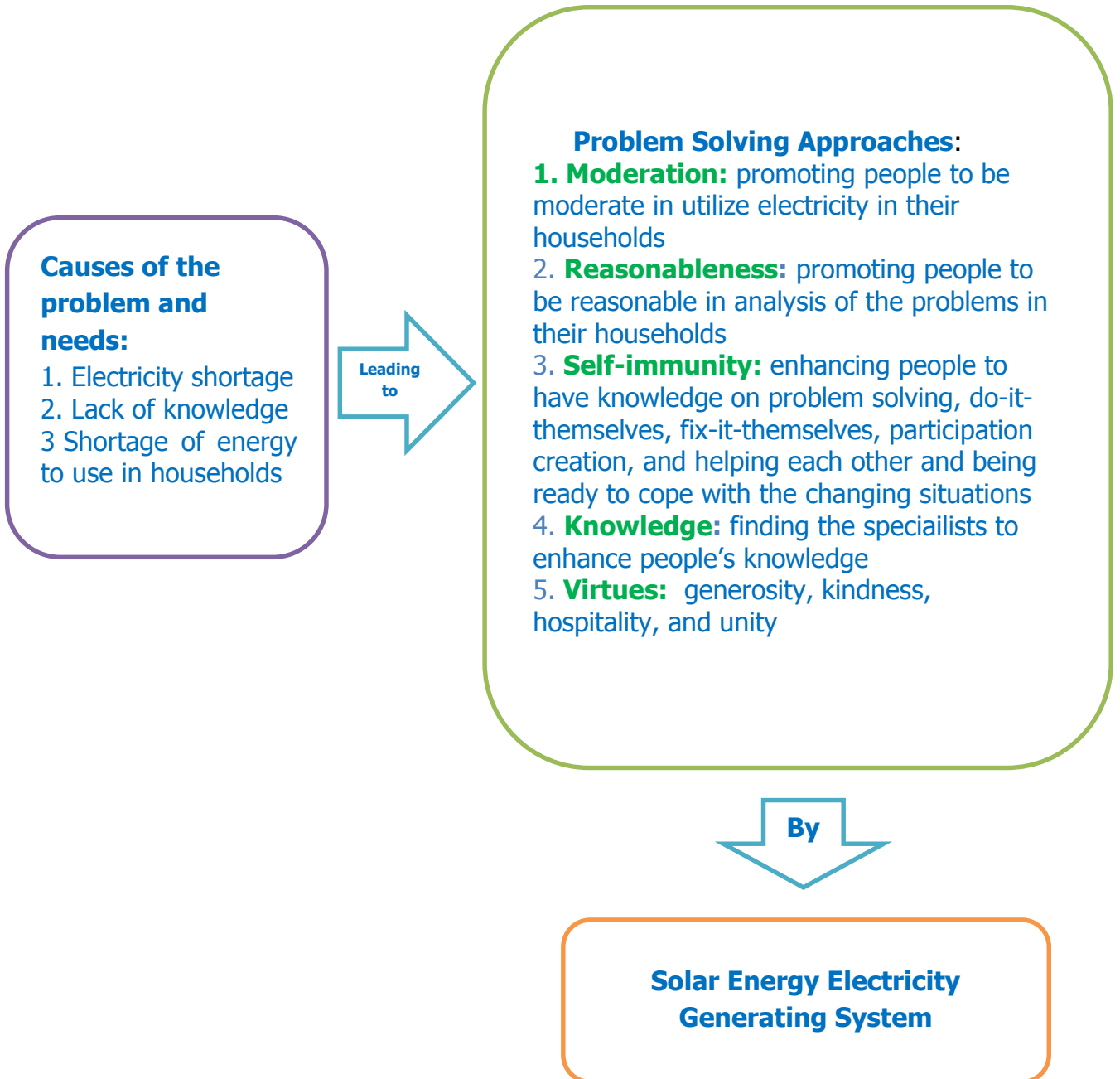
The implementation of self-reliant solar energy electricity community project need creation of participation among public, private, and civic sectors in collaborating to solve the problem to achieve sustainability. Because of the spacious problem area, the underprivileged people who could not access to electricity service were in 400 households, and lacked the knowledge on installation, repairing, maintenance, and the use of solar energy electricity generating system. It was a challenges of Nongtatam SAO to answer the following questions:

1. How can we have people use electricity the most quickly with the lowest cost?
2. How can we have people be able to sustainably maintain household electricity by themselves?
3. How should we do for low income people to have equal access to electricity?
4. Will the project implementation affect the environment?



#### 4. Guidelines for Problem Solving

Nongtatam SAO had analyzed the existing problem, and then created the conceptual framework as a guideline for the operation consisting of causes of the problem and needs of the people. To solve the problem, the philosophy of sufficiency economy was adapted to make people being moderate, reasonable, and well-immunized with the conditions of knowledge and virtues. And, the use of innovation of solar energy electricity generating system has been applied to address the challenges leading to sustainable solution.



**Figure 4 Conceptual Framework in Problem Solving**

## 5. Innovation

To solve the electricity shortage problem in Moo 8, Banwangwon, Nongtattm SAO had studied information on the alternative to sustainable solution. It was found that, if the problem had to be solved by eliminating the legal limitation, there must be several steps. It was necessary to survey the land of all households for the operation, which the ownership of the land could not yet be determined. It would take many years to do so, the most appropriate and efficient option was therefore considered for people in all 400 households to quickly access to the electricity usage at low cost and with sustainability by using household electricity and maintaining their own generation system. The self-reliant solar energy community project has been approved by applying "Pracharat" participation process. The innovation of self-reliant solar energy community was initiated in 2015 by using solar energy to generate electricity for using in households. It was Nongtattam SAO's responsibility to solve the people's problem efficiently, encouraging people to drive their own operation to achieve sustainability by participating in sharing opinions, making decisions, performing, and monitoring and evaluation of the project to create transparency with the support from Nongtattam SAO and the private sector. Solar energy electricity generating system was used in household electricity generation. According to the study of information from the Bureau of Solar Energy Development, Department of Alternative Energy Development and Energy Conservation, It was found that the average daily solar radiation distribution per year as shown in Figure 5 (Map of Solar Energy Potential throughout the Year) in all regions of Thailand was similar. The average solar radiation intensity ranged from 17 to 20 MJ / m<sup>2</sup>-day. The central and northeastern regions of the country had a high solar radiation intensity of 20-22 MJ / m<sup>2</sup> -day, appearing in a wide area covering the area of Sing Buri, Lop Buri, Ang Thong, Surin, Ubon Ratchathani, Si Sa Ket, Buriram and Roi Et, and in the nearby area. In the area of Nongtattam Subdistrict, Pran Buri District, Prachub Khiri Khan Province, an average solar radiation intensity was 18.27 MJ / m<sup>2</sup> -day, which was suitable for the solar energy electricity generating system.



**Figure 5: Map of Solar Energy Potential throughout the Year in Thailand**  
**Source: The Project on Improvement of Solar Energy Potential Map from Satellite Photo for Thailand, the Bureau of Solar Energy Development, Department of Alternative Energy Development and Energy Conservation**

Solar Power System is used to solve the power shortage problem of the people. Nongtatam Sub-district Administrative Organization divides electric connection system into 2 systems:

1. Direct Current: The solar panel connected to the solar controller that connected to the battery, that use with electrical equipment that support Direct Current.



**Figure 6 Direct current**



2. Alternating Current: The solar panel connected to the solar controller that connected to the battery that connected to the inverter and use with electrical equipment that support Alternating Current.



**Figure 7 Alternating Current**

## 6. Objective

Implementation of self-reliant solar energy community innovation The purpose is to provide electricity to people using low-cost solar power, and to be able to self-regulate household electricity. Suitable for context in areas that cannot expand the electrical field. It is suitable for solar radiation intensity throughout the year. The work has created a mechanism for the participation of public, private and public sectors in the implementation of the project. Participating mechanisms allow people to share their thoughts, make decisions, join in and monitor performance. Sustainable people can rely on their own way of promoting knowledge about solar energy that can generate electricity for household use. Establish a self-reliant alternative energy learning center to be a learning resource for the community. To create a community technician to help people. Create a Learning Center Subscription Promote working capital to purchase solar power equipment. The regulations governing the learning center for sustainability. We

also provide low cost solar photovoltaic equipment. As a result, people can solve their problems sustainably.

## 7. Operation Method

Nongtatam SAO and the people had set the policy on using solar energy to generate household electricity together, by creating people participation mechanism in preparing the project. The participation of public, private, and civil sectors was encouraged. The personnel's leadership was created to build a vision for problem solving. The organizational culture in teamwork between staff and the people was enhanced to solve problems. The officials and people could use technology to address the electricity shortage. Solving the people's electricity shortage problem is the responsibility of Nongtatam SAO to do efficiently and contribute benefit to the people with sustainability in solving the problem. The method is as follows:

### 7.1 Creating mechanism a people participation with the following mobilization:

The first cog-wheel: the staff of Nongtatam SAO talked to the community leaders and people to recognize the problem and to share continuous understanding on the way to run a self-reliant solar energy community project.



**Figure 8 : The official of Nongtatam SAO continuously went to talk to the people**

**The second cog-wheel:** Community leaders hold community meetings to encourage people to participate in giving ideas, planning, making decision on implementation of the solar energy electricity community project.



**Figure 9: The community at Moo 8 Banwangwon in implementing the Solar reliant energy community project**

**The third cog-wheel:** The people jointly organized the project with the official of Nogatam SAO, attending the training and study tour on the use of solar energy system in generating electricity focusing on installation, repairing, and maintenance of the system, and then transferring the knowledge to the neighbors.



**Figure 10: Training people on solar energy electricity generating system**





**Figure 11: Training people on solar energy electricity generating system**

**The fourth cog-wheel:** The people cooperated in establishing Nongtatam Subdistrict self-reliant alternative energy learning center and village-level learning centers to be the learning sources about alternative energy use so that the people in the village or those interested could study and use in their household and could be self-reliant, resulting in sustainability.

**The fifth cog-wheel:** the people chose community technicians to help them when there were problems in the system management.

**The sixth cog-wheel:** The people cooperated in setting up a revolving fund to provide low income people with access to capital sources for purchasing solar energy appliance.

**The seventh cog-wheel:** There was the creation of a new channel for information public relation through the application line, and the people cooperated in selecting each other to be the committee for disseminating information of the government to the zones in their vicinity. The committee consisted of the following persons:

1. Mr. Chumpon Muean-aum, taking care of Pran Buri Dam Village zone
2. Mr. Sitthikorn Injuang, taking care of Pran Buri Dam Village zone
3. Mrs. Sanya Pongpirom, taking care of Ban Fang Klong zone
4. Mrs. Maneetree Tree-inthong, taking care of Ban Fang Klong zone
5. Mrs. Chucheep Nindam, taking care of Ban Ton Ket and the back area of Ban Wang Won School zones
6. Mrs. Boonchuay Yodying, taking care of Ban Nai Lock zone

**The eighth cog-wheel:** The people participated in evaluating the solar energy community project once a year, resulting in transparency in the operation.

7.2 Creating a mechanism for governmental participation with the following mobilization:

The first cog-wheel: The official of Nongtatam SAO coordinated with Prachuap Khiri Khan Provincial Energy Office to clarify the objectives and details of the self-reliant solar energy community project, and then notify the administrators of Nongtatam SAO.

The second cog-wheel: The administrators of Nongtatam SAO had signed Memorandum of Understanding (MOU) on cooperation in promoting knowledge on alternative energy with the Prachuap Khiri Khan Provincial Energy Office to promote the knowledge necessary for transferring to the people in the area of Nongtatam Subdistrict and the general people interested in using alternative energy. Additionally, the personnel were enhanced to be able to advise and transfer knowledge on alternative energy for sharing at the organizational level, and to be able to create cooperation in transferring knowledge to the people.

The third cog-wheel: The personnel of Prachuap Khiri Khan Provincial Energy Office provided the people the knowledge on alternative energy, including supporting the solar energy electricity generating technology and other forms of alternative energy for the people, when being coordinated by the official of Nongtatam SAO.



**Figure 12 The official of Prachuap Khiri Khan Provincial Energy Office providing knowledge to people**

The fourth cog-wheel: The official of Nongtatam SAO cooperated with Ban Nongtatam School to invite students to study at the Nongtatam Subdistrict self-reliant alternative energy learning center and at the village-level learning center, coordinating with the Prachuap Khiri Khan Provincial Energy Office to provide additional knowledge to Ban Nongtatam School to establish a self-reliant alternative energy learning center at the school level to educate the interested people and youth in learning.



**Figure 13 Nongtatam School took the students to study at Nontatam Subdistrict self-reliant alternative energy learning center and at the village-level learning center**

The fifth cog-wheel: The staff of Nongtatam SAO and Nontatam Subdistrict self-reliant alternative energy learning center the Forest Protection and Environment Conservation Village Project in Phetchaburi Province, the agency under the Department of National Parks, Wildlife and Plant Conservation, Ministry of Natural Resources and Environment, to receive funding support to contribute to the revolving fund.



**Figure 14 The Forest Protection and Environment Conservation Village Project in Phetchaburi Province offering budget to people**



7.3 Creating a mechanism for participation from the private sector with the following mobilization:

**The first cog-wheel:** The official of Nongtatam SAO coordinated with the Ruam Jai Tam Roy Por Network Learning Center at Pa Deng Subdistrict, Kaeng Krachan District, Phetchaburi Province to educate people, including a study tour to learn theory and practice.

**The second cog-wheel:** The administrators of Nongtatam SAO signed a Memorandum of Understanding between Nongtatam SAO and the Ruam Jai Tam Roy Por Network Learning Center to educate people in Nongtatam Subdistrict.

**The third cog-wheel:** The personnel of Nongtatam SAO and Nongtatam Subdistrict self-reliant alternative energy learning center coordinated with Voice TV Co., Ltd. and WiseTek Solutions (Thailand) Co., Ltd., to ask for support on solar cell system equipment or batteries for the people to use for generating household electricity. WiseTek Solutions (Thailand) Co., Ltd. also provided revolving battery yearly and took the used batteries to be disposed in the correct way as well. The team of official and people coordinated with Prachuap Khiri Khan Provincial Energy Office to educate the people on the efficient use of solar cell batteries.



**Figure 15 Voice TV Co., Ltd., supporting batteries to people**



**Figure 16 WiseTek Solutions (Thailand) Co., Ltd., yearly supporting revolving batteries to people**

## 8. Success Indicators

Nongtatam SAO has set the indicators for the implementation of the Self-reliant solar energy community project as follows:

8.1 Percentage of people generating household electricity from solar energy is an indicator of success measured by the fact that the people in all 400 households in Moo 8, Ban Wang Won have used electricity which aligns with the goals of the 7th Sustainable Development Agenda, ensuring that everyone has access to modern, reliable, and sustainable energy. Indicator 1 ensures that everyone has access to reliable and up-to-date energy services.

8.2 Creation of the community technicians to take care of the people is an indicator that ensures people in that if the solar system has more serious problems than they can handle, the community technician team can take care of the installation, repairing, and maintenance of the system. As a result, the people can use electricity continuously.

8.3 Establishment of Learning Centers is an indicator of success to ensure that people have learning sources where they can study sustainable alternative energy for household use, especially taking care of solar energy system by themselves.

8.4 Establishment of a revolving fund is an indicator of success that will have all low-income people be able to access to capital resources for purchasing solar energy electricity generating equipment.

## 9. Problems and Barriers

From the implementation of the self-reliant solar energy community project, the problems and barriers in the operation can be summarized as follows:

9.1. The lack of well-prepared operational space due to the lack of demonstration sites where the people can be trained to use the solar energy electricity generating system.

9.2. The cooperation with the people, other organizations, and nearby areas, has to be agreed or inquired. Due to Nongtatam SAO not specialized in solar energy electricity generating system, it cannot, therefore, transfer knowledge and practice to the people.

9.3 There must be regulations for the project implementation since the self-reliant solar energy community project is an urgent project. The finance for supporting the project was not prepared. It is necessary to transfer the budget from other expenditure categories for the project to have it appear in the annual expenditure budget plan of Nongtatam SAO.

9.4 Project management is subject to budget and personnel constraints since the project has only THB 40,000 and there are only two project teams which are the cog-wheels to mobilize the project. So, it must be managed under the constraints with regard to efficiency and benefits the people in all 400 households will get.

9.5 Public relation is not widespread because some villages are spacious and do not have electricity.

9.6 The technical training materials are insufficient.

## 10. Resolution of Problems and Barriers

Nongtatam SAO applied the academic principle in solving problems and barriers, POSDCoRB, administration process theory of Luther Gulick and Lyndall Urwick, consisting of the following components: Planning, Organizing, Staffing, Directing, Coordinating, Reporting, and Budgeting. The problem is solved as follows

10.1 The lack of well-prepared operational space due to lack of demonstration sites was solved by planning the use of the space of Nongtatam SAO for maximum benefit by economically preparing materials from the obtained budget, appointing the project implementation committee and coordinating with the people involved to create a demonstration sites in the area of SAO.

10.2 The problem of cooperation with the people, other organizations, and nearby areas, having to be agreed or inquired was solved by planning coordination, and informal and formal contact, to achieve the goals of the MOU, supporting body of knowledge and alternative energy technology, together with the people in the request for budget support and materials from public and private organizations to drive the project to success.

10.3 The lack of regulations for the project implementation can be solved by preparing plan for spending budget by considering what activities the project will cost, such as training, study your, and purchasing materials, etc., by studying the laws and relevant regulations for transferring budget and setting in the new budget regulations of Nongtatam SAO and allocating the budget as planned.

10.4 The problem of the project management subject to budget and personnel constraints can be solved by focusing on teamwork, selecting official (Staffing) qualified in the space, electrical technique, and team management. The cooperation of relevant agencies as well as the participation of the people in the operation is also required. The budget is analyzed to meet worthwhile operation with the concept of "less budget, higher efficiency".

10.5 The limitation of public relation because of some villages not having electricity is solved by creating coordination (Coordinating) with the community leaders, creating people participation in public relation to make sure that everyone recognizes the project implementation, using the application line technology, social media, Facebook fan page, to promote the project and information to the people.

10.6 The problem of insufficient technical training materials can be solved by selecting the appropriate number of people to be trained aligning with the available materials, creating the community technicians to provide care and knowledge to neighbors on solar energy electricity generating system.

## 11. Performance

The self-reliant solar energy community has set a budget of 40,000 baht. The budget of 38,223 baht is used to promote the knowledge and understanding of the people who have electricity in their own homes. Such as solar power systems. Computing for household systems. Direct current (DC) connection. Alternating Current. Including study visit.

From the implementation of the project results The incidence is 100 percent of people have household electricity produced by solar energy. The number of people living in the village is 8, where electricity is scarce Every household is the lowest cost solution.



**Figure 17 The people in every household having electricity used in their households**

There are 20 voluntary community technicians, with a ratio of 5 technicians per 100 people, looking after and fixing solar energy electricity generating system so that people can have electricity to use continuously. The names of voluntary community technicians were as follows:

1. Mr. Sitthikorn Injuang
2. Mr. Son Pinsaeng
3. Mr. Paisarn Pumpuang
4. Mr. Somchai Imkhiew
5. Mr. Somnuk Sarika
6. Mr. Mala Srisawang
7. Mr. Anuwat Sangtawee
8. Mr. Sompon Nindam
9. Mr. Chumpon Muean-aum
10. Mrs. Manee Tree-inthong
11. Mrs. Sanya Pongpirom
12. Mr. Suthep Klueab-arb
13. Mr. Cheun Rakyong
14. Mr. Wichai Srilek
15. Mr. Thongchai Timthong
16. Mr. Somkuan Pothong
17. Mr. Wanlop Bunprasarn
18. Mr. Suthep Pukkarat
19. Mr. Paew Imcheun
20. Mr. Wichit Paopongsa



**Figure 18 The community technicians helping people**



There are 3 learning centers in Nongtatom Subdistrict for the people to learn about alternative energy in the subdistrict, village, and school levels. This can make the people or any ones who are interested in learning able to visit for applying the production of alternative energy in their households, especially the electricity from solar energy. When knowledge is available in the community, people can rely on themselves and can sustainably solve the electricity shortage problem by themselves. The established learning centers are as follows:

1. Nongtatom Subdistrict Alternative Energy Learning Center locates at No. 100 Moo 7 Nongtatom Subdistrict, Pran Buri District, Prachuap Khiri Khan Province.
2. Village-level Self-reliant Learning Center for household and agricultural use locates at 244/1 Moo 8, Banwangwon, Nongtatom Subdistrict, Pran Buri District, Prachuap Khiri Khan Province.
3. Ban Nongtatom School Alternative Energy Learning Center locates at 140/1 Moo 1 Ban Nongtatom, Nongtatom Subdistrict, Pran Buri District, Prachuap Khiri Khan Province.



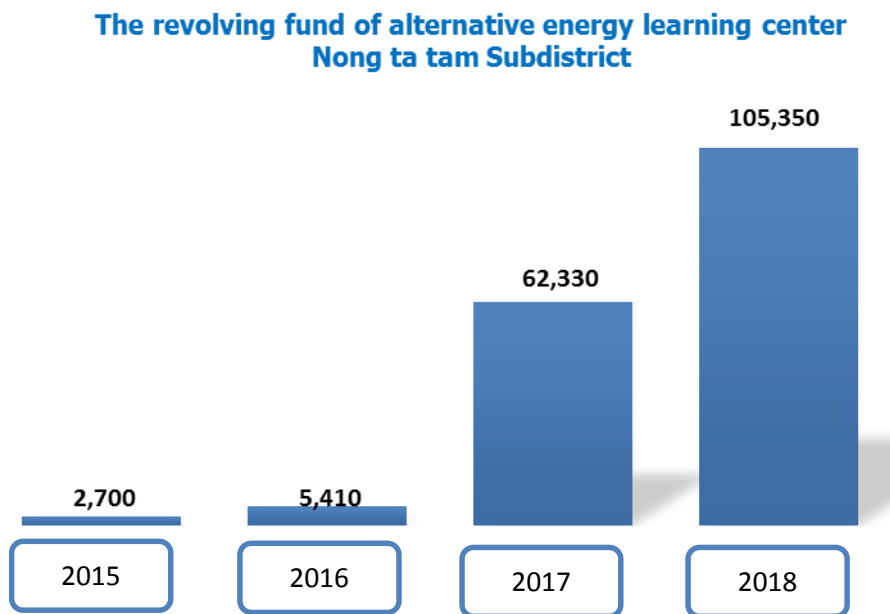
**Figure 19 District Village and School learning center**



There are 22 committees in Nongtatam Subdistrict self-reliant Alternative Energy Learning Center, selected by the people themselves, with the mission as follows.

1. Issuing regulations for governing the learning center
2. Finding new knowledge to transfer to the community and those who are interested
3. Finding the cheapest sources of solar energy electricity generating equipment
4. Organizing the meeting on every the 23<sup>rd</sup> of the month
5. Participating in follow up and evaluation of the project with Nongtatam Subdistrict SAO
6. Training the voluntary community technicians
7. Establishing and managing a revolving fund

Establishment of a revolving fund The official name. Nongtatam Selfreliant Alternative Energy Education. The project is support by the personnel of Nongtatam SAO for 2,700 Baht. The Forest protection and Environment Conservation Village project is worts 50,000 baht. The proceeds from the management of the battery is supported by the private sector of 30,000 baht and the increase from the loan for the purchase of solar energy materials , including subscription to the self-reliant learning center 22,650 baht. Totaling 105,350 baht. By Village people Moo 8 everyone has equal access to resources to buy solar energy materials, for low income earners



**Figure 20 The Growth of Nongtatam Subdistrict Self-reliant Alternative Energy Learning Center Fund**



**Figure 21** People Using Money from Fund Buying Solar Energy Electricity Generating Equipment

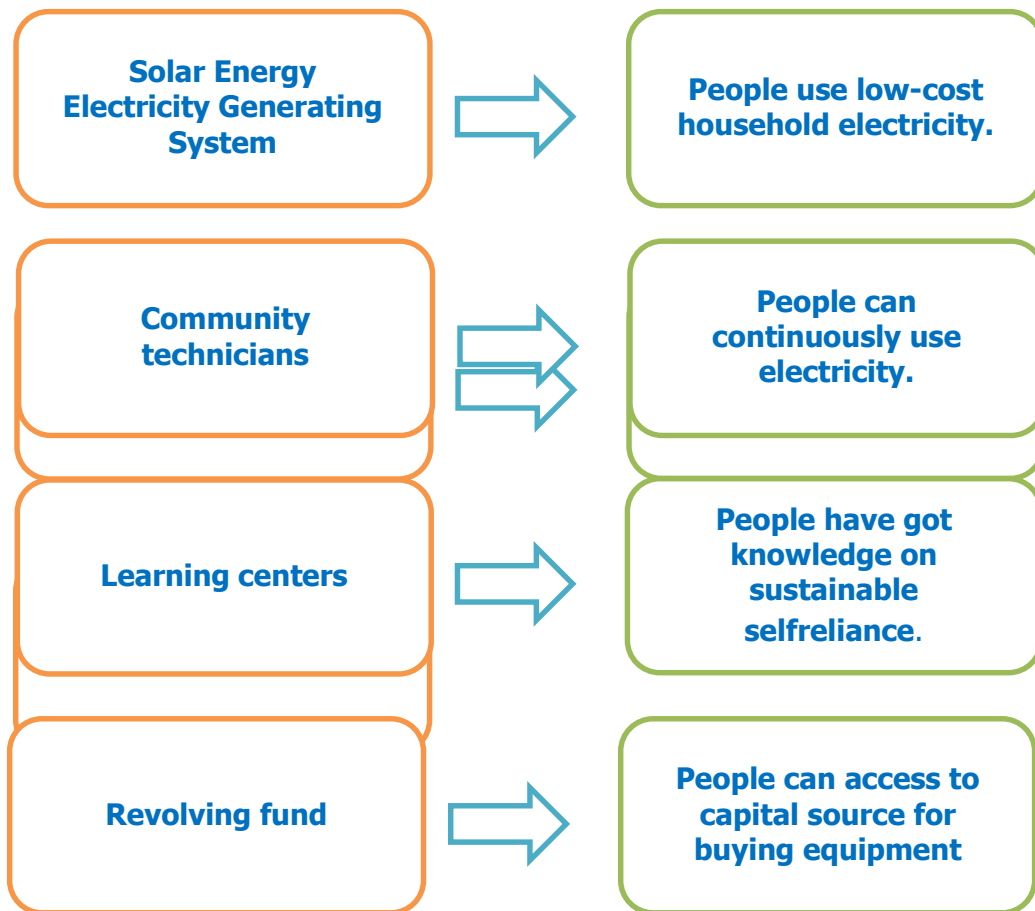
Through the promotion of training and study tours, people have the knowledge of solar energy in household electricity generation, coupled with sustainable environmental sustainability. The use of solar-powered power plants reduces the use of electricity to generate electricity for some households, which produces carbon dioxide, which has an adverse effect on the environment. It also helps people reduce the cost of using oil as well. There is also the management of batteries used in solar systems, not to affect the environment. We have been cooperating with Weitech Tech (Thailand) Co., Ltd. to get the battery to get rid of in the correct way.



**Figure 22** People Using Fuel for Electricity Generation in Water Pump



**Figure 23 People Using Solar Energy Electricity Generating System for Water Pump**



**Figure 24 Summary on Success of the Self-reliant Solar Energy Community Project**

The successful implementation of the project took four years. In 2015, the year of the beginning of the project, there were participants, who received benefit of the project, from 121 households. The number increased to 175 and 215 households in 2016 and 2017 respectively, and, in May 2018, the number increased to 400 households.

## 12. Knowledge Transfer

The knowledge on solar energy electricity generation was transferred to the following organizations:

12.1 About 10 personnel in Khao Chao SAO, Prachuap Khiri Khan Province, using the solar energy electricity generating system in the office

12.2 About 54 chiefs of governmental organizations in Prachuap Khiri Khan Province

12.3. About 10 personnel in Pran Buri SAO, Prachuap Khiri Khan province

12.4 About 50 persons in Petchaburi and Surin Provincial Energy Offices

12.5 About 50 personnel in Huay Ket SAO, Phichit Province

12.6. About 50 personnel in Suk Paiboon SAO, Nakhon Ratchasima

12.7 About 151 students in Ban Nongtatam School

12.8 About 90 personnel in Bangrakpattana Subdistrict Administrative Organization, Nonthaburi Province

The total number is 465 people. Moreover, the organizations worldwide experiencing the same problem can use this resolution method in any areas.



**Figure 25 Transferring knowledge to various organizations**

### **13. Lessons Learned from Implementation**

The lessons learned from implementing the project of self-reliant solar energy community is the community participation results in problem reflection from community leading to problem solving according to the people's needs. Being proactive administration by sending officers to listen to people's problems and get feedbacks from them, Nongtatam SAO will be able to understand real problem and be able to solve the problem accurately, which will create trust between Nongtatam SAO and the people. As a result, people will be more likely to participate in the project in every stage: opinion expression, decision making, implementation, and monitoring and evaluation for transparency. Officers in each section will be trained and developed continuously to understand the vision and be able to solve problems accurately and be able to efficiently do more duties out of their responsibilities. Teamwork is crucial for the organization culture, and that "Pracharat" participation among public sector, private sector, and people results in the organization's work performance achievement at the highest level.

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