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Article

How institutional commitment drives funding success in Indonesia's BRIN energy innovation program

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Abstract

The National Research and Innovation Agency (BRIN) plays an important role in the development of energy research in Indonesia. In 2023, BRIN launched the "Call for Joint Collaboration (CFJC)" funding scheme, which allows researchers to submit proposals based on specific themes in the energy sector. This study examines administrative operability in the Proposal evaluation process at BRIN, with an emphasis on key stakeholder perspectives, including authority, institutional commitment, capability, and organizational support. Using a quantitative survey method and purposive sampling, data was gathered through questionnaires distributed to stakeholders. The results highlight institutional commitment, particularly leadership engagement and administrative staff involvement, as one of the most critical factors influencing successful proposal implementation. While the focus on energy research proposals at BRIN may limit the generalizability of the results, this study offers valuable insights into factors affecting successful research implementation in Indonesia's energy sector, aligning with stakeholder theory in public administration. Further research is recommended to expand the scope and validate the findings.

Keywords: National Research and Innovation Agency (BRIN), energy research, administrative operability, leadership commitment, funding proposal evaluation

Introduction

The National Research and Innovation Agency (BRIN) was formed by the Indonesian government in 2021 as one of the government agencies formed to unify and coordinate research, innovation, and development activities for science and technology (IPTEK) in Indonesia. BRIN is a combination of research institutions and research entities at Non-ministerial government body such as the Indonesian Institute of Sciences (LIPI), the Agency for Assessment and Application of Technology (BPPT), the National Institute of Aeronautics and Space (LAPAN), and the National Nuclear Energy Agency (BATAN) to boost national research and innovation through its role of research agency in Indonesia. Not only that, BRIN also plays a role as a supporter of science-based development policies at both

Availability of data and material
Upon reasonable request, the datasets of this study can be available from the corresponding author.

the central and regional government levels. Furthermore, BRIN is also a funding agency in strengthening the national research and innovation ecosystem. BRIN's vision is to create Indonesia as a developed country on the basis of science and innovation. This, with its missions of enhancing national research capacity as well as ensuring the innovation ecosystem is robust and fit for purpose, facilitates the appropriate use of research outputs within sustainable development.

As a government institution, BRIN plays a crucial role in the development of energy research in Indonesia. Its commitment to fostering research and innovation in the new and renewable energy (NRE) sector supports Indonesia's goal of achieving 'energy sovereignty' (BRIN, 2022a). To further this mission, BRIN established the Energy and Manufacturing Research Organization (OREM) on March 4, 2022, focusing on conducting energy sector research (BRIN, 2022b). In 2023, BRIN introduced a research funding scheme called "Call for Joint Collaboration (CFJC)" in the energy sector. This scheme allows researchers within BRIN to submit research funding proposals according to the specified theme. As a government funding agency, BRIN needs to review proposed proposals to assess the feasibility of activities to achieve success and reduce the risk of failure. Administrative operability is a critical component of this review process, referring to the ability of an organization to implement and manage policies or programs effectively. It ensures that the necessary administrative systems, authority, institutional commitment, capability, and organizational support are in place to carry out the proposed activities. Without strong administrative operability, even technically feasible projects may fail to deliver their intended outcomes. This is because people very much consent to research costs, even though they do not understand the concept of efficiency (Meier et al., 2023).

In 2023, 210 research proposals were submitted under the CFJC energy sector scheme. The Management Team evaluated these proposals based on five critical criteria: (1) Proposal Content (Introduction, Background, Goals, and Targets); (2) Researcher Track Record; (3) Partnership; (4) Output and Outcome Target Plan; (5) Description of the prototype (if any). However, these parameters have proven inadequate to evaluate the feasibility of research, thus impacting the effectiveness and success of implementing energy research activities. Evidence of this inadequacy is reflected in the fact that 38% of accepted proposals required revisions to their original targets. This highlights the need for additional evaluation parameters to ensure the research project yields the desired impact. In addition, understanding the various determinants of various performance indicators will help governments better manage the distribution of their resources (Kim & Im, 2019).

To address this issue, it is crucial to expand the evaluation framework. According to policy evaluation theory, comprehensive assessment criteria should encompass not only technical and political feasibility but also economic, financial, and administrative operability (Patton & Sawicki, 2012). This method is used to quickly evaluate alternative policies and help make the right decisions in a limited time (Patton & Sawicki, 2012). This method can also ensure that the evaluation is powerful and comprehensive (Primanto & Undang, 2022). These additional dimensions ensure that research activities are theoretically viable and practically implementable within the given administrative and financial constraints. By incorporating these criteria, BRIN can better allocate resources, minimize the risk of failure, and ensure that research activities deliver the intended impact.

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This study aims to determine administrative and operational criteria indicators based on stakeholders' interest levels involving research organizations and government funding institutions. Stakeholders involved in the assessment process include the organization, namely the management team as a government agency that provides funding, the proposal assessment team consisting of experts in the fields of funding and energy, and the budget program management team. Administrative operational criteria are the main focus in assessing funding proposals because these criteria ensure that the project is feasible and can be implemented effectively (Patton & Sawicki, 2012).

Literature Review

This research is based on the concept of stakeholder theory in public administration. The result of review shows the importance of stakeholder involvement in the decision-making process, especially in the context of energy sector funding proposals. Stakeholder theory developed by Edward Freeman (1984) emphasizes the importance of considering the needs and interests of various groups affected by an organization's or project's policies. This theory also recognizes that stakeholders can come from within or outside the organization. These stakeholders have different influences (Edward Freeman, 1984). Stakeholder theory developed from initially focusing on shareholders towards including various factors in organizations (Atti et al., 2019). Performance strategy focuses on delivering value to stakeholders in a sustainable and socially responsible manner (Ferri et al., 2016; Svensson et al., 2015). In recent years, there has been a growing emphasis on public value creation, reflecting the importance of integrating non-financial dimensions such as environment, society, and governance into policy frameworks. These approaches aim to enhance democratic accountability and align organizational objectives with societal expectations (Oh et al., 2023). Therefore, stakeholders should be involved in finding preferences and producing the most profitable solutions (Franklin, 2020). Stakeholder involvement is also important in achieving common goals (Atti et al., 2019).

Stakeholder involvement in public administration decision-making

In public administration, involving stakeholders is crucial to making collaborative decisions that reflect various interests and perspectives (Lan, 1997; Pruteanu, 2020; Sullivan, 2011). Stakeholder engagement enables administrators to assess proposals from multiple angles, ensuring a well-rounded evaluation process (Pellicano et al., 2015). Various strategies and approaches have been developed to involve stakeholders in the public administration process (Becker et al., 2010; Bendova, 2013; Foster & Jonker, 2005; Jaramillo et al., 2016; Lan, 1997; Ljungholm, 2014; Matsuura & Shiroyama, 2018; Mehrizi et al., 2009; Prutenau, 2020; Slabbert, 2018); The success of an organization lies in the satisfaction of all stakeholders (Godam et al., 2019). In this context, stakeholder theory informs the evaluation of energy sector funding proposals by ensuring that all relevant voices are considered.

Linking stakeholder theory to administrative operability

When evaluating energy sector funding proposals, administrative operability—defined as the ability of an organization to effectively implement and manage policies or programs—must incorporate stakeholder perspectives. Administrative operability is a multidimensional concept, which includes authority, institutional commitment, capability, and organizational support (Patton & Sawicki, 2012). Stakeholder theory can be directly linked to these dimensions, as the success of policy implementation often depends on the alignment and engagement of stakeholders who possess both power and legitimacy (Ogata, 2017).

- Authority: Stakeholders, including government agencies, funding bodies, and research institutions, often have the authority to influence the implementation of policies or programs. Engaging these stakeholders is essential to ensure that proposals are backed by those who have the power to enforce changes and allocate resources. This link emphasizes the importance of evaluating whether the implementing agency has the necessary authority and stakeholder support to succeed.
- Institutional Commitment: Stakeholder theory highlights the need for commitment from both top management and staff. Institutional commitment, one of the core dimensions of administrative operability, is directly influenced by how engaged stakeholders are in supporting the project. Without their buy-in, policies risk failing in the implementation phase. By assessing stakeholders' commitment, BRIN ensures that energy projects have the necessary institutional backing.
- Capability: Stakeholders also contribute to an organization's capacity to execute its projects, particularly when it comes to technical expertise and financial resources. The involvement of knowledgeable stakeholders enhances the organization's ability to meet the necessary operational demands. This underscores the need to consider stakeholder contributions in assessing the capacity to successfully implement a policy.
- Organizational Support: Stakeholder involvement plays a critical role in ensuring that the necessary infrastructure and resources are available to support project implementation. Whether the stakeholders are internal (e.g., project teams) or external (e.g., partners or suppliers), their engagement can determine the availability of crucial organizational resources, such as equipment, facilities, or logistical support.

Stakeholder analysis of energy sector funding proposals and evaluation criteria

In the context of assessing energy sector funding proposals, stakeholder analysis has a very important role in evaluating the feasibility of an activity. This involves identifying and categorizing stakeholders based on their influence and level of importance (Pellicano et al., 2015). Farmer (2014) states that in terms of accountability, stakeholders include employees, consumers, and affected communities. Research on the analysis of stakeholder involvement and interaction in energy sector projects has been widely carried out (Buuse et al., 2012; Karakosta, 2019; Lorenc & Kustra, 2021; Shari et al., 2023; Virtanen et al., 2014; Wu et al., 2008). Apart from the role of stakeholders in evaluating proposals, it is necessary to determine criteria for assessing the feasibility of activities.

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Patton & Sawicki (2012), also known as the Patton and Sawicki Framework, develops activity feasibility criteria, namely (a) Technical feasibility by measuring the success or failure of policies in achieving the set goals; (b) Political sustainability criteria evaluate policy outcomes based on their impact on relevant stakeholders; (c) Administrative operability by measuring the importance and failure of policies in implementation in political, social and administrative contexts. Administrative operability criteria consist of 4 dimensions: authority, institutional commitment, capability, and organizational support (Patton & Sawicki, 2012).

Energy sector funding proposals involve allocating resources to support projects or initiatives aimed at fostering sustainable energy development. Evaluating these proposals requires a thorough assessment of the project's administrative operations, including budget management, project scheduling, and stakeholder engagement. In conclusion, the stakeholder concept offers a comprehensive set of principles and techniques to guide the management of relationships between various stakeholders (Atti et al., 2019; Ferri et al., 2016; Franklin, 2020; Gaur, 2013; Hua, 2007; Svensson et al., 2015; Waxenberger & Spence, 2003; Wheeler & Sillanpa, 1998). Despite its advantages, stakeholder theory has its criticisms. For instance, stakeholders may not always make decisions in the public interest, even if they possess both power and legitimacy (Ogata, 2017). Additionally, applying stakeholder theory in public administration presents challenges (Franklin, 2002), and accountability is inconsistently defined or applied by public administration stakeholders (Franklin, 2002; Gomes, 2003; Huse & Eide, 1996; McCambridge, 2004; Temple & Campling, 2000).

Administrative operability in National Research and Innovation Agency (BRIN)'s proposal evaluation framework

BRIN's approach to evaluate proposals aligns with Patton and Sawicki's policy evaluation framework, applying two of the four criteria: technical feasibility and administrative operability. BRIN's focus on these criteria ensures that projects are technically sound and practically implementable within Indonesia's administrative framework. However, by emphasizing administrative operability, BRIN recognizes the need for effective stakeholder engagement, institutional commitment, and organizational support in the success of energy projects.

This study expands the discussion by addressing how proposal selection at BRIN focuses on administrative operationalities that reflect the practical challenges faced by stakeholders in Indonesia. Using proposal evaluation criteria, this study underlines that stakeholder engagement plays a critical role in ensuring that proposed energy projects are not only technically feasible but also supported by the necessary administrative systems. Technical feasibility in this context refers to the practical achievability of research objectives, encompassing the adequacy of resources, methodologies, and expertise required for successful project implementation. Not only technical feasibility, this study also emphasizes administrative operability, focusing on BRIN's capacity to effectively manage and support proposed research activities through robust administrative frameworks.

Based on the literature, this study links stakeholder theory with administrative operability, which shows that stakeholder engagement is critical to the successful implementation of energy sector funding proposals. This relationship is explored through an empirical analysis of BRIN evaluation

criteria, addressing gaps in the literature and offering insights into how political and economic considerations can be integrated into the administrative framework. Ultimately, this research contributes to the ongoing debate in public administration regarding the applicability of stakeholder theory in policy implementation, particularly in the energy sector.

Research development policies in the field of NRE in Indonesia are regulated by Law (UU) no. 30 of 2007 concerning Energy, which provides the legal basis for developing the energy sector in Indonesia, including renewable energy. This law covers various aspects, such as energy policy, increasing the use of renewable energy, and reducing dependence on fossil energy. In addition, Government Regulation No. 79 of 2014 concerning the National Energy Policy also regulates the development of renewable energy in Indonesia, including policies and incentives to encourage investment and development of renewable energy technology. Furthermore, Presidential Regulation Number 22 of 2017 concerning the General National Energy Plan formulates policies, strategies, and programs for managing energy resources and energy utilization in Indonesia. BRIN followed up on this policy through the implementation of the CFJC in the field of NRE, which resulted in a Decree of the Head of OREM Number 13/III.3/HK/2022 concerning the Implementation of Renewable Energy Development Research Activities in 2023 and a Decree of the Head of OREM Number 12/III.3/HK/2022 concerning Implementation New Energy Development Research Activities in 2023. In determining which activity proposals are suitable for acceptance, assessment criteria are needed so that the evaluation is carried out systematically, objectively, and accountable. This research uses a survey method with a quantitative approach to look for indicators for assessing proposals in the energy sector from a stakeholder perspective.

Methods

This study applies a quantitative approach using a questionnaire as the main data collection instrument.

Research problem identification

BRIN management has developed assessment criteria for the 2023 CFJC. Based on the evaluation criteria approach developed by Patton et al. (1996), the developed assessment criteria only fulfil 2 of Patton and Sawicki's 4 evaluation criteria, namely technical feasibility and political viability, as shown in Table 1. Therefore, it is necessary to integrate the criteria of administrative operability and institutional commitment into BRIN's evaluation framework, in addition to the existing focus on technical feasibility and political viability. This research will focus on determining administrative criteria indicators in evaluating energy funding proposals based on stakeholder assessments.

Methodology and methods

This stage explains the administrative criteria used in evaluating funding proposals. Then, the relevance and effectiveness of indicators that have been used in other contexts will be assessed, and their potential for application in Indonesia will be examined to provide a theoretical basis for developing appropriate criteria indicators based on stakeholder assessments. Secondary data sources

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Table 1. Evaluation gaps in BRIN's proposal review process and recommended improvements

What is done in the reviews	What is not done in the reviews	What should be done
Technical feasibility and political viability are assessed based on proposal content and researcher track records.	Administrative operability is not systematically evaluated (e.g., authority, institutional commitment, staff capabilities, and organizational support).	Incorporate administrative operability indicators such as leadership commitment, administrative staff commitment, staff engagement, and resource availability into the evaluation criteria.
Evaluation focuses on technical outputs like publications, intellectual property, and prototypes.	The review process does not assess the organizational capacity to implement the project, which includes administrative readiness and institutional support.	Add an assessment of institutional and organizational support to ensure the feasibility of executing the proposed research, particularly for large-scale or long-term projects.
Political viability is considered through partnership evaluation.	No direct evaluation of stakeholder engagement and administrative support mechanisms.	Evaluate staff engagement and cross-functional collaboration to ensure successful policy and research implementation.

National Research and Innovation Agency (BRIN).

used include databases such as Google Scholar, Scopus, and ScienceDirect.

The PRISMA guideline is used as the search mechanism. As a result, a total of 870 articles were retrieved using keywords such as 'stakeholder assessment,' 'administrative criteria,' and 'energy funding.' Articles were selected based on their focus on administrative criteria and energy funding proposals relevant to the Indonesian context. After eliminating duplicates and screening based on titles and abstracts, 276 articles remained, of which 129 were excluded for relevance, and 47 were included for a full review.

The insights from the literature review, combined with the framework by Patton & Sawicki (2012), informed the formulation of the assessment indicators used in the primary data collection stage through questionnaires. Thus, while the broader theoretical foundation came from the literature, the specific administrative operability criteria, such as authority, institutional commitment, and organizational support, were directly adapted from Patton & Sawicki (2012).

The next stage is to formulate an initial hypothesis based on the findings of the literature review. The initial hypothesis is that stakeholders' perceptions of administrative operability indicators—including institutional commitment, authority, capability, and organizational support—significantly influence the success of technically feasible energy funding proposals by enhancing administrative efficiency.

Study design

This research uses a quantitative descriptive research design. This approach is applied because collected data are able to describe in detail the views and assessments of stakeholders regarding administrative criteria indicators. A questionnaire is used as the data collection instrument in this study. This questionnaire is designed to collect information from stakeholders regarding the indicators they consider important in evaluating funding proposals in the energy sector. Then, indicators are identified based on the 4 dimensions developed by Patton & Sawicki (2012). These indicators are Institutional Authority, Ability to Turn Policies into Programs, Collaboration with Other Parties, Priority Setting, Leadership commitment, administrative staff commitment, Staff Engagement, Staff Capabilities, Financial ability, Infrastructure and Resources, Equipment availability, Physical Facilities, and Other Support Services.

Preparation of research instruments

The next step is to validate the questionnaire by testing it on a small group of stakeholders to ensure the clarity and relevance of the questions. The questionnaire format consists of 2 parts, namely demographics in the form of basic information about respondents such as name and expertise. The second part is the indicator assessment, which contains questions regarding administrative indicators. Respondents were asked to rate the level of importance of each indicator using a Likert scale of 1 (very unimportant), 2 (not important), 3 (important), and 4 (very important). This study uses a 1–4 Likert scale to avoid respondents answering with neutral answers. Respondents are stakeholders involved in the process of assessing funding proposals for the energy sector at BRIN. The stakeholders involved in this study represent diverse, influential groups within BRIN's energy funding process. Specifically:

- Management (10 respondents): Senior leaders responsible for setting policies and overseeing resource allocation, with the authority to shape strategic directions for BRIN's energy projects.
- Assessors and reviewers (15 respondents): Experts from academia and the energy sector stakeholders responsible to evaluate the technical feasibility and relevance of proposals.
- Budget Program Management Team (10 respondents): The implementors of OREM's funding policies to review budget allocations and ensuring that resources are well manage.

All 35 stakeholders surveyed responded, achieving a 100% response rate. This comprehensive response ensures that the data reflects a full spectrum of perspectives from policy-making, technical assessment, and budget management roles in BRIN's funding process.

A purposive sampling technique was used to ensure that the selected sample had knowledge and experience relevant to the research topic (Salmaa, 2023). The sample selection criteria were at least five years of experience in the field of funding and energy and experience in the funding proposal evaluation process.

Data collection from stakeholders

The main objectives of questionnaires include collecting specific information, understanding perspectives, measuring satisfaction and feedback, identifying patterns and trends, and evaluating customer loyalty (John Creswell, 2016; Sugiyono, 2019). Questionnaires are distributed online via survey platforms such as Google Forms and offline in printed form. Online distribution was chosen to reach a wider range of respondents with time and cost efficiency. Data collection takes place from September 2023 to November 2023.

Analysis quantitative data

Data from the collected questionnaires will be checked to ensure completeness and consistency. The questionnaire was distributed to 35 respondents, consisting of experts and key stakeholders in the energy sector, ensuring that the data was gathered from individuals with relevant expertise. Although two respondents needed clarification due to incomplete responses, their contributions were ultimately incorporated into the analysis. The Likert scale is used in the questionnaire and

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the results will be converted to numerical format for statistical analysis. Next, a reliability test is carried out using Cronbach's Alpha to measure the internal consistency of the scale used in the questionnaire. Correlation Test with the Spearman Rank correlation test Stakeholder involvement is important to the influence of each indicator on the overall assessment. Then, each indicator is given an appropriate "weight" to determine the level of importance based on stakeholder perceptions using the average and percentage approach developed by Babbie (2010). The relative importance of different administrative operability indicators is formulated as follows:

$$Importance\ weigh = \left(\frac{average}{Importance\ weight = number\ of\ question\ instruments \times linkert\ maximum\ value} \right) \times 100\%$$

While a sample size of 35 respondents was used, this focused selection of expert stakeholders is justified due to the specialized nature of the study. By targeting individuals with deep knowledge and experience in the energy sector and public administration, the study ensures that the data is both relevant and insightful. However, we acknowledge that the relatively small sample size may limit the generalizability of the findings. Future research could expand the sample size to include a broader range of stakeholders, further validating the results and ensuring their applicability across different contexts.

Interpretation of result and conclusions

This step identifies key indicators that stakeholders consider to be the most important. The results are presented in tabular form. The findings provide practical recommendations for evaluating funding proposals in the energy sector.

Findings

Questionnaires were given to 35 respondents who are stakeholders in assessing funding proposals for the energy sector at BRIN. Analysis of the questionnaire results using the Jamovi application and a reliability test (Cronbach's Alpha) yielded a score of 0.916, indicating 'very good'

Table 2. The assessment criteria of the management team are compared with the Patton Sawicki criteria

Existing criteria judgement	Indicator	Evaluation criteria based Patton and Sawicki
1. Content of the proposal (introduction, background, goals, and objectives)	a. Linkage to the topic of NRE b. Originality/novelty c. Rationality to achieve goals	Technical feasibility
2. Track record researcher	a. Research coordinator qualification b. Team competence c. Continuity of research from the previous year	Technical feasibility
3. Partnership	a. Partner competencies with the research topic b. Financial sharing	Political viability
4. Output plan	a. International publications b. Intellectual property right c. Prototype	Technical feasibility
5. Description of the prototype (if the main target is a prototype)	a. Facility availability b. Mass production probability	Technical feasibility

NRE, new and renewable energy.

reliability for the instrument (Table 2). In addition, the items in the instrument can consistently measure the same construct and can be relied upon for further research or evaluation. Even though the instrument value is reliable, it is necessary to ensure that this research instrument is valid. After carrying out a validity test, the item-rest correlation was compared with the r-value table for 35 respondents, and a minimum value of 0.325 was obtained. Based on Table 3, it can be seen that all indicators have an item-test correlation of more than 0.325, so it can be interpreted that all

Table 3. Reliability test result

Scale reliability statistics	
	Cronbach's α
Scale	0.916

Table 4. Validity test result

Item reliability statistics	Item-rest correlation
Institutional authority 1	0.635
Institutional authority 2	0.421
Ability 1	0.526
Ability 2	0.476
Collaboration 1	0.447
Collaboration 2	0.367
Priority 1	0.539
Priority 2	0.413
Leadership 1	0.506
Leadership 2	0.448
Field staff 1	0.531
Field staff 2	0.464
Staff engagement 1	0.448
Staff engagement 2	0.447
Staff capabilities 1	0.589
Staff capabilities 2	0.581
Staff capabilities 3	0.473
Staff capabilities 4	0.397
Financial 1	0.503
Financial 2	0.489
Financial 3	0.468
Financial 4	0.382
Infrastructure 1	0.521
Infrastructure 2	0.505
Infrastructure 3	0.373
Equipment 1	0.586
Equipment 2	0.607
Physical 1	0.671
Physical 2	0.510
Other 1	0.413
Other 2	0.593

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instruments are truly capable of measuring what they should measure (Table 4).

After the reliability and validity tests, a correlation test was carried out with the Spearman Rank using the Jamovi application. It can be seen from Table 5 that the p-value is <0.001 for all indicators except collaboration indicators (0.016) and infrastructure (0.007). This p-value is smaller than the significance level of 0.05, so the correlation test results reject the null hypothesis and accept the alternative hypothesis. The results support the alternative hypothesis, indicating that stakeholders consider the dimensions of the administrative criteria to significantly influence the evaluation of funding proposals in Indonesia's energy sector.

The results show that the administrative operability criteria indicators significantly should influence the success of evaluating funding proposals in the energy sector in Indonesia. They are relevant to the stakeholder theory developed by Edward Freeman (1984) and expanded by subsequent research. This theory emphasizes the importance of considering the needs and interests of various parties affected by certain policies or activities. In this case, involving diverse stakeholders can help ensure that the project considers the interests of all parties involved. Previous studies have shown that stakeholder involvement can improve the quality of decisions and increase support for proposed policies or projects. However, it is also necessary to consider the limitations of stakeholder theory in measuring and managing relationships between various stakeholders and the potential problems of accountability and clarity in the distribution of responsibilities between stakeholders.

Table 6 shows stakeholder-weighted importance based on the dimensions of administrative operability outlined by Patton & Sawicki (2012), which include Authority, Institutional Commitment, Capability, and Organizational Support. These categories are essential for assessing how well an organization can manage and implement projects, particularly in a government-funded research context. Unlike technical feasibility—which would focus on the scientific and technical resources or capabilities required for a project's success—administrative operability emphasizes the support systems, leadership commitment, and organizational infrastructure needed to effectively execute policies and maintain project alignment with strategic objectives.

Each indicator in Table 6 directly relates to organizational or administrative functions rather than technical criteria. For instance, 'Institutional Authority' and 'Leadership Commitment' ensure that leadership structures and commitment levels are in place to support project execution, whereas indicators like 'Staff Engagement' and 'Resource Availability' ensure the operational readiness and support required to manage the project effectively. These criteria underscore stakeholders' prioritization of robust administrative frameworks that sustain and drive project implementation, separate from the technical aspects of project feasibility.

Discussion

The stakeholder feedback summarized in Table 6 focuses exclusively on administrative operability. This criterion includes the organizational and support elements that stakeholders consider necessary for successful project implementation. While technical feasibility concerns the scientific or technical resources directly supporting the research activity, administrative operability includes leadership commitment, staff engagement, and infrastructure—factors that ensure the

Table 5. Correlation matrix result

		Total institutional	Total ability	Total collaboration	Total priority	Total leadership	Total field	Total staff	Total staff capabilities	Total financial	Total infrastructure	Total equipment	Total physical	Total other	Total
Total institutional	Spearman's rho	N/A													
	df	N/A													
	p-value	N/A													
Total ability	Spearman's rho	0.232	N/A												
	df	33	N/A												
	p-value	0.181	N/A												
Total collaboration	Spearman's rho	0.168	0.113	N/A											
	df	33	33	N/A											
	p-value	0.333	0.517	N/A											
Total priority	Spearman's rho	0.500**	0.595***	0.036	N/A										
	df	33	33	33	N/A										
	p-value	0.002	<.001	0.835	N/A										
Total leadership	Spearman's rho	0.269	0.330	0.162	0.298	N/A									
	df	33	33	33	33	N/A									
	p-value	0.118	0.052	0.353	0.082	N/A									
Total field	Spearman's rho	0.407*	0.153	0.134	0.565***	0.246	N/A								
	df	33	33	33	33	33	N/A								
	p-value	0.015	0.382	0.442	<.001	0.154	N/A								
Total staff	Spearman's rho	0.316	0.286	0.651***	0.248	0.773***	0.236	N/A							
	df	33	33	33	33	33	33	N/A							
	p-value	0.064	0.096	<.001	0.151	<.001	0.171	N/A							
Total staff capabilities	Spearman's rho	0.407*	0.138	0.330	0.295	0.266	0.407*	0.371*	N/A						
	df	33	33	33	33	33	33	33	N/A						
	p-value	0.015	0.429	0.053	0.085	0.122	0.015	0.028	N/A						
Total financial	Spearman's rho	0.358*	0.521**	0.141	0.320	0.179	0.277	0.159	0.125	N/A					
	df	33	33	33	33	33	33	33	33	N/A					
	p-value	0.035	0.001	0.418	0.061	0.305	0.107	0.360	0.473	N/A					
Total infrastructure	Spearman's tho	0.374*	0.161	0.269	0.404*	0.068	0.223	0.263	0.288	0.109	N/A				
	df	33	33	33	33	33	33	33	33	33	N/A				
	p-value	0.027	0.355	0.119	0.016	0.700	0.199	0.127	0.093	0.533	N/A				
Total equipment	Spearman's rho	0.396*	0.184	0.368*	0.301	0.185	0.531**	0.335*	0.815***	0.175	0.346*	N/A			
	df	33	33	33	33	33	33	33	33	33	33	N/A			
	p-value	0.018	0.291	0.029	0.079	0.286	0.001	0.049	<.001	0.316	0.042	N/A			
Total physical	Spearman's rho	0.412*	0.588***	0.049	0.532**	0.462**	0.303	0.307	0.328	0.364*	0.265	0.285	N/A		
	df	33	33	33	33	33	33	33	33	33	33	33	N/A		
	p-value	0.014	<.001	0.780	0.001	0.005	0.077	0.073	0.055	0.031	0.123	0.097	N/A		
Total other	Spearman's rho	0.304	0.408*	0.117	0.541***	0.475**	0.319	0.383*	0.184	0.371*	0.342*	0.146	0.683***	N/A	
	df	33	33	33	33	33	33	33	33	33	33	33	33	N/A	
	p-value	0.075	0.015	0.505	<.001	0.004	0.061	0.023	0.290	0.028	0.044	0.402	<.001	N/A	
Total	Spearman's rho	0.627***	0.592***	0.406*	0.682***	0.552***	0.603***	0.602***	0.640***	0.586***	0.450**	0.654***	0.731***	0.624***	N/A
	df	33	33	33	33	33	33	33	33	33	33	33	33	33	N/A
	p-value	<.001	<.001	0.016	<.001	<.001	<.001	<.001	<.001	<.001	0.007	<.001	<.001	<.001	N/A

* p<.05, ** p<.01, *** p<.001.

NA, not applicable.

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Table 6. Stakeholder-weighted importance of administrative operability indicators

Level of importance	Dimensions	Indikator	Weight of assessment
1	Authority	a. Institutional authority b. Ability to turn policies into program c. Collaboration with other parties d. Priority setting	86,25
2	Institutional commitment	a. Leadership commitment b. Field staff commitment c. Staff engagement	88,45
3	Capability	a. Staff capabilities b. Financial ability c. Infrastructure and resources	84,80
4	Organizational support	a. Equipment availability b. Physical facilities c. Other support services	85,24

project is implemented effectively and aligned with institutional objectives. Stakeholders' emphasis on these criteria suggests a consensus on the importance of administrative support as the backbone for project success, validating this paper's focus on administrative operability as a key determinant in the successful management of energy funding proposals.

These results highlight the important role of institutional commitment in the success of energy funding proposals. In this context, institutional commitment includes the consistent support provided by institutions throughout the research project's lifecycle, from proposal selection to implementation and completion. This commitment encompasses providing resources, infrastructure, and continuous backing to ensure project success. The main indicators that have a significant influence are as follows:

- Leadership Commitment, namely the importance of commitment and support from the top leadership in the organization. Leaders need to show commitment to providing clear goals, adequate resource allocation, and support for the sustainability of activities. This is very influential because the leadership's lack of strong commitment to provide support will affect the activity's success. The impact of leadership commitment can provide confidence to external stakeholders, such as research partners, that activities will be managed well. The leaders in question are the Head of BRIN and the Head of OREM, who are the highest leaders of the organization.
- Administrative Staff Commitment, namely the need for dedication and involvement of administrative staff who are directly involved in project implementation. This commitment ensures that the policies implemented are more effective because administrative staff are at the forefront of implementation. Uncommitted administrative staff have the potential to hinder policy implementation. The commitment of administrative staff can directly impact the quality and efficiency of implementing activities, so it is expected to influence the satisfaction of the beneficiaries.
- Staff Engagement, namely the need for active involvement and participation from all staff from the planning process to implementation. Overall, staff involvement is essential in planning and implementation to increase the sense of collective ownership and responsibility for the activity's

success. Staff who are actively involved will have an influence on motivating and collaborating further to achieve activity targets. In addition, all staff's involvement ensures that input from various levels of the organization is considered. This is expected to increase policy adaptation and innovation.

These results highlight that administrative operability criteria are critical in the successful evaluation of funding proposals, particularly in ensuring that proposed projects are not only feasible but can also be implemented effectively within Indonesia's institutional framework. This matches with the philosophy of stakeholder theory, which says one should be responsive to many parties that might have an interest in or be affected by a particular policy (Edward Freeman, 1984). The importance of leadership and institutional commitment in project success is consistent with findings in the literature (Atti et al., 2019; Schafer & Zhang, 2019). Additionally, studies on stakeholder involvement in energy projects confirm that engagement enhances project feasibility and resource allocation (Karakosta, 2019; Shari et al., 2023). However, engaging a wide variety of stakeholders can make certain that proposals are judged in full consideration and from all viewpoints. Previous literature contended that stakeholder participation can enhance decision quality and generate more support for projects on the table. Prior research has shown that stakeholder involvement can improve decision quality and garner greater support for proposed projects.

The findings from this study are particularly relevant to Indonesia's broader energy sector, where collaboration and engagement with stakeholders are essential for advancing national energy goals. This extends beyond BRIN, covering the influence of other critical stakeholders such as donor agencies, businesses, corporates, and relevant ministries. These external institutions play an essential role by contributing additional funding, resources, and strategic partnerships that enhance the overall success of energy projects. This broader network of institutional commitment is crucial, particularly given BRIN's funding limitations, and underscores the importance of a collaborative approach to ensure successful project execution. By focusing on institutional commitment, leadership support, and staff engagement, this research provides a framework that can be applied to other energy-related projects beyond BRIN. Leadership commitment from high-level figures, such as the Head of BRIN and the Head of OREM, sets the tone for successful project implementation, while administrative staff commitment and active staff engagement are crucial for the day-to-day execution of activities. These indicators are not only relevant to BRIN's internal processes but also applicable to energy projects across Indonesia, where institutional support and staff involvement play a vital role in project success.

Although this research focuses on BRIN's energy research proposals, the insights gained have broader implications for energy projects throughout Indonesia. Political and project leaders across the energy sector will find that by paying attention to what services are sustainable in view of how they need/ought to be administered, the operational opaqueness (or transparency) house can help not only with resource allocation but also mitigate some potential conflict states before it occurs. We must consider that this study is situated within BRIN, and the extent to which these results may be applicable to other sectors/organizations needs further investigation. This way, a broader sample size and scope of the research could contribute to validating these results even further, allowing for

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better generalization among energy projects in Indonesia.

Conclusion

This study has highlighted the critical role of institutional commitment in the success of energy funding proposals at BRIN. The results shows that administrative criteria, especially institutional commitment, significantly influence the evaluation of funding proposals. This confirms the hypothesis that administrative operational criteria, especially institutional commitment and stakeholder engagement, are critical to the success of funding proposal evaluation. This study contributes to the literature by demonstrating the relevance of stakeholder theory in public administration (Franklin, 2020; Pellicano et al., 2015). The three critically important benchmarks of success according to these stakeholders are:

- Leadership Commitment: this is fundamental to setting direction, providing resources as required, and creating confidence with external stakeholders.
- Administrative Staff Commitment: Essential for effective policy implementation, as committed staff are at the forefront of executing research activities and ensuring successful outcomes.
- Staff Engagement: Vital for encouraging innovation, adaptability, and collective ownership, which contribute to the success of activities and improve overall project performance.

This research's scientific contribution lies in its emphasis on the importance of institutional commitment and resource availability in achieving the success of policies and programs. It underlines the need for energy funding proposals incorporating administrative operability criteria during evaluation. By doing this, BRIN and other institutions can ensure that the proposals they accept are theoretically sound, practically implementable, and capable of achieving their objectives.

While this study focused on BRIN's energy research proposals, the results can be expanded in application. The identified principles of leadership commitment, staff involvement, and institutional support are universally applicable and able to implemented for other sectors and institutions beyond BRIN. In areas such as infrastructure development, public health, and education, for example, incorporating these administrative operability criteria could enhance the effectiveness and success of various projects and programs. As institutional commitment and resource management are common challenges across different fields, this research can serve as a framework for improving the evaluation and implementation of projects in other sectors.

However, it is important to recognize the limitations of this work. While the study focuses on BRIN's energy proposals, this scope may limit the generalization of findings across the broader spectrum of energy projects or other sectors in Indonesia. Additionally, the reliance on the Patton and Sawicki framework, though comprehensive, may not fully capture the unique complexities and challenges faced in various contexts, particularly in the evolving field of energy research. The selection of respondents and the specific perspectives they bring may also introduce biases or gaps in the findings. To enhance the generalizability and impact of this research, future studies should explore how institutional commitment, staff involvement, and other administrative operability

criteria influence project outcomes across diverse fields and organizations. Expanding this research beyond BRIN and involving a wider range of participants can help validate the findings and strengthen their applicability to both public and private sector initiatives. Furthermore, conducting post-implementation evaluations can offer deeper insights into how these factors contribute to long-term project success and sustainability across different contexts.

In conclusion, this study provides valuable insights to improve the evaluation and implementation of energy projects at BRIN and others. By incorporating administrative operability criteria, organizations across various sectors can better allocate resources, manage stakeholder expectations, and increase the likelihood of successful project outcomes.

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