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Renewable Energy Governance and Community Benefit-Sharing in Nepal: Policy Gaps and Local Development Challenges

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ABSTRACT: Renewable energy is a core element of energy security, low-carbon transition, and rural development in Nepal, and in particular hydropower and decentralized clean energy systems. However, project benefits do not necessarily translate into local development outcomes. This paper critically summarizes the governance and public benefit sharing of the renewable energy sector in Nepal based on secondary sources of policy documents, institutional reports, and academic literature. The results indicate that royalties, local shares, compensation, employment benefits, community support, and subsidies are present, but they are neither very advanced nor well monitored. The paper suggests a governance framework based upon participation, benefit allocation, local outcomes and accountability, that is oriented towards the community. It provides a summary policy contribution, without using unpublished thesis data.

KEYWORDS: Renewable energy governance; benefit-sharing; hydropower; energy justice; local development; Nepal.

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Introduction

There is a growing recognition of the importance of renewable energy in Nepal, as it can contribute to addressing energy access challenges, energy security, low-carbon development, and rural economic transformation. The electricity pathway in Nepal is heavily dependent on hydropower, and for remote and rural areas, decentralized renewable technologies like micro-hydro, solar, biogas, and improved cooking systems are important. There are also recent national documents linking energy transition to climate ambition. There is a long-term trajectory for achieving net zero carbon dioxide emissions by 2045 in the NDC 3.0, and the energy sector is a pivotal instrument in national development planning in the Energy Sector Synopsis Report 2024 (Government of Nepal, 2025; WECS, 2024).

Even with the policy momentum, development of renewables presents a governance challenge. Projects can help to provide electricity for the country, but communities affected by them are not asking for "just compensation". They want reasonable engagement, employment locally, access to electricity, infrastructure development, earning opportunities, environmental protection, and transparency of revenue. In the case of hydropower, these expectations are reinforced, as communities provide land, water access, local labor, social acceptance and ecological space. The issue of benefits sharing is thus not just a matter of project finance. It is about who is involved, who must pay, who is going to get something out of it, and who will keep an eye on the promises once they are approved for the project.

There are several formal and informal benefit-sharing instruments in Nepal. This encompasses compensation, employment and renewable energy subsidies, community development activities, local share offers, and royalty distribution. According to IFC (2018), the local shares mechanism in Nepal is an innovative approach to reserve up to 10% of shares within hydropower projects for project-affected communities. Later, World Bank case studies confirmed that 32 hydropower projects had issued local shares as of September 2019 (World Bank, 2021). These mechanisms demonstrate that benefit-sharing is currently in practice in Nepal with renewable energy, but is not balanced and project-specific.

The main issue is that the governance of renewable energy tends to be more focused on installed capacity, generation, investments, and growth of the grid, with less monitoring of local development outcomes. This paper attempts to fill that void by examining policy and institutional challenges of renewable energy governance and community benefits sharing in Nepal. It shall be an original conference paper using inclusive data, and not include unpublished thesis survey, interview, or field data.

Research Aim and Research Questions

This paper aims to examine policy gaps and local development challenges in renewable energy governance and community benefit-sharing in Nepal. The paper addresses three research questions:

1. How is community benefit-sharing reflected in Nepal's renewable energy governance?
2. What policy and institutional gaps affect local development outcomes?

3. How can renewable energy governance become more community-centered and accountable?

Materials and Methods

This research is qualitative research with a policy analysis approach using a review methodology. It is based on secondary sources such as energy laws, renewable energy policies, government reports, energy justice and benefit-sharing studies, and academic papers. Some key sources are the Electricity Act, 1992, National Energy Strategy of Nepal, Nepal's Long-term Strategy for Net-zero Emissions, NDC 3.0, AEPC progress reports, NEA annual reports, WECS energy sector reports, IFC's local shares study, ICIMOD's benefit-sharing report, and World Bank hydropower benefit-sharing case studies (AEPC, 2024; Government of Nepal, 1992, 2013, 2021, 2025; IFC, 2018; ICIMOD, 2016; NEA, 2024; WECS, 2024; World Bank, 2021).

Thematic content analysis was used for the analysis. The sources were analyzed by the six themes of governance structure, participation, benefit-sharing instruments, local development outcomes, monitoring, and policy gaps. The method can be used for a short conference paper, as in this case, the thesis data is not duplicated or directly based on primary human participant research.

Research Results

There are five key findings of the review. First, the governance of renewable energy has broadened in Nepal, while decision-making is still heavily centralized, influenced by government laws, regulators, project developers and national energy policies. The Electricity Act 1992 offers a royalty mechanism for electricity projects, and more recent strategies and programs focus on the development of renewable energy, private investment and decentralized energy supply (Government of Nepal, 1992, 2013). This facilitates sectoral growth but may result in a reduced ability of local governments and affected communities to influence project design and benefit distribution and post-construction monitoring.

Second, there are several instruments to implement community benefit-sharing, but the instruments are not fully integrated. The main mechanisms are summarized in Table 1. Royalty distribution can help the local public finance; local shares can provide equity participation; compensation can help to cover direct losses; and community programs can enhance the infrastructure or services. These devices, however, do tend to function independently. Weak livelihood restoration and compensation to the community. Another one might be granted access to local shares but not have the financial knowledge to comprehend investment risk. This brings a gap between policy and implementation of benefits and local development outcomes.

Table 1

Main community benefit-sharing instruments in Nepal's renewable energy sector

Instrument	Main purpose	Local development value	Key gap
Royalty sharing	Public revenue from hydropower generation	Can finance local infrastructure and services	Weak public tracking of actual community outcomes
Local shares	Equity participation by affected communities	Creates ownership and possible financial return	Risk of unequal access and low financial literacy
Compensation	Payment for land and project-related losses	Reduces direct household loss	May not restore long-term livelihoods
Community support	Roads, electrification, schools, health or local programs	Visible project-area benefits	Often project-specific and weakly standardized
Renewable energy subsidy	Access to clean energy technologies	Supports remote and underserved groups	Requires stronger targeting and sustainability

Source: Author's synthesis based on AEPC (2024), IFC (2018), ICIMOD (2016), WECS (2024), and World Bank (2021).

Third, and most importantly, local shares are a unique mechanism in Nepal for sharing benefits but must be better protected. IFC (2018) commented that local shares can foster local ownership and support for hydropower. The local shares can also capture parts of the value of hydropower for project-affected people, as the World Bank (2021) also revealed. But equity does not necessarily translate to equitable benefit-sharing. Lower-income families may not be able to invest as much. Some investors may lack understanding of the volatility of share price, lock-in period, or the risk of the market. Such a system of benefits sharing, therefore, can benefit those households who have more cash, have better financial knowledge, and have better networks.

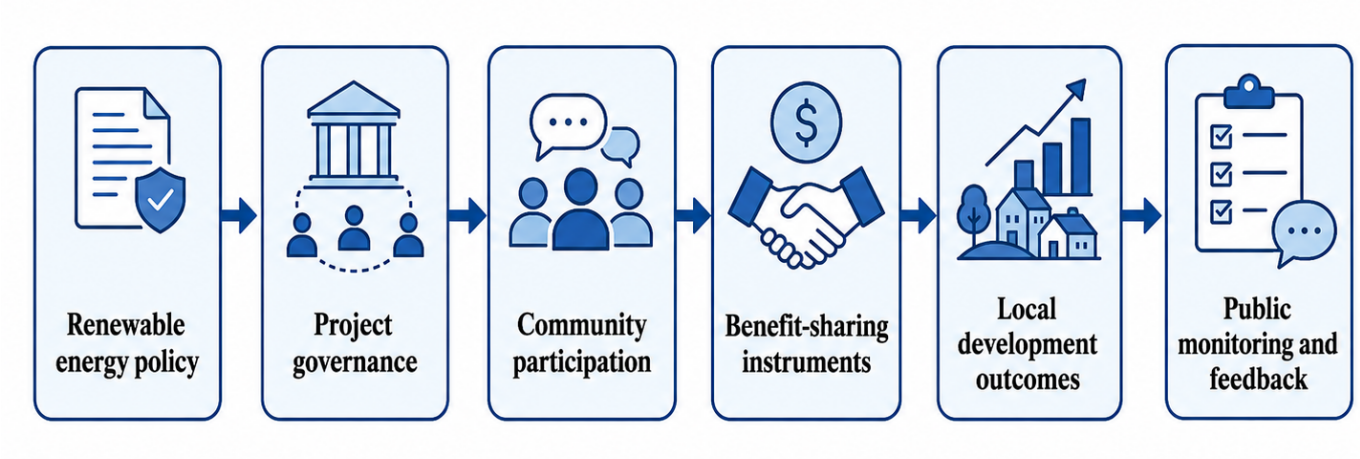
Fourth, the issue of participation continues to be a key governance challenge. Distribution justice, procedural justice, and recognition justice are identified as key aspects of energy systems in the energy justice literature (Jenkins et al., 2016; McCauley et al., 2013; Sovacool & Dworkin, 2015). In terms of governing renewables in Nepal, these are three practical questions. Who benefits and who suffers the costs? What stakeholders are involved in decisions before and after project approval? Who is included in the planning for needs, risk, and identity? Public consultation is not effective in ensuring meaningful community influence if it is restricted to procedural meetings.

Fifth, there should be more effective monitoring of local development results. Energy access, renewable energy growth, and climate-aligned development (AEPC) are highlighted in various national reports, including those from the WECS, NEA, Government of Nepal (2021, 2025), and NEP (2024).

While these goals are important, communities affected by the issue need to see tangible local results. They include livelihood restoration, the use of royalty funds, local infrastructure maintenance, grievance resolution, and inclusion of women, indigenous people, and low-income households, among others. Public reporting can transform benefit sharing from a project promise, not a development mechanism that can be held accountable for.

Figure 1

Community-centered framework for renewable energy benefit-sharing



Source: Author's own development.

The framework in Figure 1 proposes a practical sequence. Renewable energy policy should not end at generation targets. It should move through project governance, meaningful participation, defined benefit-sharing instruments, measurable local development outcomes, and public feedback. This framework can help Nepal connect national renewable energy goals with local legitimacy.

Policy Implications

After the review, there are four policy implications. Nepal should develop more transparent rules and procedures for the sharing of benefits from renewable energy projects, including the minimum requirements for participation, compensation, local shares, local jobs, public reporting, and problem resolution. Second, the local government should be more involved in monitoring the benefits promised, rather than in facilitating the project. Third, there is a need for financial literacy and risk disclosure and inclusion measures in conjunction with local shares to ensure that the poorest households are not being left out. Fourth, local development outcomes from renewable energy projects, such as who gained from the project, what was provided, and whether benefits were maintained or sustained, should be reported.

Conclusions

The paper analyzed renewable energy governance and community benefit-sharing in Nepal by

using a policy analysis approach based on a review. The key conclusion is that while some benefit-sharing mechanisms have been established in Nepal, they are not comprehensive or well monitored. Local shares are innovative and visible but are not a substitute for governance at the community level. Royalty sharing, compensation, employment, community support, and renewable energy subsidies can only be used to promote local development if they are tied to participation, transparency, and public accountability.

The paper provides a short framework to link renewable energy policy to project governance, community engagement, benefit sharing mechanisms, local development outcomes, and feedback. The policy change that needs to happen for Nepal is from generation to a community-centered approach for renewable energy governance. The present framework should be further tested through comparative case studies of hydropower, solar, and decentralized renewable energy in various ecological regions of Nepal in the future.

Declarations

Funding: This research received no external funding.

Conflict of interest: The author declares no conflict of interest.

Ethics statement: This paper is based only on secondary data, policy documents, reports, and published literature. No human participants, surveys, interviews, or personal data were used.

Data availability: All sources used in this paper are publicly available and cited in the reference list.

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