Improving Public Participation in Myanmar's Energy Sector: Participatory Design for Power Generation Development

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Abstract

The power generation sector in Myanmar is facing public resistance, partly due to a lack of meaningful and inclusive public participation in this policy process. Public participation and meaningful policy deliberation are currently overlooked in the development of power generation projects. This study examines the issue by employing a qualitative research design, including documentary research and semi-structured interviews with key policy actors. The findings reveal three major categories of challenges, namely, institutional, perceptional, and capacity-related, that impede meaningful public participation in power generation projects. To address these challenges, the study proposes to redesign the project development process to integrate public inputs, drawing lessons from a participatory design approach.

Keywords: Power generation sector, Public policymaking, Policy implementation, Public participation, Participatory design, Energy planning and development, Myanmar

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Introduction

Planning to fail? Deficient public participation in Myanmar power generation development

Since the 2011 political transition, Myanmar has entered a period of rapid economic growth, resulting from government investment in rapid manufacturing growth, infrastructure, and a surge in hotels and tourism. As a result, this has led to a sharp growth in electric power demand – 15-20 percent per year (Ministry of Electricity and Energy [MOEE], 2019). This demand might also be growing along with the policy to increase electrification access nationwide by 2030, as the country's electricity supply currently covers 68 percent of the population (World Bank, 2023). In addition, the demand can be driven by the growing population: the current population is approximately 55 million in 2021, which is a 0.73 percent increase from 2020, a 0.67 percent rise up from 2019 to 2020, and a 0.63 percent climb between 2018 and 2019 (Macrotrends, 2022). Besides, the living standard in rural and urban areas with the increasing usage of electrical appliances could enable more energy consumption, although the present country's per capita consumption is 460 kWh (Our World in Data, 2019). Against this backdrop, for the government, power generation projects are increasingly needed to fill the gap created by these driving forces.

To meet the growing demand, the country has since been developing power generation projects across the country, from hydropower to coal power plants. The two governments – the military-backed government and Aung San Suu Kyi-led civilian government – have prioritized the electricity sector. For example, during the latter government, the electricity and energy budget was at the top of the 2019-2020 budget list (Htwe, 2019). It indicates how the government's policy priority has focused on power sector development. However, most power generation projects have failed to be implemented while delaying to meeting of that growing demand. Even in the case of the projects that were technically, environmentally, and financially feasible, they could not be implemented on the ground. For example, although power generation agreements such as MOU and MOA have already been signed, these projects have not been implemented successfully (See Tables 1.1 & 1.2). The projects have failed partly because they have faced public pushback - scholars such as Kim (2021) and Simpson (2013), for example, also found similar conclusions regarding dam developments in Myanmar. This means the public has been less included when planning and developing power plant projects in the country. In other words, a lack of public participation results in conflicts during the project's implementation. The importance of public participation has been overlooked during the planning process of the current power generation projects, whereas a mere public consultation stage comes just before the project's implementation (See figure

1). Therefore, public participation, especially meaningful and deliberative public participation, becomes a key factor in the project's accomplishment.

In Myanmar, different government agencies, including the Ministry of Electricity and Energy, promote public participation as an essential component and have been considering the importance of public participation. However, it is still low in practice, and the policy-making process is less inclusive and meaningful. The agencies understand public participation as informing the public rather than deliberative or interactive communication that could result in an outcome or address public concerns. As a result, project implementation faces challenges, if not failures. Needless to say, the same has been true for the power generation projects in the country: they have been facing public pushback. It is, therefore, relevant to identify challenges impeding public participation and find ways to increase and improve it to be an inclusive and meaningful process.

This study aims (i) to identify the challenges to increasing public participation in power development in Myanmar and (ii) to design for inclusive and meaningful public participation process in power generation projects. The scope of the study will focus on the power generation development process in Myanmar.

Table 1. MOU signed the project list of thermal power generation from 2012 to 2017

Sr	Project Name	Installed Capacity (MW)	Location	MOU Signed Date	Status
1	Myeik (50 MW)	50	Tanintharyi Region	27-7-2012	Incomplete
2	Yangon	First Stage (300) Second Stage- 660 Third Stage-1980	Yangon Region	24-8-2012	Incomplete
3	Nga Yoke Kaung	540	Ayeyarwady Region	11-4-2013	Incomplete
4	Myeik (1800 MW)	1800	Tanintharyi Region	9-10-2014	Incomplete
5	Myit Wa	2640	Tanintharyi Region	9-10-2014	Incomplete
6	Nga Pu Taw	600	Ayeyarwady Region	7-10-2015	Incomplete
7	Thilawa	315	Yangon Region	28-1-2016	Incomplete
8	Hpa-an	1280	Kayin State	3-4-2017	Incomplete
Total Installed Capacity		7515			

Note: MOEE, 2020

Table 2. MOA signed the project list of thermal power generation from 2015 to 2016

Sr	Project Name	Installed Capacity (MW)	Location	MOA Signed Date	Status
1	Kyaing Tong	660	Shan State	11-3-2015	Incomplete
2	Yay (Adin)	1280	Mon State	9-4-2015	Incomplete
3	Yamazu	500	Tanintharyi Region	24-2-2016	Incomplete
4	Kalewa	540	Sagging Region	26-3-2016	Incomplete
5	Kyauk Tan	600	Yangon Region	22-3-2016	Incomplete
Total Installed Capacity		3580			

Note: MOEE, 2020

Institutional Structure of the Power Sector

The following section discusses a brief overview of the institutional documents related to the power sector in Myanmar that drives electrification across the country.

Energy Policy of Myanmar

The energy sector policy is driven by eleven objectives (Kobayashi & Phoumin, 2019). In short, the policy focuses on energy accessibility through energy development and private sector participation and covers energy efficiency, affordability, energy reserves, and security. In light of resource sectors, the policy highlights sectors such as oil, natural gas, and electric power sectors, particularly hydropower, coal power, and integration of renewable energy; however, wind and solar power have not yet been mentioned.

Regarding the policy implementation plan, the Ministry of Electricity and Energy has developed the National Electricity Master Plan - NEMP and the National Electrification Plan- NEP, as it stands poised for rapid power demand. The common goal of these two plans is accessibility and energy security; in other words, the main target is universal electrification by 2030. Given that the country is facing energy poverty among ASEAN countries, energy accessibility and affordability are prioritized, and policy and plan are driven by the fact that the country's electricity supply currently covers 68 percent of the population, and the government targeted to increase the nationwide electrification access to cover the whole population by 2030. (World Bank Data, 2023)

What is the National Electricity Master Plan -NEMP?

The National Electricity Master Plan [NEMP] (2015-2030) focuses on power generation and transmission in the power sector. It can be seen in the NEMP that those five main categories- demand forecast, power generation, power transmission, economic assessment, and strategic environmental assessment- are embraced.

Regarding the demand forecast scenario, a high forecasted demand (yearly power consumption and peak demand) is applied to the power generation plan and system plan to achieve a stable power supply in the future, even if economic growth is more than the projection. In the power generation chapter, the current situation of power generation development in Myanmar is summarized, and Power Generation Development Planning [PGDP] for the long term until 2030, formulated in NEMP 2014, is updated. Analysis of updated PGDP considers the latest situation of the power generation projects in Myanmar; optional studies of the optimum power generation mix are executed to update PGDP. Related to the power transmission scheme, technical problems of the transmission power system, power system development plan, and more reliability in the Myanmar power system. The economic assessment scheme covers the consolidation of the power sector, power supply cost, including transmission cost & tariff level, and tariff level & government subsidies. Turning to the Strategic Environmental Assessment [SEA] chapter, The SEA analysis outlines minimizing environmental impacts in accordance with sustainable energy development and generating more electricity not only from hydropower but also from other available energy sources (and also to have stable and fair prices for consumers while local and foreign investments are invited as well as corporate social responsibility is considered) (MOEE, 2015a)

What is the National Electrification Plan- NEP?

The NEP aims to achieve 100 percent electrification of households by 2030. In other words, it manages the required funds for the plan to access electricity nationwide. This plan supports power utilities in extending the distribution network as three priorities: the populated area near the national grid, the moderately populated area that the grid can connect to, and the remote area that faces transportation difficulties (MOEE, 2015b).

The current practices in designing a power plant project

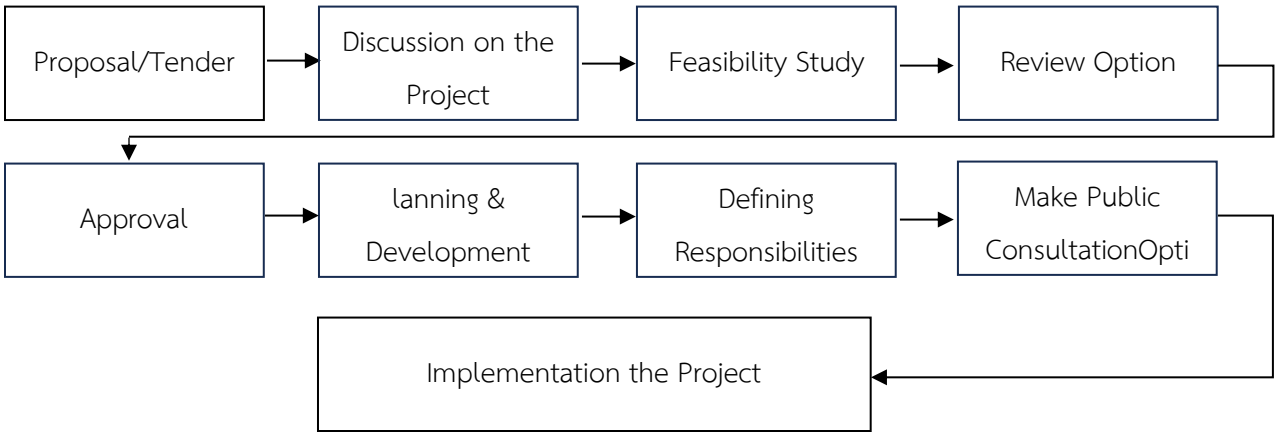


Figure 1. Current Public Engagement Process for Power Projects

Note: The Ministry of Electricity and Energy, Myanmar

The figure illustrates the current public participation process for power projects during the National League for Democracy [NLD] government era, based on the researcher's personal experiences accumulated over a decade at the Ministry of Electricity and Energy, Myanmar. The process begins with submitting proposals or tenders, followed by detailed discussions on the project. Subsequently, a feasibility study is conducted to assess the project's viability. The options are reviewed, leading to the necessary approvals. Detailed planning and development phases are then undertaken, with roles and responsibilities clearly defined. Public consultations are organized to gather feedback and ensure community involvement, which is crucial for the project's success. Finally, the project is implemented, incorporating insights gained from the public consultation process. This structured approach ensures that all stakeholders are engaged throughout the project lifecycle, addressing community concerns and contributing to the overall success of power projects. However, it is a significant improvement during the NLD government era to consider public opinion in project implementation, even though it tends to occur in the last stage before implementation. This approach is better than the military government era, but still requires further improvement. This structured approach supports the participation of all stakeholders throughout the project lifecycle, addressing community concerns and contributing to the overall success of power projects.

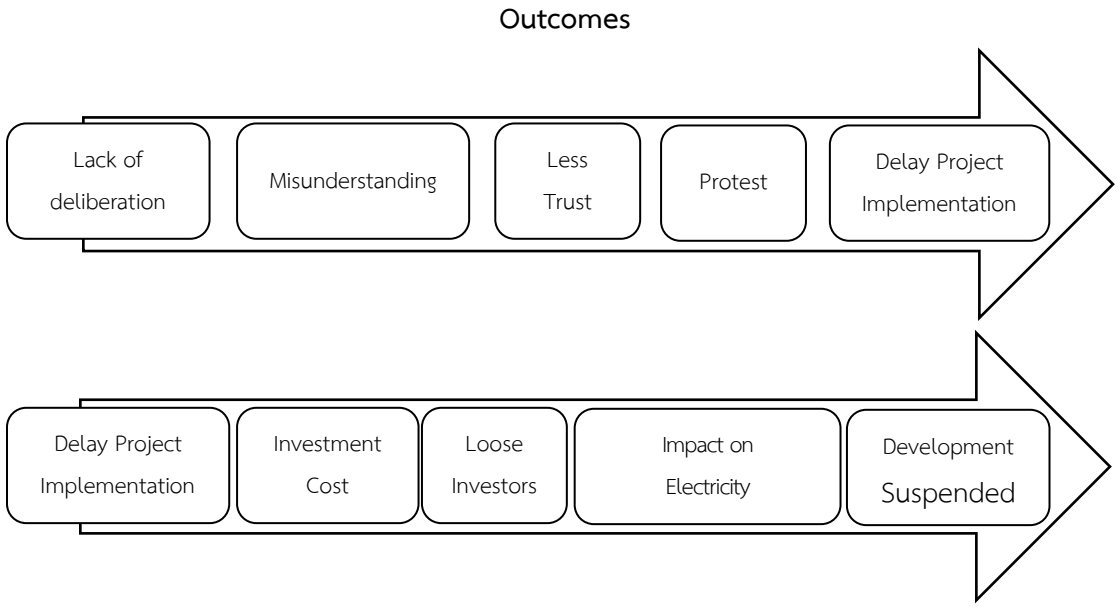


Figure 2. The consequences of a lack of deliberation

Note: Researcher's elaboration

The figure elucidates the detrimental outcomes stemming from a lack of deliberation in the public participation process for power projects in the initial stage. Initially, the absence of thorough deliberation precipitates misunderstandings, eroding trust among stakeholders and the public. This erosion of trust frequently provokes protests, further delaying the implementation of projects. Such delays result in increased investment costs and cause investors to lose confidence, often leading to the withdrawal of investments. These financial and trust-related disruptions significantly impair electricity production and may ultimately lead to the suspension of development activities. Consequently, despite meticulous planning, projects cannot be successfully implemented. This sequence of adverse effects underscores the paramount importance of comprehensive deliberation and effective communication in the planning and execution of power projects to ensure their timely and successful realization.

Literature Review

Why does deliberative public participation matter?

Public participation can be said to be a fundamental democratic practice. In democratic countries, the public is seen as an important stakeholder with the right to participate in decision-making. Public participation thus has a crucial role to play in overcoming democratic deficits (Katsonis, 2019), as it provides the public with a forum where public voices and concerns are to be heard and taken into

account in developing policy choices, which can directly affect the citizens or decide the future of the public. Hence, public participation can also be examined as a pretext for the sound policymaking process since it can enhance transparency and accountability, which builds trust between state and society, which will be a pressing issue for a country with a democratic transition or a country where trust between state and society has collapsed.

Public participation means two ways of communication - both sharing information with the public and obtaining information from the public, and the best way to assume participation is as a continuum or a process rather than stages. However, there should be four crucial scenarios: informing the public, listening to the public, engaging in problem-solving, and developing agreement among stakeholders (Creighton, 2005).

Accordingly, it can be stressed that public participation goes beyond merely providing information to the public, which is what most people used to believe. It is a deliberative communication and interactive process between decision-makers and the public to achieve a common goal of better decision-making, that is, in other terms, in line with the public's concerns, needs, and values.

Public participation can also increase the contribution of groups or individuals to the decision-making process. Decisions that are consistent with public desires can be boosted by public participation, resulting in increased public support and reducing the unacceptance of power generation projects. It has been witnessed that this is largely the case when dealing with the pandemic. However, some key challenges might be faced: for example, a lack of technical knowledge that can result in more time-consuming and different interpretations based on values, beliefs, and motivations. In this case, public involvement in decision-making through deliberation and collaboration is more effective than a top-down approach. Therefore, the success or failure of power projects heavily depends on public support (Jami & Walsh, 2014). Thus, meaningful and deliberative communication becomes a key player in public participation.

More importantly, a public participation process should be an integral part of the planning of power development, as a lack of public participation can drive a powerful dilemma of public opposition to power generation projects (Chaisomphob, Sa-nguanmanasak, & Swangjang, 2004). However, proper public participation design is needed, a stressing issue, as the literature shows, because this process can bridge the public and government for mutual understanding and enhance inclusiveness in the decision-making process. Different types of public participation design are based on different generation

sources, project locations, and people's attitudes in the project area. For that reason, when implementing power generation projects, not only technical feasibility but also ideological, situational, and contextual factors (Fischer, Torgerson, Durnova, & Orsini, 2015), as well as people's feelings, values, and opinions, should be considered in the public participation process - meaning that normative assumption should not be overlooked, as (Fischer et al., 2015) argues. More importantly, if public participation should start in the preliminary stage of the project as a pathway, the process of power generation projects could be smoothly achieved (Chaisomphob, Sa-nguanmanasak, & Swangjang, 2004).

Public participation design can shape the result of a policy and project. Bobbio (2019) discusses the important design of public participation and five dilemmas related to the design, and they stress that there have been various connections between the design and the results. They then suggest that the different participation designs should be considered depending on the policy goals. Moreover, the participatory process will have better outcomes if participatory design a) has diverse participants, b) creates meaningful deliberations among participants, c) provides inclusive information, and d) offers opportunities to have impacts on policy, decisions, and actions (Nabatchi, Ertinger & Leighninger, 2015).

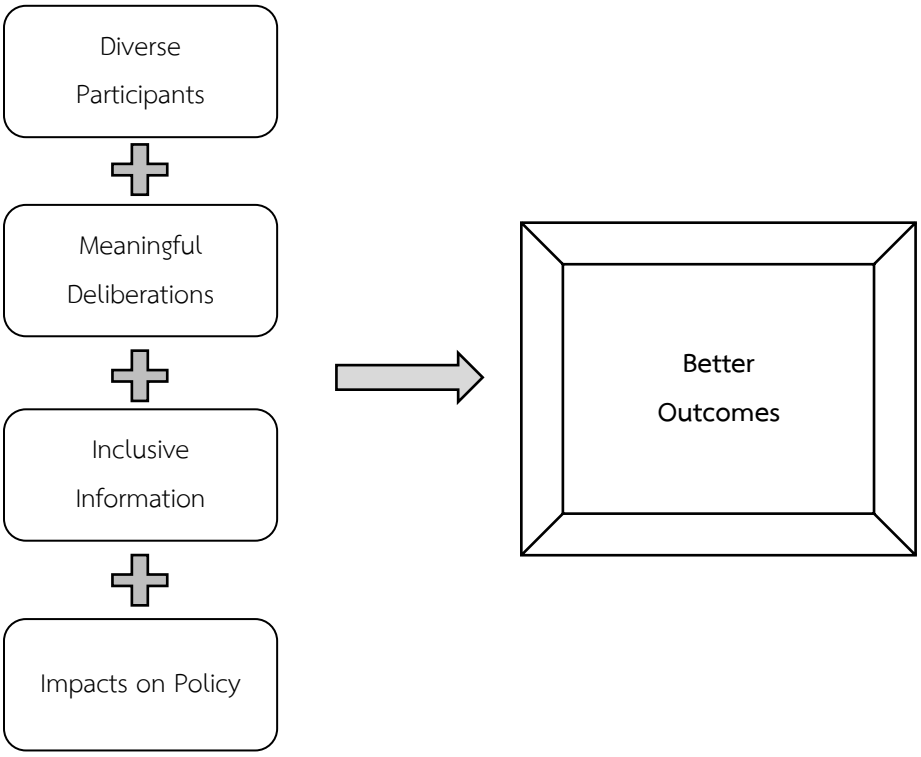


Figure 3. Features of Participatory Design

Note: Nabatchi, Ertinger & Leighninger (2015)

Literature suggests it is crucial and challenging to design a sound sense of 'who can participate? when? and how?' along the decision-making process. Fung (2006) stresses that there remain challenges in designing public participation, and they raise three questions: who participates, when and how they participate, and to what extent their decisions are taken into account in the policymaking process. They then propose an institutional design called participatory design to address these questions.

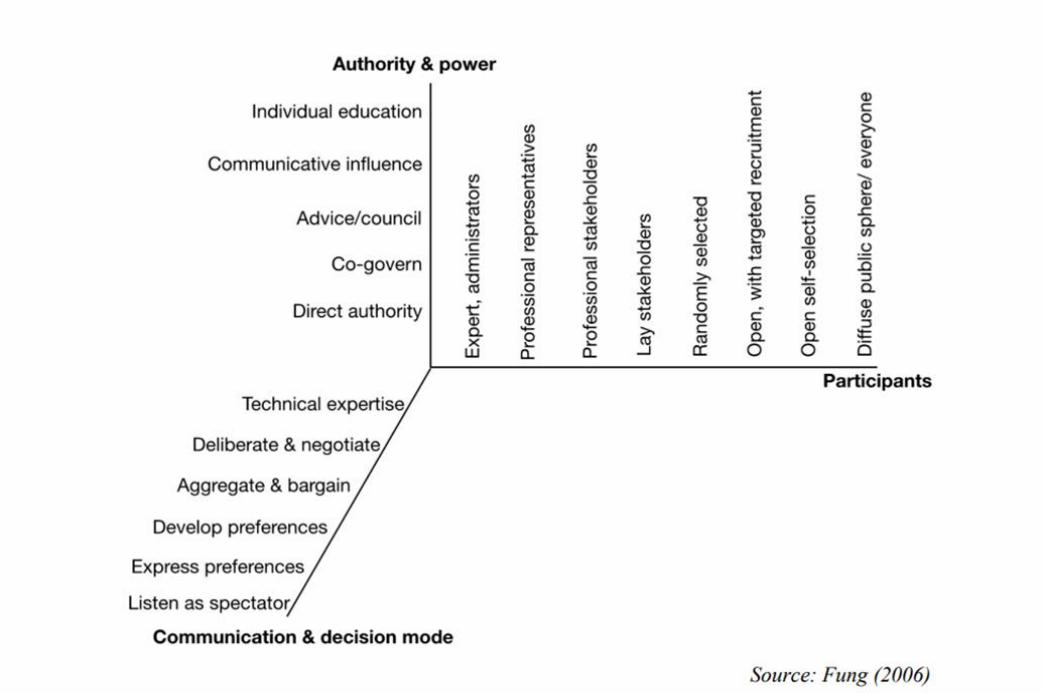


Figure 4. Participatory Design

Note: Fung (2006)

In Fung's (2006) participatory design (or democracy cube), it can be said that three components can be considered vital factors, such as authority & power, participants, and communication & decision mode. They then detail each component of the design. Related to the authority & power room, it includes direct authority to individual education at five levels: direct authority, co-govern, advice/council, communication influence, and individual education. Participant selection is classified into state, mini-publics (open to the public under certain conditions), and public. It can generally be said that the more consideration for the public, the more inclusive it is. In other words, the opposite will be seen if there is more consideration for the state. Regarding the mode of communication and decision, the least intense and most intense are examined as six levels: technical expertise, deliberative & negotiation, aggregate & bargain, develop preferences, express preferences, and listening as a spectator.

Inferential statistical procedures used in this research include multiple regression analysis to examine the relationships among the board of directors, ownership structures, and the performance of listed companies in Thailand and Vietnam. Hypothesis testing will be performed to assess the significance of these relationships at statistical levels of 1 percent, 5 percent, and 10 percent. The models employed for Thailand (Models 1 -3) and Vietnam (Models 4-6) are outlined as follows:

In addition, Fung (2015) outlines three main challenges regarding increasing participation in participatory design: a) leadership, b) lack of agreement on the role of public participation, and c) triviality, which they call. This more or less overlaps with what Thin and Chann's (2020) work found in Myanmar. They discuss three challenges related to public engagement, especially at the sub-national level of the country: structural or institutional challenges, perceptual challenges, and capacity challenges.

To summarize, the literature points out that deliberative public participation should be integral to the policy process as it can overcome democratic deficits. The same must be true for the development of power generation projects – comparative literature (done by scholars) suggests that the projects are more likely to be successful if deliberative public participation is placed at the beginning of the process. However, it shows us that there remain challenges with regard to improving public participation in the decision-making process. As various literature stresses, deliberative participatory design matters to be a meaningful and inclusive participation process in the planning of the power generation projects.

Analytical Frameworks and Research Methods

Democracy cube as a guiding framework in developing the participatory design for power generation development

This research aims to increase public participation and design a meaningful and inclusive participatory process in Myanmar's power generation project planning. To achieve the research objectives mentioned above, the following research question needs to be answered:

- What are the current challenges impeding public participation in energy development?
- How do we improve public participation in energy policy-making, especially planning and development?

To address the first question, analytical frameworks developed based on the literature review were used to identify the challenges to increasing public participation. There were three dimensions in the analytical framework: 1) institutional challenges (leadership & lack of agreement on the role of public participation), 2) perceptional challenges (triviality), and 3) capacity challenges (Fung, 2015; Thin & Chann, 2020).

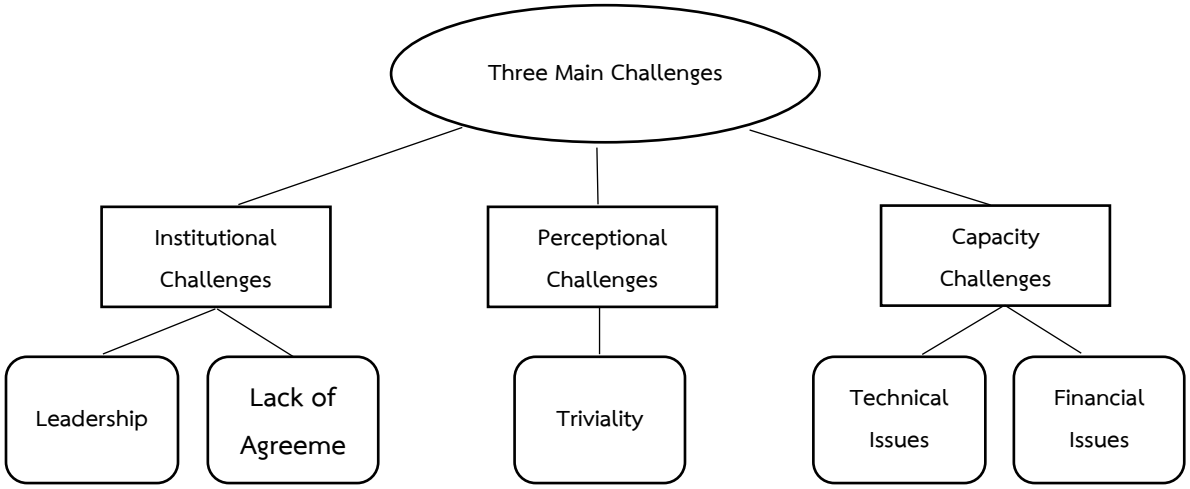


Figure 5. An Adapted analytical framework

Note: Fung (2015)

To answer the second one, Fung's (2006) democracy cube was applied to address the research question.

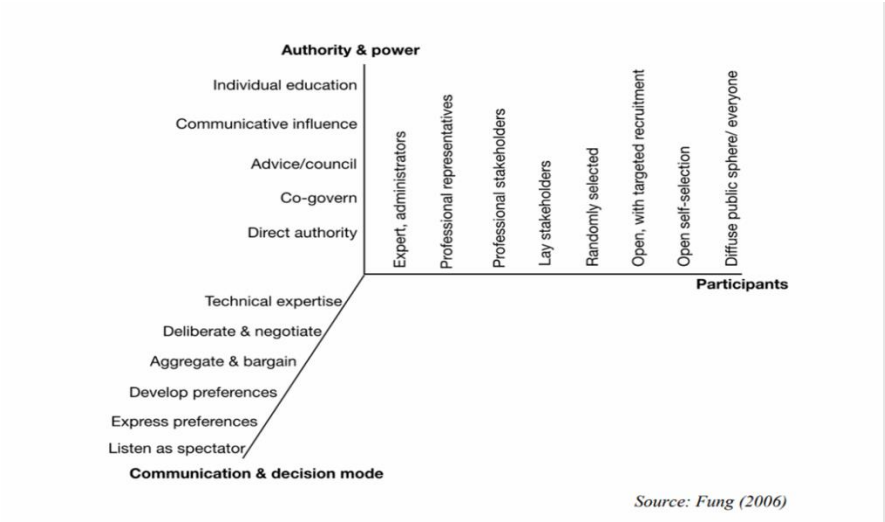


Figure 6. Democracy Cube as Design Framework

Note: Fung (2006)

Research Methods

The study employed a qualitative design, as the qualitative method was predetermined and planned at the beginning of the research process. This study had three stages of undertaking research: reviewing the existing documental literature, collecting and analyzing qualitative data, and finally, interpreting them to address the research question.

Data Collection

Qualitative data collection was employed. In addition to over 10 years of participatory observation, documentary research, and semi-structured interviews were the primary methods. Documentary research was used as an initial collection of data. The data involved published and unpublished documents and documents obtained by retrieving from the ministries' websites related to the research questions. Semi-structured interviews were employed to gain a better understanding of the case.

A combination of purposive sampling and a snowballing approach was employed to identify interview participants. The selection was guided by predefined criteria: professional experience in the energy or environmental sector, involvement in policymaking, implementation, or advocacy related to power generation in Myanmar, familiarity with the public participation process in energy projects and direct involvement in power generation projects from the private sector, including local and international investor companies. Eight key informant interviews were conducted from different backgrounds: two former government officials from the Ministry of Electricity and Energy, Myanmar, a freelance energy expert, two project managers from local and international energy companies, an environmental expert, an environmental activist, and a consultant from a local environmental firm. Online interviews, especially using Zoom, were conducted from May 12, 2022, to May 23, 2022. Before the interview, it was made to ensured that a consent form was provided to the participants outlining what the research was for and their confidentiality.

Data Analysis

Thematic analysis was applied to analyze the qualitative data. The results from qualitative data were therefore organized, categorized thematically, as well as interpreted to address the research questions.

Findings: The Challenges Impeding Public Participation in The Power Generation Sector

Public participation in energy development in Myanmar faces three main challenges: institutional challenges, perception challenges, and capacity challenges.

Institutional Challenges

When it comes to institutional challenges, first, limited and unclear procedures and frameworks related to public participation are largely the case to increase in public participation as people raise questions regarding the development process of the projects rather than the projects. An interview respondent discussed how clear frameworks and procedures are needed in energy project planning:

> *"There should be a clear framework for what steps to take. The response plan also needed to be considered. In doing so, the benefits and consequences must also be planned. Furthermore, the nature and attitude of the people have to examine whether a project is perfect or imperfect, and there is always a group that opposes it. Accordingly, if the project announcement starts at the initial stage, it cannot move forward. Nevertheless, announcements can promote transparency and public satisfaction. To that end, a solid framework or mechanism should be considered to overcome the challenges."* (Online interview, an energy expert, May 2022)

Another respondent added to this conversation, saying:

> *"There has been no specific framework on how to implement public participation. Only when they face problems do they deal with them as they happen. There are no procedures that should be ahead. Some projects have to be suspended."* (Online interview, a formal government official, May 2022)

The finding supports the importance of participatory frameworks, indicating that the achievements of project implementation depend on a solid design framework that integrates public opinion at the early stage of the project's development. In addition, it shows how it is important to prepare a response plan regarding the project.

They continued what happened by the time the government overrode the public voices:

> *"According to the country's development plan, some projects have to be done by the government. Thus, public opinions and demands have been pushed back as the last priority.*

Some projects were continued amid the people's pushbacks; however, these were being protected by the armed forces during the projects' operation period because people rejected them."

The facts surface that a lack of public participation also drives the negative consequences related to the projects and the government. For that reason, it can be said that public participation should be a must in any kind of political leadership in both democratic and non-democratic countries.

Second, limited access to the information could be another case in which people rarely know the information regarding the project – if they knew, it would come at the very last. This, in other words, makes the public concerned about the projects. The respondent added how the public came at last, and that resulted in public pushback:

"Many people cannot accept power generation projects. People wish to access electricity, but cannot accept the rules and procedures. The challenge is that wherever energy is generated, not all locals experience the benefits, but the consequences. Wherever there is development, the locals are suffering more than the benefits. Locals have not been fully informed about their rights since the start of the project, with prior notice." (Online interview, an environmental activist, May 2022)

The statement shows that the project's benefits have not been shared with the local people. The same has been true with the project information – local communities could not access the project information. This makes people feel threatened and anticipate the downside of the projects. As a result, even though local people wish to develop projects in their area, they reject them because of government procedures.

Third, it seems limited access leads to corruption, which has been the case in Myanmar for years. This was added by the respondent:

"We cannot know how much the company paid (to the higher officials) for the projects' agreement - like (MOU) and (MOA), for example." (Online interview, an environmental activist, May 2022).

As a matter of transparency, the interview can be interpreted that the contracts, such as Memorandum of Understanding (MOU) and Memorandum of Agreement (MOA) between the

government and investors for the power generation projects, are signed without informing the public, which, in other words, leads to corruption.

Fourth, communication & coordination among the stakeholders, especially government agencies, are the pressing challenges that need to be improved. A respondent pointed out the fact:

> *"Communication and coordination are also weak among ministries and departments. Some civil servants wish to help but are unaware of the projects, and there is no specific framework."* (Online interview, an investor I, May 2022)

Another respondent also pictured the same challenge, saying:

> *"People could not access the information about the projects. The government announced the project information in the national newspaper and the office's notice board. Since information access is limited, it would be more so regarding participation. Furthermore, when they hold the public meeting at the last stage of the project, they consider the availability of the relevant participants in the project areas less"* (Online interview, an energy expert, May 2022)

Regarding communication and coordination, it can be seen that they are lacking among agencies. Only after all stages of the project are planned will the meeting with the public be public participation. Rather, it could be showing proof of activities that are not effective. For this reason, this demands the appropriate communication channels should be used to provide the project information in a timely manner. Moreover, it shows that availability and accessibility should be considered when planning public meetings.

Perceptional Challenges

Regarding the perceptual challenges, trust could significantly influence public participation in project development. Lack of trust among the government, investors, and the public, including environmental activists, resulted in conflicts and delayed project implementation. Moreover, different standpoints among the stakeholders create a gap in increasing public participation.

The conversation with different respondents illustrated the picture:

> A respondent stated: *"There is a lack of trust in the government. The area has coal mines, but the locals do not get any benefits. It is ingrained in the minds of the local people that the*

investors come onto the land, and they take all the benefits, but the local people get nothing." (Online interview, an investor I, May 2022)

Another respondent argued: *"Making the laws, rules and regulations, policies, and procedures by the government aims to implement the projects, but it is not for the benefit of the public."* (Online interview, an environmental activist, May 2022)

They continued: *"Investors never take responsibility for the project's risks, but they take only the benefits….The government does not consider the people. They consider implementing the project."* (Online interview, an environmental activist, May 2022)

In contrast, a respondent raised questions about the genuineness of the environmental concerned groups: *"Environmental concerned groups incite to deter the project. And they do not have positive thinking."* (Online interview, an investor I, May 2022)

Another respondent joined the same conversation: *"Environmental concerned groups are not constructive when they portray the projects. And they use public fear when they talk with the local people, not to implement the projects."* (Online interview, an investor II, May 2022)

And continue: *"I think environmentally concerned groups speak out about the project depending on their self-interests."* (Online interview, an investor II, May 2022)

By analyzing the respondents' conversations, we see that trust was missing. In addition, they stand differently and fail to listen to each other. In this case, environmental concern groups have accused the government officials of corruption. On the other hand, investors have questioned environmental concern groups, saying their interest in the project depends on their self-interest. However, their common description points out that local people are honest, showing that deliberations are needed to negotiate related to the project.

In addition, a lack of seriousness with regard to the importance of public participation could be another reason why public participation is low, whereas public participation is implemented as a tick-box exercise rather than as a part of every policy process.

Capacity Challenges

Given the historical weakness in institutions and capacity building, capacity challenges impact inclusive involvement in the decision-making process. The main challenges, among others, include limited human resources, limited time for public participation, limited knowledge regarding the importance of public participation, and financial capability.

A respondent described how the weakness in institutions and capacity building creates a gap in communication and coordination, resulting in limited knowledge about the projects:

> *"Communication and coordination are also weak among ministries and departments. Some civil servants wish to help but are unaware of the projects, and there is no specific framework."* (Online interview, an investor I, May 2022).

Another respondent highlighted the limited capacity of the related government agencies:

> *"In some departments under ministries, civil servants who implement the policy do not know why they have to do it. They do not know the strengths and weaknesses of the policy. There is no transparency when explaining to the public. Moreover, local people cannot trust the government because of the historical weakness."* (Online interview, an environmental activist, May 2022)

Communication and coordination largely depend on the knowledge and awareness of the government staff because of the less transparency regarding the information within the government agency and the highly centralized bureaucratic mechanism. They face challenges in understanding effective communication techniques and have limited exposure to what is happening in the world. Most of them are reluctant to engage in changes.

> The same was seen in another response from a government official who also stressed: *"Weak management to designate specific staff for this public participation matter and lack of effort for it because of the limited human resources and knowledge."* (Online interview, a former government official, May 2022)
>
> And continued: *"Due to the human resources problem, it is difficult to manage the right people in the right place when considering the assignment related to the project."*

It seems human resources development is planned according to favoritism rather than merit or need-based selection, resulting in a deficiency of human resources.

Investors joined and pointed out limited resources:

> *"Investors are responsible for the projects' cost from A to Z. The government just assists with the projects. So, it is so costly."* (Online interview, investor I & II, May 2022)

Due to the limited budget for power sector development, the country largely depends on external investors for power generation projects. For example, investors are responsible for all kinds of costs for the project, including holding events related to the public participation process. As a result, the investor might be reducing the quantity and quality of the public participation meetings, and it is also questionable whether they submit the actual condition of the public opinions regarding the projects to the government.

What is more, the information gap between the government and the public with respect to the project could be an additional barrier to the implementation of the project.

Discussion

Institutional challenges could be a pressing case when promoting public participation. Lack of participatory design is resulting in failure in dealing with the public, facing they push back. Projects, therefore, have to be implemented as they happen. Also, limited access to information and limited public communication are preconditions that hinder public participation in energy projects, resulting in corruption between investors and government officials, for example, through unsolicited processes. Furthermore, there has been room for improvement regarding coordination - limited communication among the stakeholders produces an information gap in dealing with the public. Consequently, this adds to the existing lack of public trust in institutions.

Perceptional challenges are building barriers to improving public participation. Lack of trust among stakeholders, i.e, government agencies, investors, and the community, is why most projects are suspended. Similarly, a lack of seriousness regarding public participation leads to protests as they fail to include the public in project planning.

Most government staff cannot understand the pros and cons of the policy. They are facing limited knowledge about policy implementation and usually focus on orders from higher officials. Thus,

communication and coordination among the departments under the relevant ministries should be a strong and interactive relationship or process. Instead, the opposite is happening in practice - there is a one-way and top-down process. Furthermore, the progress of the projects failed to reflect what was happening on the ground.

Policy Recommendations: The Ways Forward for Energy Democracy

First, participatory design matters. The following participatory design should be integrated into current processes in the power generation sectors to have meaningful and inclusive public participation.

Firstly, tender processes need to be transparent. It should only be done through a tender process, not a proposal. At the beginning stage of the project, such as allocating the project area and considering the power generation sources, the government should submit detailed balance information to the representatives who will be selected from the project areas. The decision will be made based on recommendations from the public. The public participation report should be included in the feasibility study report. Furthermore, not only government agencies & investors but also professional representatives, environmental technicians, and others related to the power sectors are also included in the participant list for discussion on the project and feasibility stage. In the review stage, the administrators from different government agencies and experts from relevant fields should be participants. Administrators from different government agencies should be included in the approval stage, but the decision will depend on agreements from the previous stages. Regarding the planning and development stage and the defining responsibilities stage, the participants should be government agencies, professional representatives, and stakeholders. In the last stage, it should be a public forum, and the relevant government agencies, investors, experts from relevant fields, the general public, and local people should be involved in the participant list. The voices of people and concerns will be considered in the implementation stage.

Second, communication matters. The government must share detailed information about a project by using the appropriate communication channel to the public, not only to access the information from the public, but also to share the information with the public. Furthermore, the public must receive the information and have the opportunity to discuss it. In other words, the general public and regional government must be able to manage the project. The national government has to share power with the regional government. In other words, the government needs to reduce centralization.

Third, policy deliberation matters. Technical considerations and assumptions should be incorporated into the existing planning process. These four levels should be integrated into the process: technical verification, situational vindication, societal vindication, and ideological choice, because some factors are beyond the technical issues.

It is difficult to change stakeholders' initial opinions because they tend to make decisions based on their knowledge and values related to religious, social, cultural, and political ideology, and others related to their personal benefits. Hence, deliberation becomes one of the options when considering perceptual challenges.

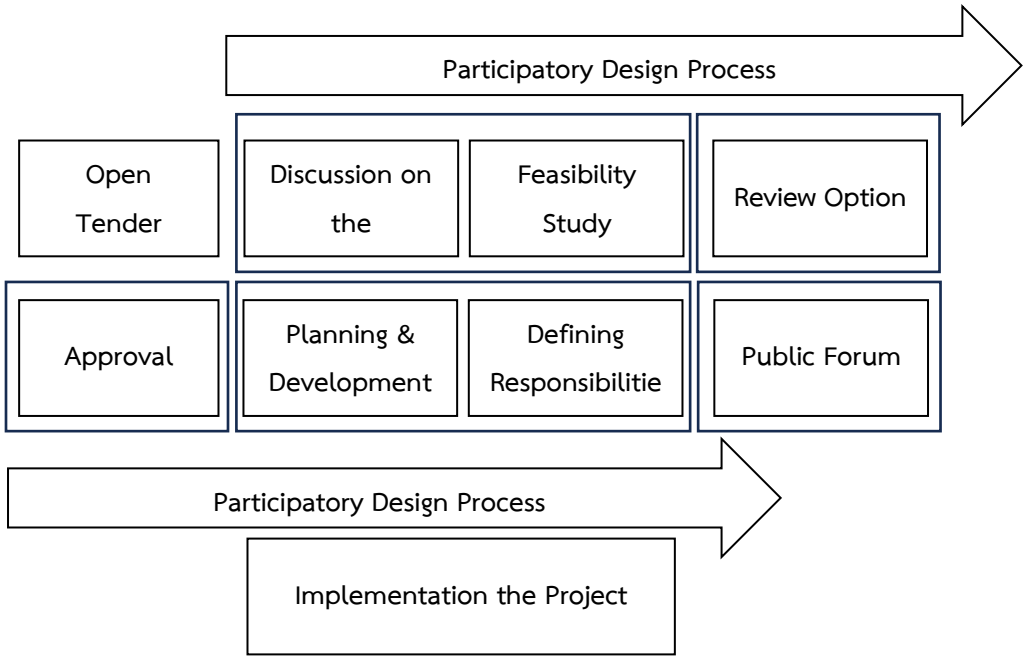


Figure 7. Proposed Participatory Planning Process

Note: Developed by Researcher

More importantly, better public participation in energy democracy should be achieved by all stakeholders at all levels being involved at the right time. The public should participate in every project process stage, especially the initial stage. For instance, the public should be involved from the beginning of the land allocation for the project.

Conclusions

This study examines the challenges that limit public participation in energy projects in Myanmar and outlines possible policy options to overcome these challenges. In this study, research findings can be concluded that public participation can play a critical role in the power sector, not only in democratic countries but also in non-democratic countries. High levels of participatory planning and design are more likely to be accepted by the public when implementing power generation projects in Myanmar.

Moreover, deliberation in participatory design is needed in implementing power generation projects, especially in project areas that consider perceptual challenges (building trust among the stakeholders) and different standpoints among the stakeholders. Despite this, it should be conducted nationwide because the projects may have direct and indirect impacts.

In addition, public participation is not simple: it is political and linked to land ownership issues, resettlement, compensation, corruption, and others. Furthermore, it results from historical weakness in institutional building and over decades of an undemocratic political regime. In addition, it is also directly related to power and benefits sharing between the union and the state government, as well as between the state and society. Furthermore, it is also related to the culture, identity, and values embedded in Myanmar's society. However, the research can only cover the scope of public participation, limiting it to other issues. Therefore, this will be the limitation or the gap that other researchers should fill.

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