Accelerating Renewable Energy: Analyzing United in Diversity (UID)'s Collaboration with Rocky Mountain Institute (RMI) in Indonesia's Pursuit of Sustainable Development Goal 7

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Abstrak

Naskah ini mengeksplorasi bagaimana program Happy Energy Action Leadership (HEAL), yang diluncurkan oleh United in Diversity (UID) bekerja sama dengan Rocky Mountain Institute (RMI), mendukung upaya Indonesia dalam mencapai Tujuan Pembangunan Berkelanjutan 7 (SDG 7). Indonesia menghadapi tantangan yang signifikan dalam melakukan transisi dari lanskap energi yang didominasi oleh bahan bakar fosil ke energi terbarukan, termasuk hambatan infrastruktur, keuangan, dan sosial-ekonomi. Dengan memanfaatkan teori Multi-Level Governance (MLG), naskah ini mengkaji dinamika kolaboratif di antara berbagai pemangku kepentingan - lokal, nasional, dan global - dalam program HEAL. Temuan utama menyoroti fokus program pada peningkatan kapasitas, tata kelola yang inklusif, dan pembiayaan inovatif sebagai katalisator untuk transisi energi yang berkelanjutan. Meskipun masih terdapat tantangan seperti kesenjangan keterampilan tenaga kerja dan rintangan peraturan, program HEAL menghadirkan peluang yang dapat diukur untuk mempercepat penyebaran energi terbarukan. Studi ini menggarisbawahi potensi transformatif dari inisiatif berbagai pemangku kepentingan dalam menjembatani kesenjangan sistemik dan menyelaraskan tindakan lokal dengan tujuan keberlanjutan global.

Kata Kunci: Energi Terbarukan, Multi-Level Governance, SDG 7, Program HEAL, Transisi Energi, Indonesia

Abstract

This manuscript explores how the Happy Energy Action Leadership (HEAL) program, launched by United in Diversity (UID) in collaboration with the Rocky Mountain Institute (RMI), supports Indonesia's efforts to achieve Sustainable Development Goal 7 (SDG 7). Indonesia faces significant challenges in transitioning from a fossil fuel-dominated energy landscape to renewable energy, including infrastructural, financial, and socio-economic barriers. Leveraging Multi-Level Governance (MLG) theory, the manuscript examines the collaborative dynamics among diverse stakeholders—local, national, and global—in the HEAL program. Key findings highlight the program's focus on capacity-building, inclusive

governance, and innovative financing as catalysts for a sustainable energy transition. While challenges such as workforce skill gaps and regulatory hurdles persist, the HEAL program presents scalable opportunities for accelerating renewable energy deployment. This study underscores the transformative potential of multi-stakeholder initiatives in bridging systemic gaps and aligning local actions with global sustainability goals.
Keywords: Renewable Energy, Multi-Level Governance, SDG 7, HEAL Program, Energy Transition, Indonesia

1. Introduction

In the current era, the global energy landscape is undergoing a profound transformation, reshaping the way we produce, consume, and conceptualize energy. This shift is primarily driven by an urgent, multifaceted need to address the escalating impacts of climate change, enhance energy security, and promote sustainable development on a global scale (Adelekan et al., 2024). As climate change poses increasingly severe environmental and socio-economic threats, the world faces the challenge of moving away from carbon-intensive energy sources and reducing the greenhouse gas emissions that contribute to global warming (Giwangkara, 2021). This monumental transition places renewable energy sources such as solar, wind, hydro, and geothermal energy at the forefront of global strategies, as these alternatives offer a cleaner, more sustainable approach to energy production.

The transition to renewable energy also stems from the growing need to secure stable, reliable energy sources in the face of fluctuating fossil fuel prices and the geopolitical complexities associated with fossil fuel dependence. Renewable energy presents a vital opportunity to meet the rising energy demands of expanding populations and industrial growth in a manner that aligns with environmental sustainability. As the global population continues to grow, so too does the demand for energy, making it imperative to adopt energy solutions that will not compromise future generations' ability to meet their own needs. Transitioning to renewables not only helps reduce emissions but also stimulates economic growth by creating green jobs and encouraging technological innovation (Giwangkara, 2021). In this context, renewable energy is more than an environmental solution; it represents a transformative force driving us towards a resilient, inclusive, and sustainable future, reshaping industries, economies, and societies in profound ways.

Moreover, by investing in renewables, countries can strengthen their energy independence and stability, reducing their vulnerability to external market shifts and supply disruptions. This trend is increasingly reflected in national and international policy agendas, where governments and international organizations are establishing ambitious renewable energy targets, incentives, and regulations designed to accelerate the shift to sustainable energy sources. Thus, international agreements such as the Sustainable Development Goals, Paris Agreement, the COP28 Global Renewables and Energy Efficiency Pledge, and IRBC Agreements, plays a crucial role in countries' transition towards renewable energy with the Sustainable Development Goals in particular showing to be the backbone in the renewable energy transition.

In the context of Indonesia, of which its energy sector has been relying heavily on coal, which accounts for a significant position of its energy mix. Rachmat Kaimuddin, chair of the national energy transition taskforce said in an article by Hicks (2024) that Indonesia relies on coal for 60 percent of its electricity, has a young fleet of coal-fired power stations and is the world's largest coal exporter. Not only that, Kaimuddin also noted that Indonesia has an abundance of renewable resources that are underexploited.

Despite Indonesia's efforts to expand electricity access, significant challenges persist, including widespread energy poverty, infrastructure deficits, and disparities in energy usage. According to the 2024 Report of the Ministry of Energy and Mineral Resources of the Republic of Indonesia, there remain approximately 1.3 million households without any access to electricity, and a total of 6,421 villages have yet to be electrified by PLN, the state electricity company. This lack of access represents not only a technical gap but also a social equity issue, as many of these villages are located in some of the country's most remote and vulnerable areas. Additionally, even in regions where PLN's electricity infrastructure is available, financial barriers prevent many from becoming PLN customers. Some households, situated in both rural and urban areas, are unable to afford the initial cost of connecting to the electricity grid. As a result, they resort to sharing electricity connections with neighbors, which often leads to limited and unreliable power access (Kementerian ESDM, 2024).

The situation is further complicated by Indonesia's geographic and infrastructural challenges. The archipelagic nature of the country, characterized by thousands of islands and rugged terrains, makes infrastructure development both costly and logistically difficult. Many of the 6,421 villages that remain unelectrified are scattered across remote regions, particularly in frontier, outermost, and disadvantaged areas. These regions are often difficult to reach and lack the necessary infrastructure to support energy projects, making nationwide electrification a formidable task. Moreover, the logistical hurdles are compounded by a rapidly urbanizing population, which places additional strain on existing power grids. As more people migrate to urban areas, the increased demand for electricity in cities puts further pressure on energy distribution systems, which are already in need of modernization and investment (WRI & Citraningrum, 2017).

Another critical issue is Indonesia's slow transition to renewable energy. Despite setting ambitious targets, the country has fallen short of its renewable energy goals. As of recent data, renewable energy sources, such as solar, wind, and hydropower, account for only 13.1 percent of Indonesia's electricity mix, well below the target of 17.9 percent for 2023 (Yustika, 2024). This shortfall highlights the difficulties Indonesia faces in scaling up renewable energy projects, which are essential for reducing greenhouse gas emissions and diversifying the country's energy portfolio. The high reliance on fossil fuels remains a major concern, with approximately 81 percent of electricity still being generated from coal, oil, and natural gas. This dependency not only undermines environmental goals but also exposes the country to the volatility of global energy markets and the long-term impacts of climate change (Setiawan & Setyawati, 2024).

Addressing these challenges requires a multifaceted approach that combines policy reform, investment in renewable energy infrastructure, and targeted initiatives to make electricity more affordable and accessible to underserved populations. The government must also prioritize infrastructure development in remote and disadvantaged areas, employing

innovative solutions such as decentralized energy systems and off-grid renewable technologies. Additionally, there is a pressing need for policies that support the financial inclusion of low-income households, potentially through subsidies or installment plans for new electricity connections. Achieving comprehensive energy access and a sustainable energy mix is not only crucial for Indonesia's economic development but also integral to achieving the Sustainable Development Goals and fulfilling international climate commitments.

In response to these challenges, Indonesia has set an ambitious target for renewable energy integration. A statement made by the Minister of Energy and Mineral Resources Arifin Tasrif at the virtual International Energy Agency (IEA) Clean Energy Transitions Summit, the largest energy and climate event, stated that Indonesia aims to make renewable energy contribute 23 percent of the energy mix by 2025. This commitment is part of a broader strategy encapsulated in the Just Energy Transition Partnership (JETP), which aims to mobilize $20 billion in public and private financing to decarbonize the energy sector. Initiatives under this partnership include enhancing solar and wind power capacities, improving grid connectivity, and promoting biomass as an alternative fuel source. Moreover, Indonesia's Energy Compact outlines a financial commitment of over $122 billion towards achieving SDG 7 and net-zero emissions by 2060. This investment will support various projects aimed at expanding renewable energy capacity, including floating solar panels and transitioning from diesel to renewable power plants. The government is also focusing on regulatory reforms to facilitate investments in clean energy technologies.

The Indonesian government is implementing several strategic initiatives to accelerate its transition towards renewable energy such as investment in infrastructure by building additional electricity capacity of up to 100 gigawatts by 2040, with a significant portion derived from new and renewable sources such as geothermal and hydropower (Purnamawati & Difa, 2024). The government is also working on regulatory measures like feed-in tariffs to encourage investment in renewable energy projects (Office of Assistant to Deputy Cabinet Secretary for State Documents & Translation, 2020). These policies aim to create a conducive environment for both local and international investors. Moreover efforts for community engagement have also been made towards a sustainable energy sector, programs such as Happy Energy Action Leadership (HEAL) are designed to empower local stakeholders with the necessary skills and knowledge to lead clean energy initiatives effectively.

HEAL was announced to be launched by United in Diversity Foundation in collaboration with the Rocky Mountain Institute at the Global Blended Finance Alliance (GBFA) dialogue during the G20 Bali event: "Natural Capital, Communities, and Climate Action for A Better Business and Better World," organized by the Tri Hita Karana Forum and the World Economic Forum in conjunction with the 10th World Water Forum in Bali. This dialogue aimed to catalyze global action to protect, restore, and regenerate natural resources and the environment, while exploring emerging ideas and solutions for systemic change that places nature, communities, and climate action at the forefront (United in Diversity, 2024). HEAL will focus on building capacity among leaders from various sectors to ensure that community needs are met while aligning with national and global sustainability goals. Thus, by setting ambitious targets for renewable integration and investing significantly in clean

energy infrastructure in efforts to achieve SDG 7, Indonesia aims not only to enhance its energy security but also to improve access for underserved populations. This collaboration represents a significant step in bridging gaps in energy access and transitioning toward a more sustainable energy future.

The partnership between UID and RMI offers a valuable case study for understanding the dynamics of Indonesia's energy transition through the lens of Multi-Level Governance (MLG) theory. MLG provides a framework to analyze how governance is distributed across local, national, and global levels, and among state and non-state actors. By involving a diverse array of stakeholders—ranging from international organizations and national governments to local communities and civil society—the UID-RMI collaboration exemplifies the principles of MLG. This theoretical approach is particularly relevant for analyzing the complexities of energy transition initiatives, where the interplay between multiple governance levels and actors is crucial for addressing systemic challenges and fostering inclusive solutions. Through the application of MLG theory, the UID and RMI partnership can be better understood as a model for aligning diverse interests and fostering shared responsibility in the pursuit of SDG 7.

This manuscript examines how the Happy Energy Action Leadership (HEAL) program supports Indonesia's efforts to achieve Sustainable Development Goal 7 (SDG 7). It begins with an overview of Indonesia's energy challenges and commitment to renewable energy, followed by an introduction to Multi-Level Governance (MLG) Theory, which helps frame the program's impact across various governance levels. The manuscript explores HEAL's community-driven initiatives and alignment with national energy targets, analyzes the collaboration between United in Diversity (UID) and Rocky Mountain Institute (RMI) through the MLG lens, and discusses the challenges and opportunities for scaling HEAL's impact. Ultimately, it demonstrates HEAL's role in advancing Indonesia's clean energy goals within the context of SDG 7.

2. Concept and Theory

a. Multi Level Governance Theory

Multi-Level Governance (MLG) theory is a framework within international relations that emphasizes the complex interplay between various levels of government and non-state actors in the policy-making process (Bache and Flinders, 2004). This framework moves away from the traditional state-centric perspective, recognizing the increasing influence of decentralized structures, supranational institutions, and civil society organizations (Saito-Jensen, 2015). MLG is divided into two main types. Type I governance features a hierarchical structure with clear tiers of authority, where national governments often retain significant decision-making power but engage with subnational actors and local communities. In contrast, Type II governance, inspired by Ostrom's polycentric model, emphasizes overlapping networks and spheres of authority, blurring the boundaries between state and non-state entities. Such governance structures facilitate collaboration across different scales, often bypassing rigid national frameworks.

The utility of MLG is evident in cases like REDD+ (Reducing Emissions from Deforestation and Forest Degradation), an initiative addressing environmental challenges. This example demonstrates how governance operates on multiple levels, with supranational entities like the United Nations and the World Bank providing frameworks for action, national

governments implementing policies, and subnational actors, including local communities and industries, playing critical roles in on-the-ground efforts. MLG provides a lens through which such collaborations can be understood, highlighting the need for shared responsibility and the mobilization of resources at all levels of governance. Furthermore, it underscores the transformative role of the state, which, while no longer holding a monopoly on decision-making, adapts to these changes by fostering coordination, steering networks, and leveraging partnerships to maintain its autonomy and effectiveness.

In terms of International Relations, MLG is particularly relevant in addressing environmental governance, a critical area in IR where global challenges like climate change, biodiversity loss, and deforestation demand coordinated efforts across multiple levels of governance and among diverse actors. Unlike traditional state-centric approaches, MLG emphasizes the interconnected roles of supranational institutions, national governments, regional authorities, local communities, and non-state actors, such as environmental NGOs, private sector stakeholders, and indigenous groups. This multilevel perspective is essential for tackling environmental problems that transcend borders and require integrated solutions. For example, initiatives like the Paris Agreement and REDD+ (Reducing Emissions from Deforestation and Forest Degradation) highlight how global institutions provide overarching frameworks and funding mechanisms, while national and subnational actors implement these strategies in specific contexts.

The MLG approach also allows for the examination of how local actors and communities contribute to environmental governance by providing contextual knowledge, managing resources sustainably, and monitoring implementation. For instance, local communities often play a critical role in forest conservation efforts under REDD+, where their participation ensures that policies are adapted to on-the-ground realities. Furthermore, MLG facilitates the understanding of how non-state actors, such as transnational advocacy networks, influence environmental governance by shaping policy agendas, fostering collaboration, and holding governments accountable (Saito-Jensen, 2015). This is evident in global climate campaigns led by coalitions of NGOs and activists, which operate across governance levels to drive systemic change.

In addition to fostering collaboration, MLG provides insights into how tensions and conflicts are managed in environmental governance. Competing interests among actors at different levels—such as national governments prioritizing economic growth over environmental protection or local communities resisting top-down conservation policies—are common challenges. By examining these dynamics, MLG helps identify pathways to balance competing priorities, enhance accountability, and build trust among stakeholders. Ultimately, MLG underscores the importance of inclusivity, adaptability, and shared responsibility in developing effective responses to the complex and interconnected environmental issues of the modern era

b. Sustainable Development Goals 7

Sustainable Development Goal 7 (SDG 7) aims to ensure access to affordable, reliable, sustainable, and modern energy for all by 2030. The key objectives of SDG 7 are multifaceted and ambitious, reflecting the global urgency to address energy poverty while simultaneously

combating climate change. First, achieving universal access to electricity and clean cooking solutions is a priority, especially in developing countries where a significant portion of the population still lacks basic energy services. These efforts are crucial for reducing energy poverty, which disproportionately affects rural communities and perpetuates cycles of poverty and inequality. Improved energy access can drive economic opportunities, facilitate access to education, and improve health outcomes by reducing the reliance on harmful traditional biomass for cooking.

Another vital component of SDG 7 is significantly increasing the share of renewable energy in the global energy mix. This objective involves widespread adoption of technologies that harness solar, wind, hydro, geothermal, and other sustainable energy sources. Expanding renewable energy is essential not only for reducing greenhouse gas emissions but also for creating more resilient energy systems that are less vulnerable to disruptions and more adaptable to future energy needs. This transition supports global efforts to mitigate the impacts of climate change while promoting economic development and environmental stewardship.

Moreover, SDG 7 emphasizes the need to double the global rate of improvement in energy efficiency. Enhanced energy efficiency means reducing energy consumption while maintaining or improving productivity, thereby cutting costs and minimizing environmental impacts. Achieving this requires innovations across sectors, from advancements in energy-efficient appliances and buildings to improved industrial processes and smarter energy management systems. By focusing on energy efficiency, countries can address their energy demands more sustainably and contribute to a lower carbon footprint, which is critical for meeting international climate goals.

In Indonesia, SDG 7 holds particular significance as the nation grapples with considerable energy challenges. The country remains heavily dependent on fossil fuels, especially coal, which complicates the transition to cleaner energy sources. Nevertheless, Indonesia has committed to achieving net-zero emissions by 2060 and has set ambitious targets for integrating renewable energy, aiming for renewables to constitute 23% of its energy mix by 2025 and 34% by 2030 (PT. PLN Persero, n.d.). However, recent policy revisions have led to a reduction of this target to between 17% and 19%, underscoring the difficulties in shifting away from a fossil-fuel-dominated energy landscape (Yustika, 2024).

Achieving SDG 7 aligns seamlessly with Indonesia’s broader development goals, such as enhancing energy security, alleviating poverty through increased access to electricity, and fostering economic growth by embracing sustainable practices. The government's commitment to clean energy also plays a vital role in Indonesia’s climate action strategy under international agreements like the Paris Agreement, which aims to limit global temperature rise and mitigate climate change impacts. Successfully transitioning to a cleaner energy future would not only fulfill environmental commitments but also drive transformative change in Indonesia’s economy and improve the quality of life for millions of its citizens. Energy access is intricately linked to achieving many other SDGs, such as reducing poverty (SDG 1), ensuring quality education (SDG 4), and promoting gender equality (SDG 5), as energy infrastructure empowers communities and provides new opportunities for economic and social advancement. Thus, Indonesia's journey toward SDG 7 is not just about transforming its energy sector but about creating a foundation for sustainable and inclusive growth that can uplift the entire nation.

3. The Happy Energy Action Leadership (HEAL) Program

a. Objectives and Goals of HEAL

The Happy Energy Action Leadership (HEAL) program is designed to empower Indonesian leaders and stakeholders in the energy sector to facilitate a successful transition to renewable energy. The primary objectives of HEAL include building leadership, fostering collaboration, and developing technical expertise. HEAL aims to enhance the skills and expertise of 30-50 stakeholders from various sectors and equip them with the knowledge necessary to implement effective energy policies and projects. This capacity building part is critical for addressing the barriers that exist in transitioning from coal to clean energy resources. This program also heavily emphasizes the importance of collaboration among local and national stakeholders. By creating networks and partnerships, HEAL seeks to ignite collective action in energy transition projects, ensuring that diverse voices are included in decision-making processes. Furthermore, HEAL also focuses on providing deep technical knowledge related to renewable energy technologies, financial mechanisms, and policy frameworks. This expertise is essential for stakeholders to design and implement innovative solutions that align with Indonesia's climate commitments under the JETP.

b. Program Structure and Activities

The structure of the HEAL program is designed to provide comprehensive training and learning opportunities for participants. Key components of the HEAL program include training modules, workshops, site visits, and collaborative learning opportunities. HEAL offers a series of training modules that cover various aspects of energy transition, including policy development, project financing, and technical implementation of renewable energy systems. These modules are designed to cover the technical, social, and economic aspects of energy transition, these modules are also tailored to equip participants with practical skills applicable in their respective roles and provide participants with a solid foundation in th e principles and practices needed for leading energy initiatives. The program also includes several highly interactive workshops in order for participants to engage in hands-on learning experiences. participants engage in action-based projects where they collaborate with other stakeholders to solve real-world energy challenges. by working on authentic problems, they gain practical insights and hands-on experience, which enhance their capacity to drive change within their communities and organization. These workshops facilitate discussions on best practices, challenges faced in the energy sectors, and innovative solutions for overcoming these challenges. Participants also have the opportunities to visit existing renewable energy projects, which provide real world insights into successful implementations. These site visits allow stakeholders to observe operational models, engage with project leaders, and understand the practical aspects of renewable energy deployment. This exposure is crucial for building a practical perspective on the feasibility and impact of clean energy projects. Lastly, HEAL promotes collaborative learning through group activities, discussions, and networking events. Through mentoring and shared reflection sessions, participants learn from each other's experiences and develop a network of support. This approach encourages knowledge sharing among participants from different sectors, fostering a community of practice that extends

beyond the program duration.this collaborative environment thus fosters a sense of collective responsibility and unity in the pursuit of sustainable future energy.

c. Stakeholder Engagement

A Unique and critical feature of the HEAL program is its emphasis on engaging a diverse range of stakeholders, which is crucial for a successful energy transition. The program creates a collaborative ecosystem that brings together key actors from different sectors to align their efforts and drive systemic change in energy transition. This program engages government officials, private sector leaders, and lastly civil society organizations. HEAL actively involves policymakers and regulatory authorities in its initiatives. By involving policymakers at various levels, HEAL ensures that participants understand regulatory frameworks and can influence policy decisions that support renewable energy initiatives. government officials are engaged through dialogues, workshops, and policy-focused discussion that highlight the importance of regulatory support for renewable energy projects. Additionally, recognizing the vital role of the private sector in energy transition, HEAL partners with businesses, investors, and energy companies. These stakeholders are involved in discussions about market-driven solutions, investment opportunities, and the economic benefits of transitioning to clean energy. By fostering partnerships between public and private sectors, HEAL creates a pathway for sustainable and scalable energy solutions. Moreover, HEAL prioritized the inclusion of civil society actors such as NGOs, Community leaders, and grassroots organizations. These groups bring valuable local knowledge and advocate for energy solutions that are equitable and community centered. The program provides a platform for CSOs to voice their concerns and collaborate on projects that promote energy access and environmental justice. Engaging civil society groups also helps incorporate community perspectives into energy planning processes as these organizations play a key role in advocating for access to clean energy resources and ensuring that local needs are addressed. Furthermore, HEAL's approach to stakeholder engagement is holistic. The program organizes multi-stakeholder convenings, where local, national, and international actors come together for shared learning and action. These gatherings facilitate trust-building, the exchange of best practices, and the development of a shared vision for energy transition. Through these collaborative efforts, HEAL aims to create a synergistic environment where different stakeholders can work together towards common goals in Indonesia's energy transition. And by building strong networks among government, private sectors, and civil society actors, HEAL enhances the potential for effective implementation of renewable energy projects aligned with national climate commitment.

4. Collaboration between United in diversity (UID) and Rocky Mountain Institute (RMI) analyzed using the Multi-Level Governance (MLG) Theory

a. Collaboration between United in diversity (UID) and Rocky Mountain Institute (RMI) analyzed using the Multi-Level Governance (MLG) Theory

The collaboration between UID and the RMI under the HEAL program is a dynamic example of how Multi Level Governance (MLG) theory can be applied to foster sustainable development through energy transition. This partnership aligns closely with MLG's core principles by involving diverse actors across multiple governance levels and emphasizing the importance of cooperation among state, non-state, and transnational stakeholders.

At the heart of this collaboration is the integration of actors operating at global, national, and local levels, which exemplifies the MLG framework. RMI, a U.S.-based non-partisan organization, brings global expertise in clean energy transition, while UID, an Indonesian non-profit, mobilizes stakeholders from Indonesia's government, private sector, and civil society. Their joint effort incorporates international entities like development funds such as World Bank and Asian Development Bank, national policy-makers like Indonesia's Ministry of Energy and Mineral Resources, subnational governments, and local communities. This multilevel engagement ensures that the energy transition strategy reflects both global best practices and local needs, creating a robust framework for collaboration.

The HEAL program also demonstrates the polycentric nature of governance, as envisioned in MLG Type II frameworks. Instead of relying solely on top-down hierarchies, the program fosters overlapping networks of decision-making and implementation. Local actors, such as community organizations and labor unions, are empowered to take ownership of energy transition projects, participating as co-creators rather than passive recipients of policy. For instance, the action-learning labs facilitate hands-on involvement of local stakeholders, allowing them to address barriers such as workforce reskilling, policy constraints, and access to funding. This decentralization aligns with MLG's emphasis on shared authority and enables innovative solutions to emerge from the ground up.

Furthermore, UID's approach to fostering trust and collaboration among government, business, and civil society actors is central to the success of this initiative. By bringing together diverse stakeholders, the HEAL program builds inclusive governance mechanisms that address systemic barriers in Indonesia's energy transition. For example, the partnership involves private capital providers, renewable energy producers, international philanthropic organizations, and local government agencies, creating a broad coalition that shares a commitment to achieving equitable and sustainable outcomes. This tri-sector collaboration aligns with MLG's goal of bridging governance gaps through shared responsibility and collective action. Additionally, HEAL also serves as a platform for transnational policy transfer and mutual learning, key aspects of MLG theory. RMI's expertise in renewable energy systems introduces global best practices to Indonesia, while UID ensures these practices are adapted to local contexts. The program emphasizes capacity building and knowledge sharing through workshops, skill modules, and action-oriented projects. These activities not only transfer technical expertise but also foster a culture of shared learning and innovation, demonstrating how MLG facilitates the flow of ideas and practices across governance levels to achieve common goals. And finally, a defining feature of HEAL is its ability to synchronize efforts across local, regional, and national levels of governance. By aligning the objectives of international development funds, national policies, and community-led initiatives, the program ensures a cohesive approach to energy transition. This integration is evident in projects that combine financial mechanisms, such as blended finance and carbon credits, with on-the-ground implementation of renewable energy solutions. Through these efforts, HEAL exemplifies MLG's capacity to coordinate actions across governance levels and achieve systemic change.

b. Challenges in Achieving SDG 7 through HEAL

Despite its strengths, the collaboration between UID and RMI faces several challenges that could hinder the effective implementation of renewable energy projects and the achievement of SDG 7. The first challenge faced by the program presents itself in the forms of multiple barriers to its implementations such systemic barriers in financing, workforce skill gaps, policy and regulatory resistance, infrastructure limitation, and of course the social and economic concerns. Financing energy transition projects remains complex. The program deals with issues like the high risk profile of clean energy investments and the intricacies of blended finance. These financial hurdles complicate the ability to secure funding for renewable energy initiatives and make it difficult for communities to mobilize capital. Meanwhile another challenge is the insufficient availability of skilled labor needed for renewable energy projects. Transitioning from traditional energy sources, such as coal, to renewable energy requires reskilling and capacity building, which is a time-intensive process. The energy transition demands a highly skilled workforce proficient in renewable energy technologies, project management, and policy advocacy. However, Indonesia's labor market currently lacks a sufficiently trained workforce to meet these demands. Many workers have built their careers around fossil fuel industries and would require significant reskilling to transition into renewable energy roles. Addressing these skill gaps involves not only providing training but also creating a broader strategy for workforce development that includes collaboration with educational institutions and vocational training centers

The energy transition in Indonesia is further complicated by resistance within the policy and regulatory environment. Existing regulations may still favor fossil fuels, such as subsidies for coal-fired power plants, which undermine efforts to promote renewables. Furthermore, the regulatory framework can be slow to adapt to emerging technologies, resulting in bureaucratic hurdles that delay renewable energy projects. For example, lengthy approval processes for renewable energy installations and restrictions on decentralized energy systems create inefficiencies that hinder progress. Infrastructure limitations also come into play. Indonesia's energy infrastructure, which is largely designed for fossil fuel-based power generation, presents another challenge. The national grid is not fully prepared to handle the integration of variable renewable energy (VRE) sources like solar and wind, which require advanced grid management and storage solutions. Grid oversupply and the geographical fragmentation of Indonesia further complicate the distribution of renewable energy. To overcome this, significant investments are needed to modernize the grid and build infrastructure that can efficiently manage and distribute renewable energy across the archipelago.

And lastly the transition to clean energy also brings social and economic concerns, particularly for workers and communities that depend on the fossil fuel industry for their livelihoods. The potential for job loss and economic displacement is a major concern that can fuel resistance to change. HEAL must ensure that the energy transition is just and equitable, providing social protections, reskilling opportunities, and economic diversification strategies to mitigate the negative impacts. Additionally, engaging communities in meaningful ways to ensure they benefit from renewable energy projects is essential for building widespread support

c. Opportunities for Future Development

Despite these challenges, the HEAL program presents significant opportunities to advance SDG 7 goals such as HEAL can expand and replicate successful pilot projects, turning them into broader initiatives across Indonesia. By documenting and sharing best practices and lessons learned, HEAL can inspire other regions and organizations to adopt similar models. This scaling effort can accelerate the transition to renewable energy and create a snowball effect, where early successes generate momentum for more ambitious projects. Additionally, expanding HEAL's reach to different parts of Indonesia can help address energy access disparities and bring sustainable energy solutions to more communities.

Furthermore, there is a substantial opportunity to enhance collaboration between local, national, and international actors. HEAL serves as a unifying platform that brings together various actors, including government agencies, private investors, civil society organizations, and international development partners. By fostering trust and alignment among these stakeholders, HEAL can streamline decision-making, reduce duplication of efforts, and create a more cohesive approach to energy transition. This collaboration can also lead to the pooling of resources and expertise, making renewable energy projects more efficient and impactful.

Not only that, by leveraging blended finance, HEAL can create new pathways for funding energy projects. The program has the potential to pioneer new financial mechanisms that can attract both public and private investment. By leveraging blended finance, HEAL can lower the cost of capital for renewable energy projects and mitigate financial risks. For instance, the program can explore the use of carbon credits, impact investing, and public-private partnerships to mobilize funding. These innovative financial solutions can make renewable energy projects more economically viable and accelerate their implementation. Additionally, HEAL can advocate for policies that incentivize investment in clean energy, such as tax breaks or subsidies for renewable energy projects.

HEAL also has the opportunity to be a hub for innovation and research in the renewable energy sector. By partnering with universities, research institutions, and technology providers, the program can drive advancements in energy technologies and solutions. Areas of focus could include developing more efficient solar panels, exploring energy storage options, and modernizing grid infrastructure. Encouraging research and innovation can also help Indonesia leapfrog to cutting-edge energy solutions, positioning the country as a leader in renewable energy deployment.

Additionally HEAL also can empower communities to take charge of their energy future fosters resilience, promotes equitable energy distribution, and creates long-term economic benefits. By providing communities with the knowledge, skills, and resources needed to implement their own renewable energy projects, HEAL can foster a sense of ownership and agency. This empowerment can lead to more sustainable outcomes, as communities are more likely to maintain and scale projects that they have helped design and implement. Furthermore, involving women and marginalized groups in these efforts can promote social equity and broaden the impact of renewable energy initiatives

And lastly HEAL can influence national energy policies by demonstrating the effectiveness of renewable energy projects. It can act as a catalyst for more supportive regulatory environments and stronger governmental commitment to clean energy transitions.

By demonstrating the economic and environmental benefits of renewable energy, HEAL can inspire policymakers to adopt regulations that prioritize clean energy development. The program can also serve as a model for other countries in the region, showcasing how multi-stakeholder collaboration and innovative approaches can drive meaningful change. This advocacy work can pave the way for more ambitious climate action and help Indonesia meet its international commitments, such as the Paris Agreement goals.

5. Conclusion

The HEAL program demonstrates the potential of multi-stakeholder collaboration to address the complexities of Indonesia's energy transition within the framework of Multi-Level Governance (MLG). By aligning local capacities, national policies, and international expertise, the program exemplifies a decentralized yet coordinated approach to achieving SDG 7. The partnership between UID and RMI highlights the necessity of inclusive governance, where actors from government, private sectors, and civil society contribute to systemic change.

HEAL's focus on capacity-building has proven vital for empowering stakeholders to adopt renewable energy solutions tailored to local needs. Moreover, its innovative financial strategies, including blended finance models, offer a replicable framework for overcoming investment barriers. However, the persistence of challenges, such as regulatory inertia and workforce limitations, underscores the need for ongoing reforms to create an enabling environment for renewable energy.

The program's integration of community voices ensures that energy transition efforts address socio-economic equity, fostering trust and engagement critical for long-term sustainability. As a scalable and adaptable model, HEAL not only accelerates Indonesia's progress toward renewable energy targets but also sets a precedent for other nations facing similar challenges. By bridging governance levels and leveraging cross-sectoral partnerships, HEAL reaffirms the pivotal role of collaborative action in building a sustainable and inclusive energy future.

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