

REPOA Brief



Enhancing Private Sector Participation in Tanzania's Renewable Energy Sector

By *EnergyCARD* & REPOA

Tanzania could unlock USD 4–5 billion in private investment by 2035, create over 150,000 jobs, and reduce fossil fuel imports by USD 200–300 million annually.

Only 14 Small Power Producer (SPP) projects below 50 MW have been implemented since 2008, indicating a significant gap in private sector engagement.

Major barriers include regulatory uncertainty, high financing costs, grid integration challenges, and weak institutional coordination.

Strategic interventions such as binding renewable energy targets, blended finance mechanisms, and human capital development are essential to catalyze investment.

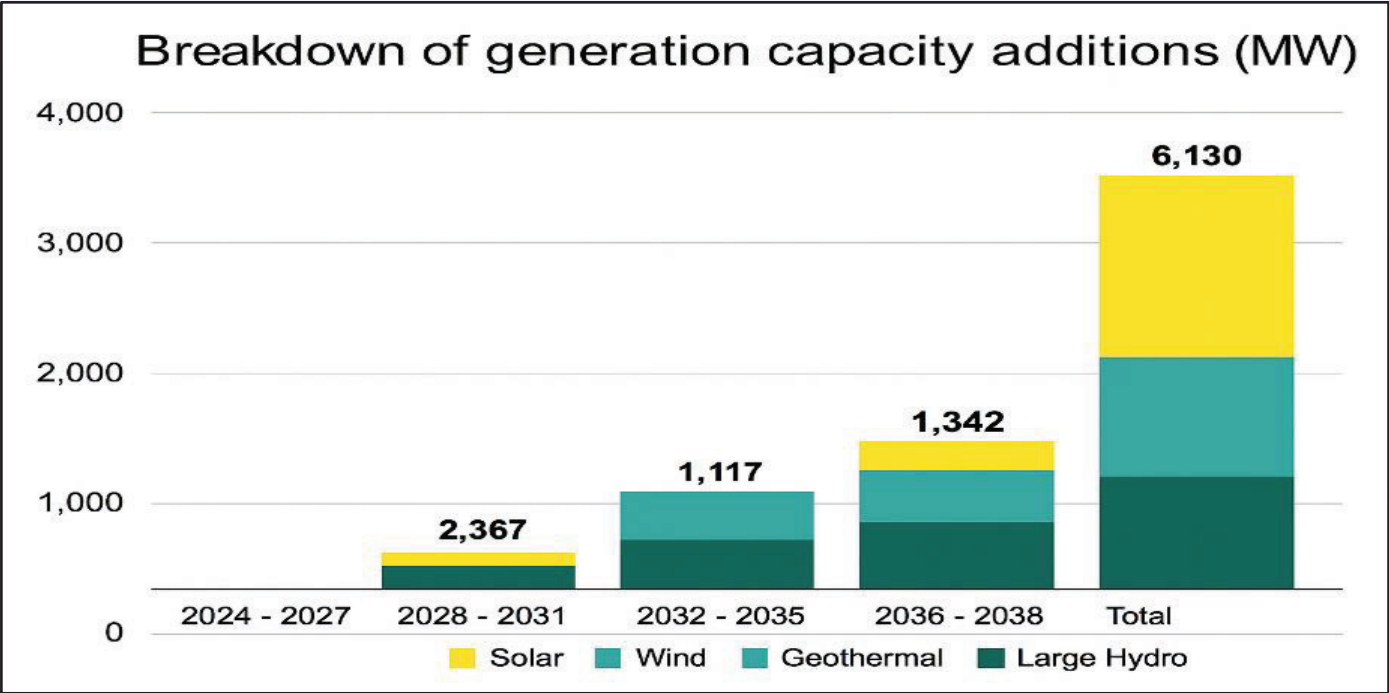
Introduction

This policy brief assesses the systemic barriers hindering private investment in RETs and proposes actionable interventions to accelerate deployment in alignment with Tanzania Development Vision 2050 and global climate commitments.

Tanzania is at a critical juncture in its energy transition, with renewable energy technologies (RETs) positioned to drive economic transformation, energy security, and climate resilience. Despite substantial potential across solar, wind, geothermal, and hydropower, private sector participation remains limited. According to the Ministry of Energy only 14 Small Power Producer (SPP) projects below 50 MW have been implemented since 2008, highlighting a substantial gap between Tanzania's renewable energy potential and actual private sector engagement (2025). Given the planned scale and composition of Tanzania's planned renewable energy investments (Figure 1), strengthening private sector participation remains pivotal to among others:

- Mobilizing investment to meet renewable energy targets and Vision 2050 objectives.
- Stimulating innovation in renewable energy technologies (RETs) and business models.
- Strengthening economic growth and job creation, particularly in rural area; and Improving system efficiency and reliability, by leveraging private-sector expertise in project development, operations, and financing.

Figure 1: Tanzania’s Renewable Energy Strategic Targets of additional MW (2024–2038)



Source: Ministry of Energy, 2024

Methodology and Data

This study employs a mixed-methods approach to investigate Tanzania’s renewable energy ecosystem, integrating both quantitative and qualitative techniques. Structured questionnaires were administered to 28 respondents from a pool of 50, capturing data on tariffs, fiscal policies, employment, trade, and socio-economic indicators. Fieldwork was conducted in March and April 2025 in Dar es Salaam, Morogoro, Dodoma, Njombe, Mbeya, Singida, Shinyanga, and Mwanza regions. Semi-structured interviews complemented this by eliciting stakeholder perspectives on policy effectiveness, financing, institutional readiness, and community engagement across eight regions. Sampling combined purposive and snowball strategies to ensure diverse representation from governmental and non-governmental actors. Field visits to solar, hydropower, and geothermal sites further validated findings and provided practical insights into implementation challenges and community involvement, enriching the study’s policy recommendations.

Findings

Achieving Tanzania’s renewable energy targets necessitates the mobilization of substantial financial resources through a collaborative partnership approach involving the Government, private sector, and development partners. As per the National Renewable Energy Strategy (NRES) 2024–2034, Tanzania aims to add 3,484 MW of renewable energy capacity by 2031 as part of its Nationally Determined Contributions (NDC) commitment to reduce its Green House Gas emissions by 30% to 35% by 2030. While, costing of the NRES remains in progress, this expansion is expected to cost in excess of USD 20 billion, roughly a quarter of its Gross Domestic Product and 100% of current annual budget. Earmarked investment includes sources such as solar (150 MW), wind (470 MW), geothermal (290 MW), and large hydropower (2,574 MW).

Planned renewable energy projects demand significant funding, with large-scale initiatives primarily financed through international markets due to limited local capacity, while smaller projects leverage domestic financing.

Analysis of secondary data reveals that:

- **As part of the World Bank and African Development Bank's Mission 300 Initiative** which aims to connect 300 million people to electricity in Africa by 2030, Tanzania needs to mobilise approximately USD 4.039 billion from private capital. This would Tanzania to deploy 1,973 MW of renewable energy capacity by 2030, encompassing 880 MW hydro, 463 MW solar, 500 MW wind, and 130 MW geothermal projects (MoE - National Energy Compact, 2025).
- **The National Power System Master Plan (PSMP) 2024 Update** envisions a USD 12.9 billion investment to add 2.4 GW to Tanzania's power grid by 2030, aiming to increase electricity access to 75% of the population energy.
- **Clean Cooking Programs:** The African Development Bank has committed USD 2 billion to support clean cooking solutions across Africa, with several countries, including Tanzania. According to the National Clean Cooking Strategy, Tanzania is expected to achieve 75% access by 2030 and 80% access by 2034.

Successful implementation of these initiatives requires integrating activities into institutional plans and budgets, coordinating resource mobilization, and ensuring efficient allocation to achieve assigned targets. This coordinated approach envisages accelerating private sector participation, ensure timely project execution, and drive Tanzania's renewable energy transition toward Vision 2050, economic growth, and climate resilience.

However, our study identifies the following critical dimensions impacting private sector participation in RET:

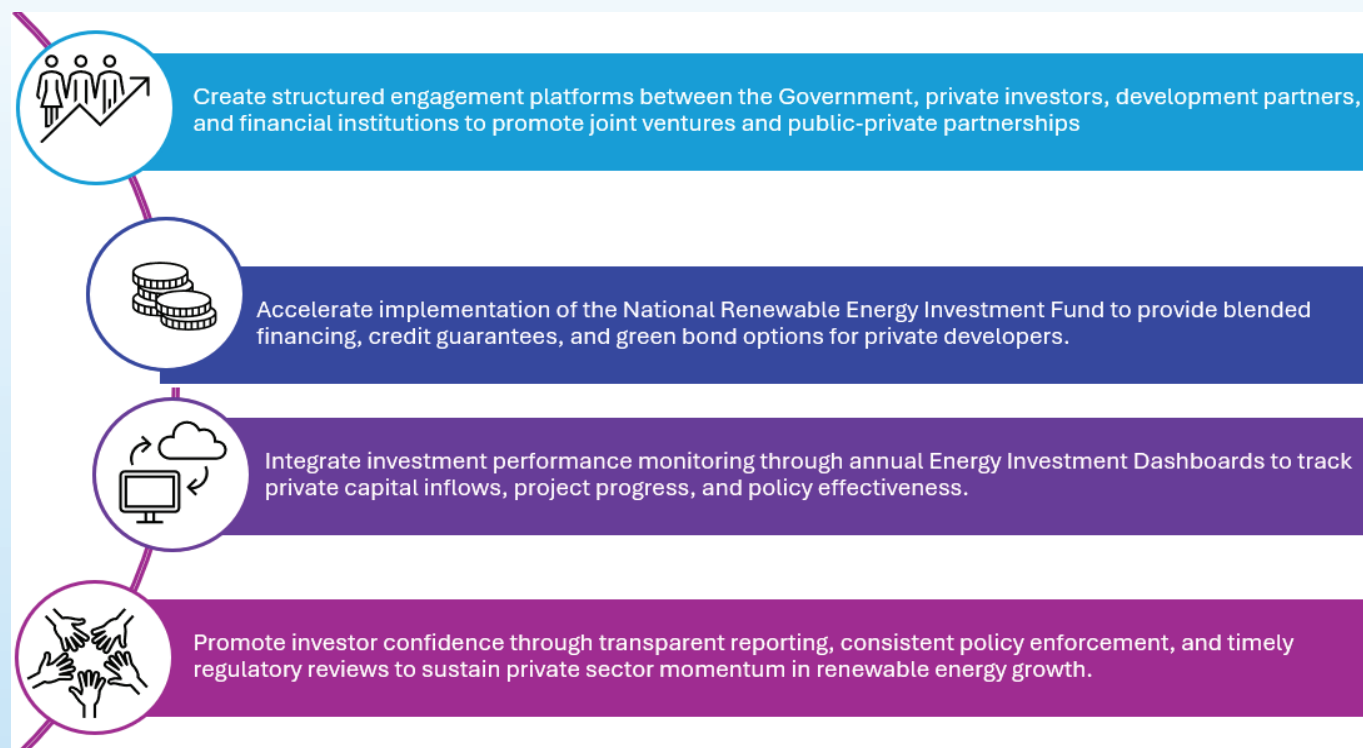
- i. **Resource Mobilization:** National strategies such as the NRES 2024–2034, Mission 300, and PSMP 2024 outline ambitious targets requiring coordinated financing from domestic and international sources.
- ii. **Economic Impact:** RETs offer substantial macroeconomic benefits, including job creation, rural development, and industrial transformation. Every USD 1 million invested can generate USD 2–3 million in additional economic activity. However, the private sector faces considerable financial and economic barriers preventing a larger footprint in RET. These include high cost of capital (16–18% local interest rates); lack of blended finance instruments or a national Renewable Energy Investment Fund; and limited SME access to affordable credit (UNFCCC, 2023).
- iii. **Policy Gaps:** Key barriers include weak incentives (e.g., non-operational net metering), absence of binding targets, and limited technical capacity.
- iv. **Infrastructure and Governance:** Grid constraints, Weak Public Private Partnership (PPP) frameworks, lack of updated resource assessments, TANESCO's monopoly, and political influence over regulatory decisions hinder private sector confidence and participation.
- v. **Human Capital:** The shortage of skilled technicians and limited local manufacturing capacity restricts sectoral growth and technology transfer. Tanzania has fewer than 10,000 skilled technicians trained, and limited manufacturing capacity with less than 5% of solar components locally assembled.

Conclusions

Private sector engagement is indispensable for achieving Tanzania's renewable energy goals. Addressing regulatory, financial, and institutional constraints is vital to create a conducive investment climate. A robust policy framework, modernized infrastructure, and targeted capacity-building initiatives are required to unlock the full potential of RETs and ensure inclusive, sustainable development.

Policy Recommendations

The following measures are recommended to enhance private sector participation in RET:



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