

## **Developing Model of Creating the Cooperation Networks for Driven to People's Sector Energy Management into Lower Northern Region, Thailand**

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### **ABSTRACT**

Operations in driving energy management to the people's sector must have a link of cooperation from all stakeholders to play a role in the management to effectiveness. Specific purpose a developing model of creating the cooperation networks for driven to people's sector energy management. A qualitative research to study with participants on the groups and organizations involved of public energy management in Lower Northern Region, Thailand. The collection to involved synthesizing documentary, interview questionnaire and group discussion to the data. The study revealed that factors in creating a network of cooperation to drive energy management in the people's sector of internal factors from coordination and assistance in operations, external factors from government policies that have focused on creating a network of cooperation. Model of creating the cooperation networks to six factors of reasoning principle, goals, objectives, development networks, process, evaluation. Finally, the success from a strengthening of the network in cooperation to create the linkage on activities from the exchange of knowledge and expansion of people's network organization.

### **Keywords:**

Model of creating the cooperation networks, people's sector, energy management.

### **Introduction**

Knowledge-based economy of learning the knowledge and innovation are to an important factors in the development and promotion of continuous learning towards a knowledge-based economy society that shows the social conditions have to changed according to the trend of globalization and emphasizes the potential of people to be knowledgeable. Future societies are knowledge-based societies where learning, knowledge and innovation are essential development factors that must promote and create a continuous learning situation in order to improve the quality and effectiveness. (Pornchai Jedaman, and Others, 2017) In a learning and supporting to systematic participation, defining and making decisions in public activities relevant to oneself, encouraging all sectors of society to reach its full potential. A creating the cooperation networks for driven to people's sector energy management of important to provide sufficient energy of good quality and reasonable price. (Joyce, B. and Weil, M.,2001) While, the same time in production activities, energy efficiency, economy, environmental friendliness to provided. Enhance competitiveness and manage a existing energy to extend as period a using the longest. Thai's government has encouraged the use of renewable energy in the country to increase. as well as increasing energy efficiency, by reducing the proportion of energy use to energy intensity. It was found that in 2020 Thailand used 11,642 thousand tons of renewable energy when compared to the reduction of crude oil equivalent ratio of 11,642 thousand tons to 19 percentage, as well as the proportion of energy use to gross product that tends to decline continuously. Especially the use of energy sources that exist within the community itself, therefore, the goal is to develop renewable energy to "increase the proportion of renewable energy from to focus on finding answers to villages or local communities a leading to the final goal together, which is "Strengthening local communities to self-reliance" in the dimensions of energy management to the people's sector of seeking and relying on renewable energy sources. (Thailand Power

Development Plan, PDP, 2018) Thanakorn Rattakul (2013) an establish guidelines for promoting energy plans to support the policy to strengthen the security of electric power, this is a master plan for the long-term supply of electricity in Thailand for 15-20 years to create stability and sufficiency in electricity demand.

However, the energy propulsion process still has problems with the mutual understanding of various sectors such as private or state power generation businesses at the level of policy can be defined, policy formulation and strategic plans are lacking, real people's participation, implementation at the local level, people's are not accepted and viewed as a social impact despite the environmental impact assessment, but still not confident in the process, etc. Also, the study and analysis of building a network of cooperation in energy management in the people's sector, and the implementation of the promotion of community energy technology that government agencies and NGOs have worked together with energy networks in Lower Northern region, Thailand to found that the conditions for creating cooperation to specialized network that creates learning, sometimes based on interest. Mostly, it is about reducing production costs and increasing income, the problem from the lack of cooperation in planning for the development of the people's energy management system, related factors from the readiness to mobilize materials, equipment and operations in the promote careers, but lack of process-oriented management. From the problems and causes mentioned above to imperative a linking the cooperation with groups, organizations, and networks to have opportunities to play a common role in people's energy management into the manner of creating cooperation in co-thinking, co-decision making, co-planning, co-operation, co-responsibility, co-monitoring and evaluation, and co-sharing benefits. Specific purpose to study the problem condition and factors of creating the cooperation networks for driven to people's sector energy management towards a developing model of creating the cooperation networks for driven to people's sector energy management into Lower Northern region, Thailand.

### **CREATING COOPERATION NETWORKS**

The creating cooperation networks was an important principle for creating, providing opportunities for colleagues to express their opinions, participate in decision-making and take responsibility, this will enable people in the organization to understand the goals and problems of the organization. (Cohen, J.M. and Uphoff, N.T, 1980) Working in which management has a one-sided view of the business by providing scheduled and scheduled work, time and regulation controls, without involvement of practitioners in organizational activities, able to develop and lead the organization to have good progress because the members of the organization do not understand the objectives and may disagree with the policy, compliance with the orders of the management a making the operator work to reluctantly. (Mate Matekarutjit, 2015) Therefore, productivity is not as good as it should be because it does not take pride in the success, because success is the result of the work of the management. Eventually, the organization behaves in a way that each individual a doing. The only function that results in it leads to not showing any initiative. People's sector to must have the opportunity to participate in decision-making with management by experience in having a operator participation will make to workers of diligent, productivity increases. Under the participatory management it is created an obligation to act without harm. (Visakha Phuchinda, 2014) Setting goals and objectives together between management and practitioners, working together to improve and develop to the goals of the organization to eliminate conflicts that arise, authority and reporting capacity for individual tasks, workers need independence in their own operational responsibilities and decision-making.

Participatory management in society needs to promote an atmosphere of teamwork. However, a comprehensive view of participation must be viewed in the relevant context. Jinnawat Pakotang (2016) by defining meaning and coordinating, emphasizing processes that allow all parties to involved as participate into stakeholders, tasks and duties, decision-making, implementation and evaluation. Participation it's a matter of responsibility to feel connected to work trust and trust cooperation, because everyone has the same goals and objectives a working in the same direction there is a shared responsibility to make the product come out more efficiently. Schuler, Barbara L. (1990) a creating the cooperation networks to management of efficiently collaborative in which a group combines human and material resources to supervise, plan, strategies, and implement structures to execute an education system. Also, cooperation networks into appreciation as recognition, appreciation, appreciation, focus on opening up and listening to learn, including an understanding by using the study of needs, resources, organizational potential and community, influence such as selective, screening, focusing on persuasion, persuasion and reasoning to lead to policy formulation and planning, and control was a development that required management and mobilization of all forces into creativity, focusing on decision-making, setting rules and planning solutions and operations in driving energy management to the people's sector must have a link of cooperation from all stakeholders of creating the cooperation networks for driven to people's sector energy management on reasoning principle, goals, objectives, development networks, process, evaluation and including the guidelines for operations to play a role in the management to effectiveness

## THE METHODS

Qualitative research came from documentary study and interview by interview questionnaire with the participants a focusing the problem condition and factors towards model of creating the cooperation networks for driven to people's sector energy management and the guidelines for operations into Lower Northern region, Thailand in research methods.

**Participants:-** to consists of groups and organizations that are involved in energy management in the people's sectors of 8 Province into Lower Northern region, Thailand on 15 groups have to total members of 852 persons, and the sample size to used in the study was determined by Krejcie & Morgan (1979) on proportion to 95% of 269 samples

**Research Tool:-** The tool of research was structure interview questionnaires of problem condition and factors of creating the cooperation networks for driven to people's sector energy management to have Item of Objective Congruence (IOC) by the experts to assessment the interview questionnaires of 0.66 - 1.00.

**Data Collection:-** in the collections of this study to involved synthesizing documentary to study the contents were perceived on influence for analyzing, to interview by interview questionnaire, group discussion and workshop with 15 groups of 269 samples for analyzed the problem condition and factors towards model of creating the cooperation networks for driven to people's sector energy management on the factors of reasoning principle, goals, objectives, development networks, process, evaluation to indicators, including the guidelines for operations of creating the cooperation networks as people's sector energy management to effectiveness in the data.

**Data Analysis:-** the data analysis on the problem condition and factors towards model of creating the cooperation networks for driven to people's sector energy management into the factors and indicators including the guidelines for operations as qualitative data using grounded theory a relying on analytical methods to open coding of creating the most concepts are divided into 2 levels as substantive code, theoretical code is conceptualization into after creating all the

concepts this stage is based on knowledge of theoretical sensitivity on analyzer, in addition, a comparison of stability to content comparative method of each data unit, category when creating concepts or opening codes at both levels will be categorize the code of similarity or related in a context, condition, and consequences, which these are things make it visible on the process of clear phenomenon, axial coding for relationships analyzed between the resulting category and context for getting the main category and subcategory include central concept to checking with the data provider, and theoretical generalization for interpretation lead to conclusion and SWOT analysis.

## MAJOR FINDINGS

Developing model of creating the cooperation networks for driven to people's sector energy management into Lower Northern region, Thailand of the results were followed:

### ***a) Results of problem condition and factors of creating the cooperation networks for driven to people's sector energy management.***

The problem condition and factors of creating the cooperation networks for driven to people's sector energy management of condition to have the collaboration to created as a network in create a learning platform to reduce production costs and increase revenue a using renewable energy technology. Problem of creating the cooperation networks for driven to people's sector energy management from the lack of cooperation in planning for the development of energy management systems in the people's sector. Factors of creating the cooperation networks for driven to people's sector energy management of internal factors are the strengths that can coordinate with all departments, the willingness of mobilization of materials and equipment to help each other in operation, the weak point is the lack of management that focuses on the use of participative research and development processes. External factors are opportunities from the government's policy to focus on creating a network of cooperation, allowing the public sector to participate, and that various agencies have promoted the development of careers that are conducive to the creation of knowledge and understanding, while the barrier is the lack of access to new services and marketing. However, it is an important issue to model of creating the cooperation networks for driven to people's sector energy management to effectiveness.

### ***b) Results of model of creating the cooperation networks for driven to people's sector energy management.***

Model of creating the cooperation networks for driven to people's sector energy management to effectiveness into six factors of reasoning principle, goals, objectives, development networks, process, evaluation such as indicators were followed;

1. ***Reasoning principle:-*** a working together as the partnership, the conceptual principles, the networks strengthening, principles of network cooperation.

2. ***Goals:-*** approaches to an enhancing the networks of cooperation throughout a learning, sharing, and cooperation to ability people's energy management, include a driving people's energy management into the area base.

3. ***Objectives:-*** for a creating the cooperation networks for driven to people's sector energy management to effectiveness, the network group can learning and sharing and expanding the results of people's energy management together, a guidelines for operations in the government and academic sectors.

4. **Development networks:-** government networks, private sector networks, and people's networks.
5. **The process:-** networking initiatives, distributing consolidated ideas, creative learning and sharing, resource mobilization, expanding horizontal network organizations.
6. **Evaluation:-** creating the capability and sustainability public energy management cooperation network, learning and sharing and expanding results in the joint energy management of the people's sector of the networks, a guidelines for operations in the government and academic sectors of the success factor is the principle of working together in the partnership, conceptual principles for strengthening cooperation networks, and principles of building cooperation networks with people's organizations into an experience and results on energy management as a starting point for linking cooperation in carrying out activities and exchanging knowledge to expand people's network organizations.

***c) Results of the guidelines for operations of creating the cooperation networks as people's sector energy management to effectiveness***

The guidelines for operations of creating the cooperation networks as people's sector energy management to effectiveness in educating to the cooperation networks as people's sector energy management through meetings, trainings, seminars and curriculum development, etc. Developing participation by organizing process-oriented activities for people's sector energy management to participate in every step from joint awareness, joint initiative, joint decision, joint action, and joint audit to be the beneficiary and jointly take responsibility for the consequences. Utilization of various media available in the area to create learning and awareness of participation in the preparation of development plans that rely on the community plan as a guideline for the preparation of strategic plans, development plans to people's sector energy management. Promoting the establishment of a community group or organization, promoting working as a group system and committee a using rationale in decision making and seizing common interests.

## **DISCUSSION**

Factors in creating a network of cooperation to drive energy management in the people's sector of internal factors from coordination and assistance in operations, external factors from government policies that have focused on creating a network of cooperation and the model of creating the cooperation networks including reasoning principle, goals, objectives, development networks, process, evaluation. Because a linking cooperation with various groups of organizations and networks to have opportunities to play a common role in the energy management of the people's sector in In the way of networking with differentiation and operational issues for collaborative action, collaborative learning, mutual sharing, and openness. An important strategy to lead to a joint partnership and creating innovation-driven sustainable energy management under participation of people's sector energy management to effectiveness. Pornchai Jedaman, Chotniphitphon Phoncharoen, PhraDhammamolee, Riangdow Tavachalee, Benjapuk Jongmuanwai, Sanya Kenaphoom, and Busara Niyomves (2020) to implementation into strategic development and management are preparing people, creating people, an innovation, linking access to technology and being in the change as the requires systematic management used of driven planning to the successful and can be converted to the practice as a procedure for the problem solving throughout the participation to sustainability development. Wuttikon Datkwinlerd and Pornchai Jedaman (2021) to report the personnel's involvement to issuance of rules and regulations including co- conjunction, co- planning, co- operation, co- follows up

participation, co- assessment, co- responsibility. Creating the capability and sustainability public energy management cooperation network, learning and sharing and expanding results in the joint energy management of the people's sector of the networks, a guidelines for operations in the government and academic sectors of the success factor is the principle of working together in the partnership, conceptual principles for strengthening cooperation networks, and principles of building cooperation networks with people's organizations into an experience and results on energy management as a starting point for linking cooperation in carrying out activities and exchanging knowledge to expand people's network organizations. Montree Numnam (2012) the goals collaborative network to efficiency of network membership determination, objective setting, operational engagement, leadership skills, and Teerasak Srisurakul (2014) the network coordination, monitoring and evaluation, organizational culture, local resources, policy and technology. In the goals to approaches to an enhancing the networks of cooperation throughout a learning, sharing, and cooperation to ability people's energy management, include a driving people's energy management into the area base. Phoochinda. W. (2012) into management of renewable energy production at the household and community levels to said to the needs of cooperation networks, there is an expectation to improve the efficiency of public services in order to be cost-effective in the shared resource management of the organization, and the cost-effectiveness of using resources. Reasoning principle of a working together as the partnership, the conceptual principles, the networks strengthening, principles of network cooperation towards the process in a networking initiatives, distributing consolidated ideas, creative learning and sharing, resource mobilization, expanding horizontal network organizations. Rujarekha Wittayawutthikul (2014) the collaborative networking includes network membership assignment, shared vision, operational engagement, communication and interaction, mutual benefit management, monitoring and evaluation, development network members in implementation and planning into action. The success from a strengthening of the network in cooperation to create the linkage on activities from the exchange of knowledge and expansion of people's network organization.

### ***Implementation.***

Developing the participation by organizing process-oriented activities for people's sector energy management to participate in every step from joint awareness, joint initiative, joint decision, joint action, and joint audit to be the beneficiary and jointly take responsibility for the consequences. Utilization of various media available in the area to create learning and awareness of participation in the preparation of development plans that rely on the community plan as a guideline for the preparation of strategic plans, development plans to people's sector energy management.

## **CONCLUSION**

Model of creating the cooperation networks for driven to people's sector energy management to effectiveness into factors of; 1) reasoning principle of working together as the partnership, the conceptual principles, the networks strengthening, principles of network cooperation, 2) goals into approaches to an enhancing the networks of cooperation throughout a learning, sharing, and cooperation to ability people's energy management, include a driving people's energy management into the area base, 3) objectives for a creating the cooperation networks for driven to people's sector energy management to effectiveness, the network group can learning and sharing and expanding the results of people's energy management together, a guidelines for operations in the government and academic sectors, 4) development networks such as government networks, private sector networks, and people's networks, 5) process in networking initiatives, distributing consolidated ideas, creative learning and sharing, resource mobilization, expanding horizontal

network organizations, and 6) evaluation into a creating the capability and sustainability public energy management cooperation network, learning and sharing and expanding results in the joint energy management of the people's sector of the networks, a guidelines for operations in the government and academic sectors of the success factor is the principle of working together in the partnership, conceptual principles for strengthening cooperation networks, and principles of building cooperation networks with people's organizations into an experience and results on energy management as a starting point for linking cooperation in carrying out activities and exchanging knowledge to expand people's network organizations. The success from a strengthening of the network in cooperation to create the linkage on activities from the exchange of knowledge and expansion of people's network organization.

## REFERNCES

- [1] Cohen, J.M. and Uphoff, N.T. 1980. Participation's the Place in the Rural Development: A Seeking Clarity through Specificity" World Development, pp. 213- 235.
- [2] Good, Carter V. 2005. Dictionary of Education.5<sup>th</sup> ed. New York: McGraw-Hill.
- [3] Jinnawat Pakotang. 2016. Model of community participation in the basic education management of outstanding schools. Educational Administration. Chonburi Province, Thailand: Burapa University.
- [4] Joyce, B. and Weil, M. 2001. Models of teaching. 5<sup>th</sup> ed. Massachusetts : Allyn and Bacon.
- [5] Mate Matekarutjit. 2015. The Cooperative Educational Management: People, Local Government Organization and Government. Bangkok, Thailand: Book Point Publishing
- [6] Montree Numnam. 2012. Collaborative Network in Art and Culture Project Management History and local wisdom of city of some magical Sukhothai. Doctorate of Philosophy Dissertation, Department of Public Administration, Bangkok, Thailand: Sripatum University.
- [7] Phoochinda. W. 2012. The Management of Renewable Energy Production at The Household and Community Levels: A Case Study of Phaluai Island in Thailand. Journal of Environmental Management: 9 (2), pp. 346- 358.
- [8] Pornchai Jedaman, and Others. 2017. Developing education in Thailand 4.0 era for the 21<sup>st</sup> century. Industrial Education Journal, 16(2), pp. 92-99.
- [9] Pornchai Jedaman, Chotniphitphon Phoncharoen, PhraDhammamolee, Riangdow Tavachalee, Benjapuk Jongmuanwai, Sanya Kenaphoom, and Busara Niyomves. 2020. Educational Management 4.0: The Result Based Management Process to Driven A Uplifting Sustainable Education in The 21<sup>st</sup> Century. Journal of Psychology and Education : 57(9), pp. 1226-1237.
- [10] Rujarekha Wittayawutthikul. 2014. Development of a social network model for increasing research productivity in universities. Doctorate of Information Science Program Department of Liberal Arts. Bangkok, Thailand: Sukhothai Thammathirat University.
- [11] Schuler, Barbara L. 1990. "Citizen Participation in Educational Decision Making." Doctoral Dissertation Abstracts International. Indiana State University.
- [12] Teerasak Srisurakul. 2014. Development of community participation model in the provision of education to informal studies: Analytical application to affirmative factors and operational research. Journal of Education, 42(2), p. 240.

- [13] Thailand Power Development Plan. 2018. An Energy Management. Bangkok, Thailand: Ministry of Energy office.
- [14] Thanakorn Rattakul. 2013. Effectiveness of Renewable Energy Management in Thailand. Doctoral Thesis, Department of Public Administration. Bangkok, Thailand: Valaya Alongkorn Rajabhat University.
- [15] Visakha Phuchinda. 2014. Renewable energy management for energy production at the community level and Household Level: A Case Study of Koh Phaluai Community. *Journal of Environmental Management*: 9(2), pp. 125- 136.
- [16] Wuttikon Datkwinlerd and Pornchai Jedaman. 2021. Personnel's Involvement to Issuance of Rules and Regulations in Rajabhat Mahasarakham University, Thailand. *Annals of R.S.C.B. ISSN: 1583- 6258, Vol.25, Issue 4, pp. 17522-17529.*