

PARTICIPATORY ELECTRICITY SAVING PLANNING INSIDE THE UDON THANI EDUCATION CENTER SUAN SUNANDHA RAJABHAT UNIVERSITY

Supat Somsuk^{1*}, Srayut Kuanmaung²

^{1*,2}Udonthani Education Center, Suan Sunandha Rajabhat University, Udon Thani, Thailand

E-Mail: supat.so@ssru.ac.th^{1*}, srayut.ku@ssru.ac.th²

ABSTRACT

This study aims to 1) Study planning to save electricity within the Udon Thani Education Center building. 2) Study the participation of personnel in saving electricity within the Udon Thani Education Center. It is qualitative information. By collecting from In-depth Interview Cover the population Personnel at Suan Sunandha Rajabhat University Udon Thani Education Center. The sample group was personnel at the Udon Thani Education Center. Number of people: 28 people.

From the study it was found that Most of the sample group had opinions about planning to save electricity. That is to Reduce usage, reduce losses, Seal the add options and change the way of working in the comments section about the participation of personnel in saving electricity. That is Most of the personnel of the Udon Thani Provincial Education Center Give good cooperation in organizing activities – Participation - Planning measures to save electricity and focus on pushing personnel to recognize the importance It is intended to strictly follow the electricity saving measures of the Udon Thani Education Center. The participation of personnel in saving electricity is an important factor to make personnel conscious and join the campaign for cooperation enthusiasm to save electricity efficiently and with great value.

Keywords: Planning, Saving, Electricity, Participation

INTRODUCTION

From the 5-year operational plan (2023 - 2027) of the Ministry of Energy Summary and analysis of the energy situation in the world and within Thailand. It was found that the Ministry of Energy must adjust the direction of development in order to accommodate changes in technology that affect energy development. such as Smart electrical grid system solar energy technology Highly efficient energy storage system and electric vehicles. In terms of the environment, the Ministry of Energy also needs to accelerate policies aimed at reducing greenhouse gas emissions even more like other countries, as well as wanting to plan to support the behavior of energy users as producers of energy for their own use. that

is likely to increase in the future from this situation, it will affect the future picture of energy use. As follows: The electricity sector will play a key role in supporting a greater economic recovery. In the long run, electricity will be the energy the world needs. And in the past, it has developed into a system that has less carbon dioxide emissions. Together with the basic structure the electrical side has increased strength and flexibility. Global electricity demand growth will outpace other fuels. And by 2030, global final energy consumption will account for 21% of electricity. In addition, the pattern of electricity production will change to a non-centralized distribution. Emphasis on producing energy for own use and produce more renewable energy in various areas throughout the country Development must focus on setting up an electricity management system at the local level. To support the decentralization of production centers and bring in digital systems to help manage.

Building or workplace Energy is used in many forms, such as air conditioning systems, lighting systems, and the use of various equipment, but more or less is used depending on the nature of the work. And all building users should work together to save energy use. and use it effectively Various workplaces They are usually located in large buildings. Which will install various energy systems to facilitate work, such as air conditioning and ventilation systems. Electrical lighting system and various equipment, so executives, building administrators, building workers as well as those who come into contact with the building, should have a basic understanding of energy saving. and energy-saving building design It is important to solve problems in other areas at the same time. From the initial stage, consider the project location. To lead to reducing environmental impacts around the building construction area. and reduce the impact on buildings from climate change Link the benefits to the quality of life of building users with economic effects. or an investment budget that can be reduced well Therefore, it requires joint thinking from people in the team. or people involved in design, construction, and building management from different professions. (Supachoke Sonthichai and Siriwan Roho. 2021)

Currently, the university has established energy saving measures for departments. has been put into practice in order to use electricity within the agency efficiently. Budget savings occur. Udon Thani Education Center has taken measures to review and plan energy saving in the education center building. Currently, a lot of electricity is used. From observation, it is found that electricity is sometimes used more than necessary. Some personnel's time may be caused by forgetting or not seeing the importance of saving electricity. Causes wasted energy. The researcher therefore created a research project on participatory electricity saving planning. Inside the Suan Sunatta Rajabhat University Udon Thani Education Center To allow personnel in the education center to participate in ownership of the initiative, needs, and identification of obstacles related to saving electricity that are encountered. By allowing personnel to be involved in planning from brainstorming about the expectations of personnel in their perceptions and thoughts in order to know their expectations of how to save energy well. and find ways to implement energy saving measures When personnel are involved in initiating savings ideas, practices and policies, formulating measures according to needs to happen Personnel will take responsibility for matters that they have a part in determining and have a sense of ownership in activities and want to see the implementation of their ideas be successful.

OBJECTIVES

1. To study planning to save electricity within the Udon Thani Education Center building.
2. To study the participation of personnel in saving electricity within the Udon Thani Education Center.

METHODOLOGY

From the study to study the electrical pattern by studying from books, documents, and related research reports. Using in-depth interviews Executives and personnel within the Udon Thani Provincial Education Center Then the data was used to analyze problems and obstacles caused by the use of electricity with the following details.

1. Population and sample.
2. Research tools.
3. How to create tools.
4. Data Collection.
- 5 .Data analysis.

1. Population and Sampling

The population used in this study is the population working at Suan Sunandha Rajabhat University. Udon Thani Provincial Education Center with electricity usage management from various electrical devices in performing duties both directly and indirectly the content of the study consists of electricity usage situation Studying problems and obstacles in saving electricity To propose a channel for adopting measures to save energy in the use of electrical equipment. to be used in the Udon Thani Education Center building.

2. Tools used in research and determination of quality of tools

Tools used in this research It is an in-depth interview. and create a process for developing electricity saving activities which has the following details:

- 2.1 In-depth interview form for personnel.
 - Personal information.
 - Planning to save electricity.
 - Participation of personnel in saving electricity.
 - Comments and suggestions.

3. How to create tools

Tools used in this research It is an in-depth interview (In-depth Interview) to propose channels for implementing energy saving measures. Working with electrical equipment to be used in the Udon Thani Provincial Education Center building the steps for creating the tool are as follows.

3.1 Study documents and research related to saving electricity. Characteristics of participation in economic management of personnel Efficient use of electrical equipment Then take the results Let's define the content. in an in-depth interview (In-depth Interview).

3.2 Study and research documents Various textbooks and research Concerning channels suitable for creating measures to save electricity within the Udon Thani Provincial Education Center building. To set the questions to cover all the desired content.

3.3 Create data collection tool questions to cover all content. The details have been mentioned.

4. Data Collection

4.1 Interview (In-depth Interview) The researcher conducted interviews with those directly

involved and recorded them in writing, and record the sound. With permission from the interviewee to summarize the study results.

4.2 Using the results of the analysis of electricity saving measures channels The results obtained from the study were given to administrators and personnel in order to create measures to save electricity within the Udon Thani Provincial Education Center building. next perfect.

5. Data analysis

Tools used in this research It is an in-depth interview (In-depth Interview) to propose channels for implementing energy saving measures. Working with electrical equipment to be used in the Udon Thani Education Center building the steps for creating the tool are as follows.

5.1 Study documents and research related to saving electricity. Characteristics of participation in economic management of personnel Efficient use of electrical equipment Then take the results Let's define the content. in an in-depth interview.

5.2 Study and research documents Various textbooks and research Concerning channels suitable for creating measures to save electricity within the Udon Thani Education Center building. To set the questions to cover all the desired content.

5.3 Create data collection tool questions to cover all content. The details are mentioned above.

RESULTS

This research is a research study. Regarding participatory electricity saving planning Inside the Udon Thani Education Center Suan Sunandha Rajabhat University The researcher conducted a study, interviewed, and analyzed data. From the personnel of the Udon Thani Education Center, 28 people, by interview form. There was an issue regarding personal information. The results of the study found that the total number of samples was 28 names, most of which were personnel working in academic positions, numbering 15 people. Next were personnel working in academic support positions. Number of 11 people, the least are 5 personnel who work as workers and most of the personnel have not been working for more than 5 years. By means of in-depth interviews on 3 designated topics as follows:

1. Planning to save electricity.
2. Participation of personnel in saving electricity.
3. Comments and suggestions.

1. Planning to save electricity

Participatory electricity saving planning Udon Thani Provincial Education Center There is a process for personnel in the agency to include administrators, professors, officials, and employees at all levels. Join together in taking the initiative to express opinions and make decisions. To plan measures to save electricity, including determining methods to save electricity. policy setting Electricity saving measures Determining interest in the benefits of saving electricity of the organization as well as problems and obstacles to saving electricity by focusing on energy campaigns that give importance to factors Environmentally, it helps preserve the environment and helps reduce global warming. Reducing economic factors means saving on energy imports. and help save costs of the Udon Thani Provincial Education Center Reduce social problems, that is, help reduce health problems caused by electricity production. In summary, the personnel of the Udon Thani Provincial Education Center Give importance

to campaigns about electrical energy that give importance to environmental factors. and economic factors in terms of budget wastage (Thannapat Maneesri,2012).

A study of electricity saving within the Udon Thani Provincial Education Center found that employees with different job positions and length of service had electricity saving behaviors. that are not different (Phawana Watcharasathien, 2002).

Studying behavior in saving electricity to reduce economic problems of Suan Sunandha Rajabhat University personnel Udon Thani Education Center found that factors affecting energy saving behavior in order to reduce economic problems of the Udon Thani Education Center, including job positions, age, and participation of personnel (Sukon Masnui, 2008).

Saving electricity is another important way to help reduce monthly expenses for the agency. If done continuously on a regular basis or as a habit, it will have a beneficial effect on the organization in the long run and have a great impact on the environment.

1.1 How to save electricity

The interview results found that the sample group expressed their opinions about how to save electricity. The results are summarized as follows.

- A committee or team should be established. To survey the electrical system and the amount of electricity used by the agency on consistent and continuous.
- There should be an energy saving plan.
- There should be clear orders and announcements regarding energy saving.
- Equipment should be changed to be more efficient, such as electrical equipment that has a lifespan of more than 7 years, is in damaged condition and requires frequent maintenance.
- Should choose to use renewable energy or alternative energy. to use instead of using electrical energy, such as installing electrical lighting around the education center to be a solar cell system.
- Plant trees around Because trees or ground cover plants will help clean the air very well. It will help keep the unit cooler. and increase resting areas for personnel, students, and service users.
- Organize training to provide knowledge Create understanding among personnel about the correct use of electrical appliances in the office. and provide knowledge about maintaining electrical appliances to reduce the rate of electrical energy consumption and extend the life of electrical equipment.
- Reduce the time of use of electrical appliances by specifying the opening-closing time.
- Unplug and turn off all equipment. Every time you stop using it.
- - Campaign to give importance to saving electricity together.

In summary, the Udon Thani Education Center has determined basic measures that can be done without investment, including reducing use / reducing wastage / filling leaks / increasing options / changing work methods. That will result in supporting the methods of saving electricity of the Udon Education Center to achieve its objectives.

1.2 Opinions about the benefits of saving electricity

The interview results found that the sample group expressed their opinions about the benefits of saving electricity. The results are summarized as follows.

There is a team to create an electricity saving plan, follow up and report the results.

- Personnel have more knowledge and understanding about saving electricity.
- Take care of, maintain, and repair electrical appliances according to the correct period of use.
- New energy sources are being used to reduce electricity costs.
- Can reduce unnecessary electricity costs from the system.

2. Participation of personnel in saving electricity

Personnel of the Udon Thani Provincial Education Center There are opinions regarding the participation of personnel in saving electricity. The results are summarized as follows.

- Participation of personnel in saving electricity is a good collaboration to organize planning activities to create measures to save electricity.
- All personnel participate in planning, observing, inspecting, and reporting the results of the agency's electricity usage.
- All personnel give importance to saving electricity in the agency.
- All personnel are committed to promoting, pushing, and strictly following the agency's electricity saving measures.

Participation of personnel in saving electricity is an important factor in managing the use of electricity within in Udon Thani Education Center. It was found that personnel in each department have awareness and understanding of the process, policies and measures for saving electricity within the education center. There was a meeting to explain the operational plan and methods for saving electricity. By giving personnel, the opportunity to participate in brainstorming. Express your opinions at every step. Both directly and indirectly So that personnel can act according to plans and methods that can help reduce electricity use efficiently and create value for the agency seriously and continuously.

Increasing the level of public participation in the organization's electrical energy management. Personnel of the Udon Thani Education Center said that raising the level of participation of people in the organization There must be continuous organizing of activities to promote joint measures. To reduce the gap of personnel and aims to create knowledge and campaigns for personnel to see together That results in participation in electricity saving planning being truly the work of every personnel in the organization (Somsak Meenakorn, 2012)

3. Comments and suggestions

The interview results found that the sample group expressed their opinions and suggestions about important things in saving electricity. The results are summarized as follows.

- Create awareness of all personnel in terms of saving electricity.
- There are concrete and clear measures.
- Cooperation, join together to save electricity.
- Enthusiasm about saving electricity.
- Reduce agency expenses.

CONCLUSION AND FUTURE WORK

From the study it was found that Sample personnel There was an opinion about planning to save electricity within the Udon Thani Education Center building that saving electricity is an important way to help reduce the monthly expenses of the Udon Thani Education Center. Regularly or doing it until it becomes a habit will have a positive effect on the in-Udon Thani Education Center. In the long run and having a positive impact, it is very important to the environment. By the following method:

1. Consultation meeting among the personnel team to establish a working group to save electricity at the Udon Thani Education Center. The Director of the Education Center is the chairman and personnel are the operating committee.

2. Plan operations The working group considers the amount of electricity used within the Udon Thani Education Center and should know the proportion of electricity used in each system such as (1) lighting system (2) air conditioning system (3) other systems and consider methods of use. of each system appropriately as necessary and consider methods of maintenance which must be assigned a person to take care of according to the inspection period The personnel must have knowledge. Understanding how to save electricity means personnel have received training on the correct use of electrical appliances in the office. Know how to take basic care of electrical appliances. To reduce the rate of electrical energy consumption and extend the life of electrical equipment.

3. Create plans and measures to save electricity that are appropriate for the Udon Thani Education Center. By determining basic measures that can be done without investment, such as reducing use / reducing loss / plugging leaks / increasing options / changing work methods. and disseminate public relations information to create cooperation with personnel of the Udon Thani Education Center.

As for the participation of personnel in saving electricity within the Udon Thani Provincial Education Center From the study it was found that Personnel of the Udon Thani Education Center Provide good cooperation in organizing activities - projects - planning measures to save electricity. By participating in planning, observing, inspecting and reporting the results of the agency's electricity usage. and personnel of the Udon Thani Education Center Everyone gives importance, is intent on promoting, pushing for and strictly following the electricity saving measures of the Udon Thani Education Center. which involves the participation of personnel in saving electricity. It is an important factor in managing the use of electrical energy within the Udon Thani Education Center efficiently and for great value.

Sample group Expressed opinions and suggestions about important things in saving electricity. From the study it was found that Awareness of all personnel should be created. Concerning saving electricity within the Udon Thani Education Center and campaigning for personnel cooperation, unity and enthusiasm and give importance to saving electrical energy According to the plans and measures that the Udon Thani Education Center has prepared. To affect the budget That can reduce utility expenses - electricity costs of the Udon Thani Education Center. and to support the work on saving electricity in the future of the Udon Thani Education Center to be more efficient.

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