MISSION 300
AFRICA
ENERGY
SUMMIT

NATIONAL ENERGY COMPACT
FOR UNITED REPUBLIC OF TANZANIA

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Preamble

The government of the United Republic of Tanzania is committed to ensuring reliable, affordable, sustainable, inclusive, and clean energy for all. This National Energy Compact serves as a roadmap to accelerate the pace of access to energy toward that goal.

The Energy sector in Tanzania began decades ago, laying a foundation for what has now a become a robust and transformative sector. Starting with Hydro power Plant producing just 21 MW in 1967 and expanding to significant projects including Julius Nyerere Hydropower Project producing 2,115 MW to reach total installed capacity of 3,404.20MW as at January, 2025.

Tanzania continues to make significant progress in connecting citizens to electricity. Overall electricity access in mainland Tanzania has increased from 14 percent in 2011 to 78.4 percent in 2020[1], as the country has expanded the power grid to reach 100 percent coverage of all 12,318 villages. Despite this achievement, connectivity of the population today in mainland Tanzania is less than 50 percent and about 40 percent of the population in Zanzibar. Over 89 percent of households in mainland Tanzania still rely on traditional fuels and technologies for cooking, while in Zanzibar, the figure exceeds 84 percent. Aging infrastructure further compounds the problem of reliability and quality of supply. This National Energy Compact sets forth actionable commitments to address these challenges and achieve transformative energy outcomes.

The government of Tanzania aims to increase electricity connectivity to 75 percent by 2030 and clean cooking access to 80 percent by 2034. It also aims to increase the share of renewable energy in the generation-mix to 75 percent from the current 61.8 percent, which will require adding over 1,800 MW of generation capacity from solar, wind, geothermal, and hydro. Significant mobilization of public- and private-sector financing is targeted in order to create a favorable investment climate, strengthen local capacities through training, and establish robust data-collection systems for informed energy-planning and decision-making.

This National Energy Compact was developed through extensive engagements and consultations with various stakeholders, including development partners, private sector, and civil society, to foster partnerships crucial for achieving the ambitious goals of the Compact.

Recognizing that success requires capacity-building and considerable collective efforts, the government of the United Republic of Tanzania calls on development partners, philanthropies, the private sector, and civil society to join this transformative journey in accelerating the pace of access to energy and to help in mobilizing an additional US$12.9 billion in financing, including US$4.039 billion from the private sector.

[1] Energy Access and Use Situation Survey II by NBS – 2019/20

Abbreviations

AFD	Agence Francaise de Developpement
AfDB	African Development Bank
ASCENT	Accelerating Sustainable and Clean Energy Access Transformation
CAIDI	Customer Average Interruption Duration Index
CCGT	Combined Cycle Gas Turbine
CSP	Corporate Strategy Plan
DRE	Distributed Renewable Energy
EAPP	Eastern Africa Power Pool
EU	European Union
EWURA	Energy and Water Utilities Regulatory Authority
GIS	Geographic Information System
GoT	Government of Tanzania
HFO	Heavy Fuel Oil
ICS	Improved Cooking Stove
IPT	Independent Power Transmission
IRP	Integrated Resource Plan
JNHPP	Julius Nyerere Hydro Power Plant
KTPIP	Kenya - Tanzania Power Interconnector Project
kV	kilovolt
LPG	Liquified Petroleum Gas
MoE	Ministry of Energy
MOTA	Mozambique - Tanzania Interconnector
MoU	Memorandum of Understanding
MoWEM	Ministry of Water Energy and Minerals
MVA	Megavolt Ampere
MW	Mega Watt
NBS	National Bureau of Statistics
NCCS	National Clean Cooking Strategy
PPP	Public Private Partnership
PSMP	Power System Master Plan
RBF	Result Based Financing
REA	Rural Energy Agency
REI4P	Renewable Energy Independent Power Producer Procurement Programme
REMP	Rural Energy Master Plan
RGoZ	Revolutionary Government of Zanzibar
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SAPP	Southern African Power Pool
SPP	Small Power Projects
TANESCO	Tanzania Electric Supply Company Limited
TBS	Tanzania Bureau of Standards
TPDC	Tanzania Petroleum Development Company
TREEP	Tanzania - Rural Electrification Expansion Program
USD	United State Dollar
UTIP	Uganda - Tanzania Interconnector Project
WB	World Bank
ZECO	Zanzibar Electricity Corporation
ZHBS	Zanzibar Household Budget Survey
ZURA	Zanzibar Utilities Regulatory Authority

Contents

1

Declaration of Commitment

The government of Tanzania is committed to ensuring reliable, affordable, sustainable, inclusive, and clean energy to all. To this end, the government intends to undertake the following:

- **Expand electricity connectivity** to an additional 8.3 million households by 2030, raising the national electricity connectivity rate from 46 percent in 2022 to 75 percent in 2030, with a focus on rural electrification and underserved areas through grid and off-grid solutions.

- **Accelerate access to clean cooking** from the current 6.9 percent in 2021 to 75 percent by 2030, significantly improving the lives of women by promoting alternative fuels and clean cooking technologies.

- **Expand the share of renewable energy** in the generation mix from the current 61.8 percent to 75 percent by 2030—driven by investments in solar, wind, geothermal, and hydro.

- **Create an enabling environment** for private-sector participation in the energy sector to mobilize a total of US$ 4.039 billion in private investments to support Tanzania's energy transition and development goals.

Tanzania aligns its energy priorities with the Third Five-Year Development Plan (FYDP III) by advancing industrialization, enhancing infrastructure, and fostering private sector growth. The compact's focus on sustainable energy solutions supports Vision 2025, which envisions a middle-income, energy-secure nation. It also aligns with SDG7 by promoting universal access to modern energy. Furthermore, the compact complements Agenda 2063 by strengthening regional integration and fostering shared prosperity. These initiatives position Tanzania as a leader in sustainable development and socio-economic transformation.

To achieve the targets outlined in the National Energy Compact, the government of Tanzania commits to addressing critical bottlenecks across the energy value chain as outlined in the Compact's action plan. In particular, the government of Tanzania will:

I. REHABILITATE AND EXPAND ENERGY INFRASTRUCTURE AT COMPETITIVE COSTS.

- **The government commits to adopting and periodically updating a comprehensive least-cost power system master plan starting in 2025** to guide future public and private investments in the energy sector, incorporating regional resources and emerging demand from e-mobility, e-cooking, etc.
- **The government commits to developing and operationalizing by 2027 a competitive procurement framework for power projects** in accordance with the Public Procurement Act of 2023 and to establishing a Renewable Energy Independent Power Producer (IPP) Procurement Programme by 2026 for competitive procurement of renewable energy projects.
- To meet the investment needs in transmission, **the government commits to undertaking a pilot independent power transmission project by 2027** and adopting the framework for future investments by 2028.

II. LEVERAGE BENEFITS OF INCREASED REGIONAL INTEGRATION.

- **Recognizing the crucial importance of cross-border electricity trade in optimizing energy supply costs, the government commits to establishing an appropriately resourced trading unit within Tanzania Electric Supply Company Limited (TANESCO) by 2025** and to identifying and implementing critical interconnection investments to facilitate increased power trade with neighboring countries through the Power Pools.
- **To facilitate and improve cost-effectiveness in regional power exchanges, the government commits to harmonizing the regulatory framework, including transmission tariffs** with the Southern African Power Pool (SAPP) and Eastern Africa Power Pool (EAPP) by 2026.

III. EMBRACE DISTRIBUTED RENEWABLE ENERGY (DRE) AND CLEAN COOKING SOLUTIONS AS CRITICAL ELEMENTS OF THE ACCESS AGENDA.

- **The government recognizes the crucial importance of both intensive investments in on-grid and off-grid electrification solutions to achieve its ambitious electrification targets.** To this end, by 2027 the government commits to revising and implementing the Rural Energy Master Plan and the Zanzibar Electrification Master Plan and their respective implementation strategies with clear roles for the private sector. The monitoring and evaluation plan will be revised to include the multi-tier framework for electricity and clean cooking by 2026.

- **To facilitate private investment in DRE, the government commits to mobilizing adequate resources to strengthen the institutional capacity of Tanzania's Bureau of Standards to enforce quality standards for off-grid equipment.**
- **To address the crucial challenge of clean cooking, the government** has established the National Clean Cooking Strategy 2024–2034 that targets 80 percent access by 2034. **The government and private-sector institutions will adopt** the strategy and action plan and will focus on increasing access to alternative fuels and clean cooking technologies, particularly for women. National quality and performance standards and adequate infrastructure for testing will be developed. The results-based financing (RBF) facility for improved cookstoves will be scaled up in 2025 and taxes, duties, and fees will be reduced for clean cooking appliances by 2026.

IV. INCENTIVIZE PRIVATE-SECTOR PARTICIPATION TO UNLOCK ADDITIONAL RESOURCES AND DEVELOP LOCAL CAPACITY.

- **Recognizing the private sector's crucial role in mobilizing necessary resources and to incentivize its participation in the energy sector (both on-grid and off-grid), and unlock additional resources**, the government commits to revising the Small Power Projects (SPP) framework to establish cost-reflective tariffs for small power producers by 2026, update the net-metering rules for renewable energy by 2027, and develop and enact Zanzibar's Energy Act by 2026.
- **The government commits to strengthening the legal and regulatory frameworks for public-private partnerships (PPPs)** across the energy value chain by in 2025 and to retaining transaction advisors in the Ministry of Energy to facilitate the financial closure of priority projects under PPP arrangements by 2027.

V. ADVANCE FINANCIALLY VIABLE UTILITIES THAT ENSURE ENERGY SECURITY AND PROVIDE RELIABLE AND AFFORDABLE SERVICES.

- **Strengthening the financial and operational performance of TANESCO and the ZECO are critical priorities of the government** and will be achieved through a combination of measures, including tariff adjustments and performance improvements. A cost-of-service study will be completed by June 2026 to assist in developing the methodology for cost-recovery tariffs, and annual tariff adjustments to be implemented by 2027 while still protecting poor and vulnerable groups. Specific regulator-approved performance improvement plans will be developed by June 2026 to strengthen the quality of service provided, efficiency, transparency, and accountability in the operations of TANESCO and ZECO. The regulator will publish annually the progress made in implementing the performance improvement plans starting in 2027.
- **The government is committed to building institutional capacity** within Ministry of Energy, TANESCO and ZECO, the Rural Energy Agency (REA), and the Energy and Water Utilities Regulatory Authority (EWURA) to ensure effective implementation of energy projects and policies.

The government commits to ensuring rigorous and transparent monitoring of the National Energy Compact through a structured monitoring and evaluation (M&E) framework supported by the Ministry of Energy and other stakeholders. Data collection and feedback mechanisms will guide policy adjustments and track progress in achieving universal energy access. Monitoring efforts will be integrated into the program budget.

Call for Partnerships

The government of Tanzania is fully committed to transforming the country's energy landscape and ensuring all citizens can access modern energy. The government invites development partners, philanthropies, and private-sector stakeholders to support Tanzania's journey toward universal access to affordable, reliable, sustainable, inclusive, and clean energy. These efforts will foster economic growth, create income opportunities, and contribute to the country's development goals.

Funding Needs from the Public and Private Sectors by 2030 (US$ million)

	Generation	Transmission	Distribution	Rehab	Last-Mile	Off-Grid	Clean Cooking	Capacity-Building	Total
Public	2,062.40	583.81	550.00	1,398.25	3,169.45	38.84	400.00	647.50	8,850.25
Private	2,062.40	583.81	550.00	-	352.16	90.64	400.00	-	4,039.01
Total	4,124.80	1,167.62	1,100.00	1,398.25	3,521.61	129.48	800.00	647.50	12,889.26

2

Compact Targets and Action Plan

This Energy Compact presents high-level commitment actions with specific targets and timelines to drive progress toward the achievement of universal access to energy in a reliable, affordable, and sustainable manner.

Indicator	Current Annual Pace Between 2017 and 2022	Targeted Pace Between 2023 and 2030
Increase Electricity Connectivity Rate	7% p.a.[2] (Connectivity was 46% in 2022)	7% p.a.[3] (To achieve 75% connectivity by 2030)
Increase Access to Clean Cooking	11.9% p.a. (Access to clean cooking was 6.9% in 2021)	21% p.a. (To achieve 75% access by 2030 and 80% access by 2034)

Note: Rural Energy Master Plan (2022) for Tanzania defines:

- **Access to Electricity Service:** Total number of people living within a radius of 600 meters from the secondary side of the distribution transformer/total population.
- **Connectivity to Electricity Services:** Total number of people in connected households/total population.

Indicator	Current Share Renewable Energy in Fuel Mix	Target by 2030
Increase Share of Renewable Energy	61.8% (2,011.27 MW of 3,404.20 MW installed capacity in December 2024)	75% 463 MW solar 500 MW wind 130 MW geothermal 880 MW large hydro

Indicator	Baseline	Target by 2030
Amount of Private Capital Mobilized	US$0.5 billion	US$4.039 billion

[2] The access rate was 78.4% and connectivity was 39.9% in 2020 according to an NBS survey. According to Tracking SDG7, connectivity increased to 46% in 2022, an average increase of 7% per year. In 2024, the number of new connections made per year was 562,940.
[3] The increase in connectivity each year must equal or exceed 7% to achieve 75% connectivity by 2030. This will require, on average, 1.6 million connections per year from 2025 to 2030. It is expected that electricity access will reach 100% by 2030.

Action Plan

Achieving the above overarching trajectory targets will require critical reform actions to be taken across the energy-sector value chain, the most critical of which are included in the action plan below.

Pillar	Indicator	Baseline Data (2024)	Target Year & Detailed Actions Needed to Achieve Goal (including timeline)
I: Rehabilitate and Expand Infrastructure at Competitive Costs	Integrated Least-Cost Power System Planning adopted, incorporating regional resources	No	• Prepare and approve comprehensive Power System Master Plan (PSMP)/Integrated Resource Plan (IRP) to include generation and transmission; existing and planned regional interconnections; climate resilience; and demand from e-mobility, e-cooking, etc., as appropriate (by 2025). • Strengthen inter-agency task force for systematic review and update of PSMP/IRP in mainland Tanzania, led by the Ministry of Energy and in Zanzibar led by the Ministry of Water, Energy and Minerals (MoWEM). – Procure planning and software tools, and capacitate designated planning staff by June 2025. – Review, update, and adopt planning methodology by June 2026. – Ministry of Energy to constitute inter-agency task force by nine months before the next issue update. • Periodically (every four years) update PSMP/IRP, which should include public consultation on the draft plan intended for approval and publishing after approval.
	Competitive procurement policy and framework in place for private-sector investment in power projects	No	• Adhere to Public Procurement Act 2023 so as to develop, approve, and operationalize a competitive procurement framework (that includes reverse auction) to develop power projects by June 2027. • Establish a Renewable Energy Independent Power Producer Procurement Programme (REI4P) by June 2026. • Review the National Energy Policy 2015 by June 2027 to facilitate renewable energy deployment and applications beyond electricity.
	Enable private investment in transmission sub-sector	No	• Undertake a pilot independent power transmission (IPT) project by 2027, and define and adopt the framework for future investments by 2028.
II: Regional Integration and Power Trade	Enhance readiness for regional interconnection and power trade	No	• Establish an appropriately resourced trading unit within TANESCO by December 2025. • Finalize ongoing assessment to identify specific grid investments to enable reliable and safe interconnected operations, in conformity with the EAPP and SAPP regional grid codes, and to enable Tanzania to be a control area by June 2025. • Procure and install critical equipment identified above by June 2027. • Participate in the harmonization (through adoption and enforcement) of regulatory frameworks (including transmission pricing) to facilitate power trade by June 2026.

			• Undertake capacity-building to facilitate power trade by June 2026.
III: Last-Mile Access	Monitoring and evaluation program adopted to track the multi-tier framework for access to electricity and clean cooking	No	• Monitoring and evaluation plan revised and adopted by June 2026 to (1) include the multi-tier framework for access to electricity and clean cooking, and (2) to track indicators every three years.
	National Electrification Strategy adopted including an updated five-year electrification plan with a clearly defined role for the private sector	Yes	• Rural Energy Master Plan (REMP) developed and approved in 2022. Zanzibar Electrification Master developed and approved in 2018. • Revise and approve REMP 2022 with a clear role for private-sector participation and an associated implementation strategy by June 2027, and every five years thereafter. • Revise and approve Zanzibar Electrification Master Plan 2018 with a clear role for private-sector participation and an associated implementation strategy by June 2027, and every five years thereafter.
	National clean cooking strategy in place	Yes	• Prepare and Adopt National Clean Cooking Action Plan with a focus on women by June 2026. • Prepare and commence implementation of the National Communication Strategy on Clean Cooking Energy by June 2025. • Revise and adopt the National Clean Cooking Action Plan by 2030 to ensure access targets are met most efficiently.
		No	• Develop and adopt Zanzibar Clean Cooking Strategy and Action Plan with a focus on women by 2027.
	Technical, policy, and regulatory framework	No	• Define and adopt a connection subsidy policy for households to improve the affordability of grid connections by June 2026. • Productive Uses program to be defined and commence implementation by June 2025. • Review, revise, and approve budget for Tanzania Bureau of Standards to implement controls such that imported and locally produced off-grid equipment, such as solar homes systems, comply with governing standards (Lighting Global, etc.) and regulations by June 2026. Budget to be assessed and approved annually thereafter. • Infrastructure for testing the standards of quality for clean cooking energy, equipment, and cookstoves are installed by the relevant standards authority, research institutions, and colleges by June 2027 • Define, update, and adopt national quality and performance standards for cooking energy, technologies, and appliances by June 2025. • Reduce taxes, import duties, and fees imposed on clean cooking energy, appliances, and efficient stoves by June 2026. • Develop, update, and adopt policies, laws, regulations, and guidelines regarding the use of cooking solutions by June 2026. • By June 2025, develop and adopt financial incentives for rural producers of charcoal and briquettes based on efficiency of production.

	Enhance investment in clean cooking	No	• Define, establish, and commence sustainable charcoal and briquette production programs by June 2025. • Scale up REA's RBF facility for the increased distribution of improved cooking stoves (ICS) to households in rural and peri-urban areas, and e-cooking solutions in urban areas by June 2025. • Establish National Clean Cooking Fund or integrate clean cooking initiatives into existing funds and commence operations by June 2025. • Promote the involvement of financial institutions in supporting clean cooking stakeholders through low interest loans and financial education programs by June 2025.
IV: Private-Sector Participation	Process outlined for regulatory approval of private-sector-led mini-grids, including tariff regulations	Yes	• Robust process in Electricity Development of Small Power Producers Rules, which was issued in 2020. • Strengthen capacity to implement and enforce SPP regulations by June 2026. • Comprehensively review, revise, adopt, and enforce the SPP framework to establish cost-reflective SPP tariffs by June 2026.
	Financial support to private-sector DRE and clean cooking operators to ensure affordability and viability	Yes	• RBFs and credit-line facilities are offered to off-grid service providers through ongoing programs implemented by REA. • Assess lessons learned and operationalize innovative financing mechanisms through the Renewable Energy Investment Facility by June 2025. • Enhance capacity of local financial institutions to assess and structure renewable energy projects by June 2027. • Define, adopt, and operationalize energy project-financing guarantee mechanisms by June 2027.
	Strengthen legal and regulatory frameworks to attract and support investments across the energy-sector value chain	No	• EWURA to revise, adopt, and enforce (by June 2026) the SPP framework to require TANESCO to periodically publish strategic areas for SPP investments. • Revise, adopt, and enforce Renewable Energy Net Metering Rules 2018 by June 2027. • Assess, define, and implement actions required to strengthen PPP legal and regulatory frameworks for attracting and supporting investments across the energy-sector value chain by December 2025. • Retain transaction advisors for the Ministry of Energy whose aim is to facilitate financial close of priority projects using PPP arrangements by 2027. • MoWEM to develop legal, institutional, regulatory, and contractual framework for renewable energy development by 2026. • Zanzibar Utilities Regulatory Authority (ZURA) to develop a net-metering regulation by mid-2026. • MoWEM to develop and enact Energy Act by 2026.
V: Financially Viable and Operationally Competent Utilities	Audited annual financial statements of utilities published	Yes (mainland)	• Audited annual financial statement (unqualified) for the fiscal year ending June 2023 was published in March 2024 for TANESCO.

	No (Zanzibar)	• Audited annual financial statement for the fiscal year ending June 2023 was not published for ZECO. • Annual financial statement for the fiscal year ending June 2024 to be disclosed in March 2025, with timely disclosure of annual financial statements each year thereafter within nine months of fiscal year end.
Utilities achieving at least 100 percent operational cost recovery	No	• Undertake a cost-of-service study to determine cost-recovery rate for provision of electricity services, and establish and implement a methodology for adjusting electricity tariffs to the identified cost-recovery rates with periodic adjustments—while protecting poor and vulnerable groups—by June 2026. • Apply multi-year incentive-based tariff regime, the Electricity and Natural Gas Tariff Application and Rate Setting Rules, approved by EWURA in 2021 for regulated utilities and mini-grids in mainland Tanzania by June 2026. Adopt and apply similar regime in Zanzibar by June 2026. • Review and improve, retail electricity tariff structures applied by EWURA and ZURA by June 2026. • Annual tariff adjustment is conducted and published annually as per the guidelines: 2027, 2028, 2029, and 2030.
Utility-specific plan to improve service quality approved by regulator	No	• By June 2026, utilities will prepare and the regulator will approve performance improvement plans to strengthen (1) the quality of service provided to customers; and (2) efficiency, transparency, and accountability in operations of TANESCO and ZECO in key business areas. • By June of each year starting 2027, EWURA to annually publish/include in annual reports (1) progress achieved by implementing the Performance Improvement Plans, and (2) performance against agreed key performance indicators.

3

Country and Sector Overview

Tanzania is a lower-middle-income country with a per capita gross national income (GNI) of US$1,210 in 2023. It spans over 947,303 square kilometers (ranking 30th in size globally) and is home to an estimated population of over 61.7 million, inclusive of 1.9 million in Zanzibar. Tanzania is among the countries with the fastest population growth rates globally, a trend driven partly by the high total fertility rate and the reduction in childhood mortality. This rapid growth, while a sign of potential, also poses significant challenges for the country's economic and social development. Tanzania's economy has been resilient, growing by 5.2 percent in 2023 compared with 4.6 percent in 2022. The economy is expected to grow by 5.6 percent in 2024, with a long-run potential of around 6 percent by 2025, supported by an improving business environment and ongoing structural reforms. Tanzania's domestic low-cost energy resources provide conditions and opportunities for affordable electricity to facilitate economic growth; however, existing power infrastructure has been unable to adequately cater to the rising demand, given the population growth of 3 percent per year.

Tanzania maintains a centralized, vertically integrated power sector. The power sector serves as a cornerstone for the nation's socioeconomic development. The Ministry of Energy (MoE) in mainland Tanzania is responsible for overall coordination, planning, and policy in the energy sector, while the EWURA oversees the technical and economic regulatory functions in the electricity and water sectors. TANESCO, the state-owned vertically integrated utility, is the largest operating company in the electricity sector, conducting generation, transmission, distribution, supply, bulk power sale to Zanzibar, and cross-border trade. It has about 5.2 million customers as of December 2024. The REA is an autonomous body under the MoE, responsible for promoting and facilitating availability of improved access to modern energy services in rural areas of mainland Tanzania. The Tanzania Petroleum Development Corporation (TPDC) manages commercial aspects of petroleum operations upstream, midstream, and downstream, and it represents government interests in petroleum and natural gas agreements. Furthermore, the power sector in Zanzibar[4] comprises three key institutions: (1) the Ministry of Water, Energy and Minerals (MoWEM), responsible for overall sector coordination, planning, and policy; (2) ZECO, the vertically integrated utility that provides service to 338,578 customers; and (3) Zanzibar Utilities Regulatory Authority (ZURA), responsible for technical and economic regulation in the water and energy sectors. Tanzania's mainland is the only source of power supply for Zanzibar's islands through three submarine cables.

Overall electricity access in mainland Tanzania has increased from 14 percent in 2011 to 78.4 percent in 2020[5], as the country has expanded the power grid to reach nearly 100 percent of villages. Nevertheless, approximately a quarter of the population in mainland Tanzania remains without access to electricity services. There is a significant disparity in electricity access rates in urban areas (99.6 percent) and rural areas (69.6 percent). Connectivity rates have also increased in recent years, estimated to be 46 percent in 2022, whereby connection rates in urban and rural areas stand at about 79 percent and 36 percent, respectively[6]. The current pace of connectivity is about 500,000 customer connections per annum in the country. Therefore, with Mission 300 support, there will be an increase of about 8.3 million connections compared with the current pace of 2.5 million within five years. In accordance with the Rural Energy Master Plan (REMP) 2022, a comprehensive strategy aimed at improving energy access in rural areas, the REA is undertaking extensive efforts and electricity connectivity is expected to grow to 75 percent by 2030. The same is true for Zanzibar, where electricity access has increased from 38.3 percent in 2011 to 88 percent in 2020, with a connectivity rate of 57 percent in 2024. The current pace of connectivity is about 63,000 customer connections per annum in Zanzibar. In accordance with the ZECO Electrification Master Plan of 2017, the Revolutionary Government of Zanzibar is making extensive efforts to achieve 100 percent connectivity by 2032.

In mainland Tanzania, more than 89 percent of households still rely on traditional polluting fuels and technologies for cooking, while in Zanzibar, this figure exceeds around 84 percent. Firewood and charcoal are the primary cooking fuels in Tanzania. Despite repeated policies aimed at making natural gas and liquefied petroleum gas (LPG) affordable to encourage their adoption, their usage remains low, accounting for only 3.2 percent in mainland Tanzania and 7.7 percent in Zanzibar, primarily in urban areas with significant stacking practices. In May 2024, the United Republic of Tanzania launched the National Clean Cooking Strategy (NCCS 2024-3034) aiming to reach 80 percent access to modern cooking by 2034, up from 6.9 percent in 2021. The strategy will increase access to clean cooking by promoting natural gas usage, e-cooking, and improved cookstoves along with promoting alternative fuels such as bioethanol, biogas, and briquettes.

Tanzania aims to diversify its electricity generation mix. As of December 2024, the total installed capacity of 3,404.20 MW comprised 2,011.27 MW hydro (59.1 percent); 1,198.82 MW natural gas (35.2 percent); 101.12 MW heavy fuel oil (HFO) and diesel (3 percent); 5 MW solar

[4] Zanzibar is a semi-autonomous Government, having its own legislative assembly, judicial system, and an executive power - the Revolutionary Government of Zanzibar (RGoZ).

[5] Energy Access and Use Situation Survey II by NBS – 2019/20

[6] Tracking SDG7 Report

photovoltaics (PV) (0.1 percent); and 87.99 MW biomass and co-generation (2.6 percent). The ongoing commissioning of the Julius Nyerere Hydropower Plant (JNHPP) is transforming the power generation mix of the national grid in greater favor of hydro. Maximum electricity demand reached 1,888.72 MW on November 26, 2024, up 14.9 percent from the peak in 2023. Given expected demand growth of 5 to 10 percent per annum, Tanzania aims to further diversify its power mix by adding 2,463 MW of generation capacity from solar PV, wind, natural gas, and geothermal resources by 2030, as presented in the recently completed National Renewable Energy Strategy and Roadmap[7]. In addition, Tanzania's strategic location at the boundary of the EAPP and the SAPP offers the country vast opportunities for power trade that will enable it to tap lower-cost power generation, among other benefits. Interconnections with Kenya, Rwanda, and Burundi were recently commissioned, while interconnections with Zambia and Uganda are forthcoming. Meanwhile, natural gas and LNG remain crucial to Tanzania's energy strategy, as both will help to reduce dependence on imported fuels and support economic growth through export opportunities and import substitutions.

Reliability and supply quality challenges create obstacles to the country's extensive efforts to enhance electricity connectivity. While transmission and distribution losses remain at acceptable levels (14.2 percent for TANESCO), a significant challenge for those with electricity connections is the poor reliability and quality of service, caused by a deteriorating network with overloaded transformers, distribution feeders that are longer than industry good practice, poorly configured networks that hinder isolation of faults, and limited operations and maintenance (O&M) services. Improvements in the quality of electricity service require investments in grid stabilization, network rehabilitation, reinforcement, and upgrades, including incorporating modern switchgear and digital technologies to enhance operational flexibility. At the same time, given the current level of cost recovery, utilities are not able to perform the required O&M without significant budget support from the government. The importance of government support in the energy sector cannot be overstated, as Tanzania's power infrastructure cannot cope with the increasing demand from new connections, partly due to deficient public funding for infrastructure improvement and expansion as well as a limited enabling environment, particularly on matters related to project bankability for private investment.

Private-sector investments remain limited throughout the value chain. Given inadequate public funding, the private sector has an important role to play in efficiently achieving development objectives (in generation, transmission, and distribution) and meeting expected growth in Tanzania. The private sector has supported mini-grid deployment and distribution of solar home systems and improved cookstoves and has been instrumental in developing natural gas and other supply resources, accounting for about 220 MW of installed generation capacity. However, past controversies involving unpredictability in determining strategic investment areas, bankability issues, lengthy negotiations, and issues related to risk allocation between the off-taker and project developers hinder prospects for private investment. The recent amendments to the PPP law, among others, send a clear indication of the government's unwavering commitment to improving the enabling environment for investment, and the government will continue current efforts to strengthen the PPP framework, bolster the utilities' performance, increase transparency, and enhance the current legal and regulatory frameworks, which are imperative to attracting and fostering a conducive environment for private investments.

[7] 2400 MW Tanzania Mainland and 63MW Zanzibar.

4

Current Status, Opportunities and Challenges

PILLAR I
INFRASTRUCTURE EXPANSION AT COMPETITIVE COSTS

As of December 2024, the installed capacity on the mainland stood at 3,404.20 MW, comprising hydro, natural gas, HFO, diesel, biomass, and co-generation. The Power System Master Plan (PSMP) 2020 Update is the most recent plan, following PSMP 2008 and its subsequent updates in 2009, 2012, and 2016. The PSMP 2020 was prepared by a joint team of experts from inter-governmental institutions, led and coordinated by the MoE. The planning approach did not consider existing and planned regional interconnectors, and the frequency of PSMP updates has not been fixed. The MoE is currently leading an effort to prepare a new PSMP, expected to be finalized in early 2025.

The Zanzibar Islands are connected to the mainland grid through two 132 kV submarine cables carrying 100 MW and 45 MW to Unguja, and installed capacity of 25 MW diesel generator, a 33 kV submarine cable carrying 20 MW to Pemba. Inadequate supply contingency to both islands results in a continued risk of supply outages. While projects to enhance the capacity of the submarine cables are ongoing, Zanzibar has also commenced the development of three solar PV projects—one publicly funded and the others privately funded—with combined capacity of 63 MW, and it aims to further develop domestic resources. The inaugural Zanzibar Integrated Resource Plan (IRP) is under preparation, expected to be delivered in 2025.

As input to the forthcoming update of the PSMP, a least-cost capacity-expansion exercise was coordinated by the MoE to assess needed generation capacity and the magnitude of investment requirements through 2048. The peak demand is expected to increase from 1,350 MW in 2022 to 8,472 MW in 2048. The study shows that 4.4 GW of large hydro, 4 GW of combined-cycle gas turbine, almost 3 GW of solar PV, 1.37 GW of wind, and 800 MW of geothermal must be installed, with an annualized capital cost of $ 1.6 billion, to meet the growing demand. Through 2030, approximately 1,973 MW of generation capacity (880 MW hydro, 463 MW solar, 500 MW wind, 130 MW geothermal) is targeted for deployment, requiring approximately **US$4.12 billion**. As highlighted in the recently launched National Renewable Energy Strategy 2024–2034, renewable energy has a huge role to play in the development of Tanzania's energy sector.

Proper planning and procurement of projects are vital to ensuring efficient expansion of required infrastructure. The procurement process for projects currently involves both solicited and unsolicited models. The competitive and open-solicited procurement process has historically experienced prolonged negotiations and subsequent tender cancellations. On the other hand, unsolicited models (where developers directly approach TANESCO as off-takers) have provided flexibility for innovative solutions but have led to costlier projects and the signing of numerous bilateral MOUs that are not fully materialized. It is well-established that well-run, competitive, and transparent processes lead to the most cost-efficient development of projects. Both procurement processes have faced challenges due to key bankability issues that have been a barrier to investors, financiers, and off-takers, among others. The current Public Procurement Act (2023) has played a crucial role in addressing all these challenges in procurement. It has provided flexibility in procurement to enhance value for money. The bottleneck, such as time to make decisions for commercial enterprises, has been addressed by separating them from non-commercial enterprises and allowing e-procurement to speed up the process. Further, the new act has made provisions for contract management to increase accountability. All the changes have been made to attract private-sector investment.

PILLAR II
INCREASED REGIONAL INTEGRATION

Regional transmission interconnections are set to change the landscape of the electricity sector in Tanzania over the next few years. Tanzania's strategic location at the boundary of the EAPP and the SAPP presents vast opportunities for power trade. Accessing these markets will not only improve the reliability, resilience, and security of the power supply in Tanzania—from the diversification of power supply and lower-cost power generation—but also allow the country to accrue substantial benefits, potentially generating revenues from exports and wheeling services.

It is estimated that a total of 1.5 GW of interconnections between Tanzania and neighboring countries (Kenya, Zambia, Burundi, and Rwanda) will be complete by 2028. The interconnection with EAPP alone will enable Tanzania to share reserves with neighboring countries, reducing the need for primary reserves to just 92.2 MW (from the current 235 MW to cover an outage of a JNHPP unit) as highlighted in the recent least-cost capacity-expansion exercise. This will result in significant cost savings and improved reliability.

Interconnection with Burundi and Rwanda was completed in March 2023 through the commission of transmission lines for the Rusumo Falls Hydroelectric Power Station. The Kenya–Tanzania Power Interconnector Project was commissioned in November 2024, enabling Tanzania to become an operational member of the EAPP. However, commercial arrangements must be finalized and executed to facilitate power trade. The Tanzania side of the Tanzania–Zambia interconnector is already under construction, and its finalization is expected by 2027; the

Zambia side of the interconnector is under preparation and will be commissioned by the end of 2028. This interconnector will enable Tanzania to become an operational member of the SAPP with full access to its trading platforms. The Uganda–Tanzania Interconnector Project is at the preparatory stage, and interconnections with Mozambique, Malawi, and Democratic Republic of the Congo are at the conceptual stage.

Since this is the first time Tanzania will be operating as part of a synchronous regional grid, there is a need to strengthen the utility in both the operational and commercial aspects of an interconnected network. An ongoing assessment (costing US$3.1 million) will identify specific grid investments to enable reliable and safe interconnected operations, in conformity with the harmonized EAPP and SAPP regional grid codes. Recent studies have indicated that Tanzania will play a critical role as a control area in EAPP and could even host other neighboring countries within its control area. Establishing a control area would require the installation of critical equipment such as automatic generation control, provision of sufficient operating reserves, and a backup control center, all of which are currently lacking. In addition, harmonization of the national regulatory frameworks to support regional trade is needed. Tanzania would need financial support to implement the required grid investments, regulation harmonization, and capacity-building (estimated at US$80 million).

PILLAR III
CLEAN AND AFFORDABLE LAST-MILE ACCESS

Electricity Access

The REMP (2022) estimated that US$5.8 billion is needed to connect about 70 percent of the population to the grid and to deploy off-grid solutions, including mini-grids and standalone solar systems, for the remaining 30 percent. By the end of March 2025, the national grid will have successfully extended its reach to cover 100 percent of villages in the country. However, there is still a substantial challenge in last-mile connections in (1) electrified villages where many households cannot afford wiring costs; and in (2) electrifying remotely located communities, where approximately 30,702 out of 64,359 hamlets[8] are not currently connected to electricity. Tanzania has a tremendous opportunity to achieve universal electricity access by accelerating grid densification where power infrastructure exists and leveraging DRE solutions for extremely remote areas, particularly islands, where the grid is not feasible.

As of December 2024, TANESCO had more than 5.2 million customers, while the private sector operates 68 registered mini-grids, distributing power to about 22,885 customers. To accelerate grid densification, Tanzania will need to strengthen affordable connection policies to help households overcome prohibitive connection and wiring costs. At the same time, last-mile connections should be done at scale and using tried and true technologies, such as ready-boards and optimized distribution schemes, to minimize the overall cost per connection as well as new, innovative methods such as pay-as-you-go for connections. The REMP asserts the critical role of the private sector in deploying off-grid solutions. However, the enabling environment for private developers must be strengthened to ensure predictability related to tariffs and certainty about where and when the grid will be expanded as well as assurances for fair and just compensation on arrival of the grid. While the underlying regulations are generally robust, persistent issues related to their implementation remain, which highlights the importance of strengthening regulatory oversight and enforcement capacity.

Lastly, according to a National Bureau of Statistics (NBS) Study Report of 2019/2020, overall electricity access in Tanzania has increased from 14.2 percent in 2011 to 78.4 percent in 2020; and according to Tracking SDG7, electricity connectivity in Tanzania stood at 46 percent in 2022. For Zanzibar, access has increased from 38.3 percent in 2011 to 88 percent in 2020, and further to 90 percent in 2023, according to ZECO, while connectivity stood at 57 percent in 2020 according to the latest household survey. This is a

[8] Hamlets are settlements that are much smaller than villages.

tremendous achievement. However, monitoring and evaluation of ongoing progress should be done on both sides at the country level on a regular and more frequent basis (e.g., every two years) to track and strengthen accountability for sector development. The frequency of tracking progress by the government lags by four years. Currently, the last figures published by the government of Tanzania and the Revolutionary Government of Zanzibar are from 2020 (NBS 2020, Zanzibar Household Budget Survey 2019/2020).

Over the next five years, a total of **US$4.6 billion** is required for grid-based accessibility and **US$129.48 million** for off-grid solutions as illustrated in Annex 2.

Access to Clean and Improved Cooking

Tanzania has demonstrated its commitment to addressing the long-standing need to improve access to modern cooking through strong political leadership and the preparation of the National Clean Cooking Strategy (NCCS 2024–2034), which estimated that about 6.9 percent of Tanzanians had access to clean and improved cooking solutions in 2021. The clean cooking market remains nascent and fragmented; therefore, addressing the low access rate and adoption of clean cooking solutions requires an integrated and collaborative approach to overcome supply and demand constraints and to create a supportive environment for market growth.

The successful implementation of Tanzania's NCCS for 2024–2034 relies on:

- enhancing the enabling environment,
- securing financing from both public and private sectors (with climate finance mechanisms playing a pivotal role);
- building capacity to bolster technical and human resources within institutions to support scaling efforts;
- improving inter-institutional cooperation;
- enacting effective government policies for the design and implementation of effective subsidy allocation mechanisms to mobilize and sustain private-sector participation as well as target households with an affordability gap;
- prioritizing sustainability in charcoal production through improved regulations;
- establishing stove/fuel labels and standards to ensure that the improvements in fuel efficiency and reductions in emissions promised by ICS translate into tangible benefits for households and the environment; and
- promoting behavior change through awareness campaigns to facilitate the shift away from a longstanding dependence on solid biomass and toward cleaner alternatives.

The government of Tanzania, through REA, has launched an RBF mechanism to strategically provide subsidies to distributors of improved cookstoves for up-scaling their sales and increasing end-user affordability. The NCCS 2024–2034 indicates that additional subsidy mechanisms are foreseen.

The Tanzanian government estimated that reaching 80 percent of modern cooking energy by 2034 as outlined in the National Clean Cooking Strategy 2024–2034 will require an investment of approximately **US$1.7 billion**, corresponding to **US$170 million** per year, primarily driven by the public sector. This investment estimate includes contributions from both the public and private sectors. The government of Tanzania is taking concrete steps to help companies and institutions leverage carbon finance to close the funding gap as investment is required to ensure the availability of affordable, high-quality clean cooking solutions for all households, with a particular focus on impoverished and rural communities. Very close monitoring of progress and regular updates to the strategy and implementation plan will be required to ensure targets are met.

PILLAR IV
INCENTIVIZE PRIVATE-SECTOR PARTICIPATION TO UNLOCK ADDITIONAL RESOURCES

While the private sector has a tremendous role to play in helping Tanzania achieve its development objectives, private investment continues to be relatively low across the value chain. To date, the private sector has supported mini-grid deployment, with 68 mini-grids operating today, the distribution of solar home systems (to about 42 percent of rural households in 2020), and the distribution of improved cooking solutions (to about 6.9 percent of population in 2021). It has also been instrumental in the development of grid-connected generation through several sources, including small hydro (12.8 MW), biomass/bagasse (87.99 MW), solar (5 MW), and natural gas (220 MW). While private participation in transmission has been non-existent, recently, the government has indicated a willingness to involve the private sector in transmission projects. Specifically, the government of Tanzania is considering the development of a pilot independent power transmission (IPT) project. It is expected that the pilot project will be put out to tender, with the tendering process managed by the PPP unit. A development partner is working with the Ministry of Energy to provide technical assistance in assessing the feasibility of developing the IPT project.

Most investors in the generation space secure funding from international and local markets for large and small projects, respectively. For large projects, financing depends on the international market due to the limited ability of local financial institutions to structure large transactions to finance—for example, large-scale renewable energy

projects. Unpredictability in determining strategic investment areas, lengthy negotiations, and bankability issues, including issues related to risk allocation between the off-taker and project developers, are barriers to new prospects for private investment in the sector.

Securing financing for smaller projects, however, has proved to be more difficult. REA has offered matching grants in the past and, despite REA's initiatives to establish a credit-line financing facility for SPPs through the Tanzania Investment Bank, accessing this facility remains challenging due to limited resources and scope. For small projects, most developers do not have sufficient equity or collateral to backstop loans offered by local financial institutions. In addition, there is inadequate understanding in the local banking sector about how to structure loans for renewable energy projects, which can lead to high transaction costs in securing and servicing the loans despite the availability of funds through REA. Furthermore, it is difficult for both investors and financiers to have a long-term, predictable environment in the sector, particularly regarding tariffs, which affect overall risks and payback periods. These challenges contribute to the unfavorable business-financing environment for small renewable energy projects.

Recent amendments to the PPP law that, among others, accept international arbitration and enable the government's use of guarantee instruments to underwrite risk send a positive signal about the government's commitment to improving the enabling environment; however, further strengthening of PPP frameworks, strengthening the financial performance of the utilities, increasing transparency, enhancing the current legal and regulatory frameworks, and addressing the reluctancy of government backstopping are imperative to attracting and fostering a conducive environment for private investments.

An additional source of funding that should be considered and leveraged on a greater scale by project developers and government institutions is carbon-financing.

PILLAR V
WORK TOWARD FINANCIALLY VIABLE UTILITIES THAT PROVIDE RELIABLE SERVICE

The provision of reliable power supply in Tanzania has been a significant challenge. In Zanzibar, ZECO has been successful in reducing commercial losses, but technical losses remain high, and the network is fraught with reliability and power-quality issues. Many of ZECO's transformers are overloaded and have distribution network feeders that are often longer than industry good practice recommendations. As a result, many large power users, such as hotels, have installed backup diesel generators. On the mainland, transmission and distribution losses remain at acceptable levels (14.2 percent). Since 2009, TANESCO has leveraged prepaid meters to limit commercial losses. However, the quality of electricity service provided to customers requires substantial improvements. Quality-performance indicators in distribution (System Average Interruption Frequency Index, System Average Interruption Duration Index, and Customer Average Interruption Duration Index) have been substantially higher than allowances established in applicable regulations due to a deteriorating network and inadequate O&M resulting from the non-cost recovery of tariffs and low consumption (and affordability) of newly connected customers. Overall, improvements in the quality of electricity service require investments in grid stabilization, network rehabilitation, and the adoption of best practice O&M approaches. Investment requirements total $1.87 billion (see Annex 2). However, TANESCO's financial position is precarious and greatly impacted by factors such as fluctuating fuel prices, reliance on government subsidies, and delays in tariff adjustments.

TANESCO's Annual Report 2021/22 indicates that the bill-collection rate was 96 percent during the reporting period. According to TANESCO's 10 Year Corporate Strategic Plan 2024/25–2034/35, the utility faces the following financial challenges:

- Revenue management: TANESCO experiences low revenue due to low consumption of its increasing customer base, revenue leakages and non-cost-reflective tariffs resulting from recovering only 80 percent of the cost of supply.
- Cost management: TANESCO is suffering from lower operating margins, driven by the cost of sales and operating expenses.
- Debt management: The organization is highly leveraged as a result of over-dependence on the government for operational costs and project implementation.

As of June 2023, TANESCO successfully converted over TZS 2.8 trillion in debt to equity, resulting in an increase in the

equity-to-assets ratio from 0.14 in June 2020 to 0.28 in June 2023[9]. This strategic move aims to enhance TANESCO's financial solvency and potentially attract more favorable financing options. However, TANESCO is continuously facing liquidity challenges due to low profitability and insufficient cashflow. TANESCO discloses financial statements audited by the Controller and Auditor General annually.

ZECO is in a similarly challenging financial situation. For the year ending June 2022, ZECO reported bill-collection efficiency of 98 percent for private customers and only 29 percent for government institutions. Tariff cost-recovery stands at 81 percent.

By achieving financial sustainability, TANESCO and ZECO can ensure stability, improve operational performance, attract investment, maintain creditworthiness, and continue to provide reliable and affordable electricity services to consumers while contributing to the economic development of Tanzania.

[9] Report of the Controller and Auditor General on the financial and compliance audit for the financial year ended June 30, 2023, TANESCO

ANNEX I
METRIC OF KEY INDICATORS

Pillars	Metrics /Indicators	Data (latest available)
Pillar 1: Expand Generation, Transmission, and Distribution Networks at Competitive Costs	• **Generation capacity installed/available** (MWs) by 2024 • Average annual growth rate (%) (of last three years)	• 3,404.20 MW installed (56.05% available) • Hydro: 59.1% • Natural gas: 35.2% • HFO and diesel: 3.0% • Biomass and co-generation: 2.6% • Solar PV: 0.1% • Annual growth rate: 13%
	• **Energy produced annually** (MWhs): Total by 2024 • Average annual growth rate (%) (of last three years) • Average cost per kWh: thermal, renewable	• 10,804,110 MWh (38.78% thermal, 57.46% renewable) • Average annual growth rate: 10% • US$0.089/kWh
	• **Energy imported annually** (MWhs): Total by 2024 • Average annual growth rate (%) (of last three years) • Average cost per kWh (US$)	• 1,264,290 MWh • NA • US$0.085/kWh
	• **Energy exported annually** (MWhs): Total • Average annual growth rate (%) (of last three years) • Total revenue (US$)	NA
	• **Transmission network**: low-voltage (LV), high-voltage (HV), medium-voltage (MV) • Total: length (km); voltage (kV): transfer capacity (MW/MVA)	Total HV: 8,025.75 km • 400 kV AC – 1,085 km; 2,000 MW • 220 kV AC – 4,136.62 km; 250 MW • 132 kV AC – 1,827 km; 80 MW • 66-kV AC – 580 km; 50 MW
	• Rehabilitation Costs	~US$1.4 billion
	• Expansion Costs	~US$6.4 billion
	• **Distribution network** (LV) • Total: length (km), voltage (kV), transfer capacity (MW/MVA)	33 kV: 66,992.10 km 11 kV: 12,737.36 km 0.4V: 117,867.88 km

	• **Access to energy (electricity and clean cooking)**			
	• Number of on-grid connections (by customer type)			
		2022	**2023**	**2024**
	Households	4,037.367	4,650,185	5,219,722
	Industries	4,699	5,074	5,454
	Commercial (SGR)	N/A	N/A	17
Pillar 2: Regional Integration	• **Transmission interconnectors** (HV) • Total: length (km), voltage (kV), transfer capacity (MW/MVA)			• Tanzania-Kenya: 4,000 kV, 60 km, 100 MW • Tanzania-Burundi-Rwanda: 220 kV, 80 km
	• Energy traded in bilateral power purchase agreements/MOUs			N/A
	• Energy traded in power pool			N/A
	• Transmission wheeling charges (US$ per kWh)			N/A
	• Payables: arrears/receivables (US$)			N/A
Pillar 3: Last-mile connectivity/Clean Cooking	• Number of new mini-grid connections (by customer type) (last three years, if possible)			Residential households and small-scale commercial: 16,958
	• Number of solar home systems (last three years, if possible)			
	• Number of clean cooking connections/appliances			• Households: 609,983 • Institutions: – Prison premises: 211 – National Service Camps: 22 – Schools: 53
Pillar 4: Private-Sector Participation	• Total investment required to meet 2030 Energy Compact goals/targets: public/private			US$12.89+ billion
	• Total (private) investment needs by 2030 (US$, percentage)			US$4.04+ billion (31.3%)
	• Investment gap to be mobilized each year up to 2030: public/private			US$1.8 billion p.a. (public) US$0.8 billion p.a. (private)
Pillar 5: Sector Reforms and Sustainable Utilities	• Utility financial profitability (per audited accounts): Net income/loss (US$ amount and US$/kWh) for Discos, Transcos, Gencos			• US$20.3 million (income) • Cost US$0.085/kWh
	• Regulator: tariff policy, average end-user tariffs (per kWh), and trajectory to full cost reflectivity (current % of recovered costs to achieve 2030 target)			• To be determined after cost-of-service study by 2026

	• Total subsidy amount (US$) • Path/timelines to full cost reflectivity (estimate)	• US$56.8 million p.a. • To be determined after cost-of-service study by 2026
	• Aggregate technical commercial & collection losses: % reduction targets per year. • Number of metered/unmetered customers • Number of prepayment meters	• Current 14%; reduction 0.05% p.a. • 5,276,679 as of December 2024 • 5,271,125
	• Load-shedding (e.g., average number of hours per day and/or estimated lost MWhs per annum)	NA
Additional Cross-Cutting for Consideration	• Capacity-building requirements (US$) (at all levels) • Alignment of power-sector least-cost expansion plans to country long-term strategies and National Development Corporation/Paris Agreement: yes/no • Household affordability (i.e., % level of household disposable income available to be spent on energy services and/or % of households receiving energy subsidies) • Jobs: e.g., track the number of jobs created for youth and women	• US$647.5 million • Yes, aligned • Affordability tbc • Jobs tbc

ANNEX II
PROJECTS & INVESTMENT NEEDS

Last-Mile Connectivity Projects

S/N	Project Name/Details	Estimated Cost (US$ million)
1	Hamlet Electrification Project (HEP-IIC)	1,100.00
2	Last-Mile Customers Connection (Customer Densification)	3,521.61
3	Electrification of 143 Island in Mainland Tanzania	129.48
Total		**4,751.22**

Grid Stabilization Projects Phase II

S/N	Project Name/Details	Estimated Cost (US$ million)
1.	Construction of 220 kV line of 102.3 km from Mwakibete-Chunya and associated substation of 220/33 kV at Chunya-Mbeya region	40.032
2.	Construction of 220/33 kV, 2x60 MVA substation in Njombe District-Njombe region	13.441
3.	Construction of 220/33 kV, 2x30 MVA substation in Manyoni District-Singida region	11.7
4.	Construction of 220 kV Bulyanhulu-Bukombe transmission line and associated substation in Bukombe District-Geita region	33.41
5.	Construction of 220 kV, 45 km transmission line from Dundani to Pembamnazi and construction of 2x120 MVA Pembamnazi substation-Pwani region	14.6
6.	Construction of 220 kV, 32 km transmission line from Pembamnazi to Dege substation and upgrade Dege S/S to 220/33 kV, 2x120 MVA Substation-Pwani region	12.393
7.	Construction of 220 kV, 16 km transmission line from Kurasini to Dege substation-Dar es Salaam region	4.32
8.	Construction of 220 kV, 87.4 km transmission line from Songea to Mbinga and 220/33 kV Mbinga substation-Ruvuma region	28.1
9.	Construction of 132 kV, 54 km Msamvu-Mvomero transmission line and 132/33 kV Mvomero substation-Morogoro Region	16.58
10.	Construction of 35 km, 220 kV Nyakato-Sabasaba (Ilemela) transmission line, Mwanza region	25.46
11.	Construction of 80 km, 220 kV, Tagamenda-Kilolo transmission line, Iringa region	28.4
12.	Construction of 46.7 km, 132 kV Musoma-Rorya transmission line and 132/33 kV substation at Rorya-Mara region	17.91
13.	Construction of 49.5 km, 132 kV Nyamongo-Serengeti transmission line and 132/33 kV substation at Serengeti-Mara region	15.245
14.	Construction of 220 kV Zuzu-Kikombo transmission line, Dodoma region	27
15.	Construction of 220 kV Kikombo-Ihumwa transmission line, Dodoma region	41.75
16.	Construction of 220 kV Ihumwa-Msalato transmission line, Dodoma region	20.57
17.	Construction of 220 kV Msalato-Zuzu transmission line, Dodoma region	7.1
18.	Construction of 220 kV Ihumwa-Kongwa transmission line and 220/33 kV substation at Kongwa-Dodoma region	30.13
19.	Construction of 132 kV line of 20 km from Kilombero-Mangapwani and associated substation of 132/33 kV (2*30 MVA) at Mangapwani-Unguja	17.00
20.	Construction of 132 kV line of 6 km from Ubago-Dunga and associated substation of 132/33 kV (2*30 MVA) at Dunga-Unguja	13.00

21.	Construction of 132 kV line of 12 km from Matemwe-Nungwi and associated substation of 132/33 kV (2*30 MVA) at Nungwi-Unguja	15.00
22.	Construction of 132/33 kV (2*30 MVA) substation at Fumba-Unguja	11.00
23.	Construction of 220 kV transmission line of 80 km from Makunduchi-Matemwe with one substation at Matemwe of 220/132 kV (2*200 MVA) at Unguja	28.40
Total		**472.541**

Rehabilitation Projects

S/N	Project Name/Details	Estimated Cost (US$ million)
1.	Rehabilitation and upgrade of supervisory control and data acquisition (SCADA) systems at Ubungo, Msamvu, Lindi, Mtwara, Makumbusho, Babati, Makuyuni, and Kibara substations	1.99
2.	Rehabilitation of protection and control system at Babati, Kiyungi, Mbulu, Kondoa, Karatu, Bunda, and Kyaka	37.27
3.	Replacement of 33 kV switchgear at Nyakato substation with new geographic information system (GIS) system, extension of control building to accommodate GIS, and renovation of control building with extension to accommodate GIS facilities	11.50
4.	Rehabilitation and reinforcement of distribution network in Dar es Salaam, Pwani, Dodoma, Mbeya, and Mwanza regions	98.10
5.	Replacement of 33 kV switchgear at Nyakato substation with new GIS system, extension of control building to accommodate GIS, and renovation of control building with extension to accommodate GIS facilities	11.50
6.	Grid substation upgrades on system automation and digital transformation	381.5
7.	Reinforcement of fiber telecommunication infrastructures	99.70
8.	Upgrading of lower Kihansi and construction of upper Kihansi Dam	112.67
9.	Rehabilitation of Kidatu, Mtera, and Nyumba ya Mungu Hydropower Plant	93.89
10.	Replacement of gas engine with gas turbine 60 MW at Ubungo I Gas Power Plant	45.06
11.	Conversion of Ubungo II from simple-cycle to combined-cycle gas-fired power plant (51.83 MW)	95.05
12.	Supply, installation, and commissioning of new gas turbine 30 MW at Tegeta Gas Plant	24.05
13.	Additional gas turbine 30 MW at Mtwara II Gas Power Plant	22.53
14.	Replacement of 132 kV submarine cable 45 MVA to 100 MVA from Ras Kiromoni to Ras Fumba 39.8 km	29.00
15.	Extension of switchyard of 33 kV bays to accommodate eight outgoing feeders, and supply and installation of 10 indoor switchgears for 33 kV feeder	4.00
16.	Installation of 60 MVA power transformer of 132/33 kV with accessories at Mtoni-Unguja	1.90

17.	Installation of 30 MW solar plant with 10 MWh battery at Matemwe-Unguja	70.00
18.	Distributed energy storage system 60 MWh to operate on peak load and Small Island (Uzi, Tumbatu, Tumbe, Kojani)–Zanzibar	90.00
19.	Upgrading 250 km of 11 kV to 33 kV for Bambi, Kilimahewa, Mazizini, Jang'ombe, Fuoni distribution line, Unguja	6.50
20.	Reconducting of 33 kV distribution line 80 km from 100 mmsqr to 150 mmsqr (Mtoni substation to Kitogani, Mtoni to Mfenesini, and Mtoni to Fumba), Unguja	4.60
21.	Rehabilitation of distribution network in Dar es Salaam and Pwani regions	157.443
Total		**1,398.253**

Generation and Transmission Projects

				Contribution to Compact Targets			
Project Name	**Timeline**	**Project Description**	**Funding**	**Access to Electricity (people or connections)**	**Access to Clean Cooking (households)**	**Renewable Energy Installed (MW or MWp)**	**Relevant Pillar(s) & Binary Targets**
Kikonge Multipurpose Dam, Hydropower and Irrigation Project (300 MW)	2030	The project involves construction of a multipurpose dam, HPP, and its 220 kV double-circuit transmission line of about 97 km to existing Madaba grid substation. The project is located at Ruvuma region along the Ruhuhu River.	US$87.35 million and 708 million euros	31,175	3,117	300	Pillar I Pillar III Pillar IV
Chalinze-Segera Transmission Line (400 kV)	2027	Construction of 400 kV double-circuit transmission line, 181 km from Chalinze to Segera with associated substations	US$124.3 million	11,800	2,000	N/A	Pillar I Pillar III
Segera-Tanga Transmission Line (220 kV)	2026	Construction of 220 kV double-circuit transmission line, 64 km from Segera to Tanga with associated 220/132/33 kV substation at Tanga	US$58.27 million	14,900	1,700	N/A	Pillar I Pillar III

Regional Interconnectors (Malawi)	2028	Construction of 400 kV, 82.3 km transmission line from Iganjo to Kasumulu with a substation at Kasumulu	US$54.3 million				Pillar II
Regional Interconnectors (DRC)	2030	Construction of 400 kV transmission line, 100 km (Tanzania side) from Sumbawanga to DRC with associated substations	US$50 million, excluding DRC substation and submarine cable				Pillar II
Segera-Same-Kisongo (Arusha)	2028	Construction of 400 kV double-circuit transmission line, 330 km from Segera to Lemugur via Same with associated substations	US$184.2 million	5,500	3,500	N/A	Pillar I Pillar III
Ruhudji Hydropower Project (358 MW)	2030	The project involves the construction of a 358 HPP and its 170 km, 400 kV single-circuit transmission line from Ruhudji HPP to Kisada substation. The project is located at the Ruhudji River in Njombe region.	US$968.37 million	37,203	3,720	358	Pillar I Pillar II Pillar IV
Rumakali Hydropower Project (222 MW)	2030	The project involves construction of a 222 MW HPP, a new 95 km 220 kV double-circuit transmission line from Rumakali power station to Mbeya substation. The project is located at the Ruhudji River in Njombe region.	US$634.5 million	23,070	2,307	222	Pillar I Pillar III Pillar IV
Wind Power Project (100 MW), Singida	2030	Construction of 100 MW wind power plant, Singida Project	US$152.46 million				Pillar I Pillar IV
Wind Power Project (100 MW), Makambako	2030	Construction of 100 MW wind power plant, Makambako Project	US$125 million				Pillar I Pillar IV
Solar Power Project (100 MW), Dodoma	2030	Construction of 100 MW solar power plant, Dodoma Project	US$84 million				Pillar I Pillar IV
Solar Power Project (100 MW), Manyoni	2030	Construction of 100 MW solar power plant, Manyoni Project	US$79.62 million				Pillar I Pillar IV

Same Power Project (100 MW), Same	2030	Construction of 100 MW solar power plant, Same Project	US$81 million				Pillar I Pillar IV
Geothermal Power Project (120 MW)	2030	Construction of 120 MW geothermal power plant	US$623.80 million				Pillar I Pillar IV
Submarine Cable to Zanzibar Project	2030	Project will comprise (1) installation of submarine cables, including construction of HV sections, overhead transmission lines, and underground cables, as well as associated substation infrastructure; (2) last-mile connection; and (3) clean cooking.	US$224 million	50,000 (connections for Tanzania mainland and Zanzibar)	50,000 (connections for Tanzania mainland and Zanzibar)	Submarine cable to Zanzibar project	Pillar I Pillar III

ANNEX III
ONGOING ACTIVITIES AND SUPPORT FROM DEVELOPMENT PARTNERS

Development Partner	Project Name	Timeline	Project Description	Funding (including from the private sector)	Contribution to Compact Targets			
					Access to Electricity (people or connections)	Access to Clean Cooking (households)	Renewable Energy Installed (MW or MWp)	Relevant Pillar(s) & Binary Targets
World Bank	Tanzania - Rural Electrification Expansion Project (TREEP)	2016 - 2026	The Project Development Objectives are (a) to increase access to electricity in rural areas; and (b) to scale up the supply of renewable energy in rural areas while strengthening sector institutional capacity.	USD 15 million grant USD 535 million credit	7.925 million people	200,000	13MW	Pillar I Pillar III
World Bank	Accelerating Sustainable and Clean Energy Access Transformation Regional MPA - ASCENT Tanzania	2023 - 2028	The Project Development Objective is to increase access to sustainable and clean energy	USD 300 million credit	4 million people			Pillar I Pillar III Pillar IV
World Bank	Tanzania-Zambia Transmission Interconnector	2018 - 2026	The Project Development Objective is to (i) increase power transmission capacity to southern regions of Tanzania and (ii) strengthen institutional capacity in Tanzania and of the Eastern Africa Power Pool for regional power trade.	USD 465 million IDA 130 million euro cofinancing (AFD, EU) USD 10 million GoT				Pillar II
World Bank	Zanzibar Energy Sector Transformation and Access Project	2021 -2027	The Objectives of the Project are to expand access to reliable and efficient electricity services and to scale up renewable energy generation in Zanzibar through the following three	USD 117 million IDA USD 22 million CTF Loan	378,000 people		18MW	Pillar I Pillar III

			components: (i) renewable energy and storage infrastructure development; (II) grid modernization and access scale up; (III) sector institutional strengthening and project implementation support.	USD 3 million CTF Grant				
World Bank	Uganda-Tanzania Interconnector Project	2026 +	The Project Development Objective is to establish regional transmission interconnector capacity between Uganda and Tanzania. The main activity is the construction of a 605km 400KV double circuit transmission line to interconnect Ugandan and Tanzanian national grids.	USD 515 million IDA USD 45 million trust funds EUR 30 million (EU)				Pillar II
African Development Bank (AfDB)	Submarine Cable to Zanzibar Project	2030	Project will comprise of: 1) Installation of submarine cables including construction of sections of High Voltage (HV) overhead transmission lines and underground cables and associated substations infrastructure; and 2) Last mile connection and clean cooking.	USD 224 million	50,000 Connections for Tanzania Mainland and Zanzibar	50,000 Tanzania Mainland and Zanzibar	Submarine Cable to Zanzibar Project	Pillar I Pillar III
African Development Bank (AfDB)	400 kV Kenya – Tanzania power interconnection	2015 - 2025	The Project's development objective was to improve supply, reliability and affordability of electricity in the Eastern Africa region through cross-border exchanges of cheap and cleaner surplus electricity from neighboring countries, to promote power trade, regional integration, and primarily contribute to Eastern Africa's socioeconomic transformation	USD 116.5 million ADF, USD 98.23 million cofinancing, and USD 44.1 million counterpart funding	electricity access for 37 villages in Tanzania along the transmission line.			Pillar II Pillar III
African Development Bank (AfDB)	Kakono Hydropower Project	2022 – 2029	Project comprises of 1) construction of 87.8 MW hydropower plant and 2) 220 kV transmission line, 38.5 km long to the existing substation at Kyaka.	Total USD 308.85 million: co-financed by AfDB (USD 161.47 million), AFD (Euro 110 million), EU (Euro 35 million) and	12,176 connections		87.8 MW	Pillar I

				GoT (TZS 17.64 billion)				
African Development Bank (AfDB)	Malagarasi Hydropower Project	2020 - 2028	Project comprises of 1) Construction of 49.5 MW hydropower plant, 2) 132 kV transmission line, 54 km long for power evacuation to the national grid, and 3) Distribution network expansion including rural electrification and last-mile connections.	USD 140 million	5,144 Connections	-	49.5 MW	Pillar I Pillar III
African Development Bank (AfDB)	Northwest Grid Project	2018 - 2025	Project comprises of 1) Construction of a 280 km power line running from Nyakanazi to Kigoma in the northwestern part of Tanzania, 2) Extension of Nyakanazi substation and construction of a new substation at Kidahwe near Kigoma town, and 3) Integration of existing Kigoma and Kasulu 33 kV distribution networks to the main grid including supply of last mile connection potential consumers in Kigoma Region.	Items (1) and (3) are financed by AfDB amounting to USD 123.39 million Item (2) is financed by EDCF amounting to USD 45 million	10,000 Connections	-	-	Pillar I Pillar III
African Development Bank (AfDB)	Expansion of Transmission, Distribution and Last mile connection	2026 +	The project objectives are to increase the reliability of supply to customers, improve the quality of electricity supply, improvement in technical losses through loss reduction, enhancement of the existing network through the identification of key network constraints and reinforcement / upgrading or construction of additional network systems. The project involves construction of new and upgrade of existing transmission lines and substations, and distribution networks, in the Regions of Arusha, Dodoma, Mbeya and Mwanza. The project includes also strengthening of the transmission network, installation of distribution facilities and service connections to households for Last-Mile connectivity, and construction of a 10 MW PV solar plant and battery	Total cost: USD 427 million **Phase-1** USD 145 million AfDB USD 100 million cofinancing **Phase-2** USD 100 million AfDB USD 82 million cofinancing	100,000 connections	50,000	10 MW Solar PV with BESS	Pillar I Pillar III

			energy storage system (BESS) plant in Pemba Island					
African Development Bank (AfDB)	Tanzania – Malawi Power Interconnection	2027 +	Construction of 400 kV, 82.3 km transmission line from Iganjo to Kasumulu with its substation at Kasumulu.	Funding requirement for Tanzania side is USD 54.3 million	TBD	TBD	N/A	Pillar II
African Development Bank (AfDB)	Segera – Same - Kisongo (Arusha)	2028 +	Construction of 400kV double circuit transmission line, 330km from Segera to Lemugur via Same with its associated substations	USD 184.2 Million	5,500 connections	3,500	N/A	Pillar I Pillar III
African Development Bank (AfDB)	Kigoma - Mpanda - Sumbawanga Transmission lines project	2028 +	Construction of 400 kV double circuit transmission line. the detailed scope and cost estimate will be determined by the ongoing feasibility studies.	TDB by the feasibility study	TBD	TBD	N/A	Pillar I Pillar III
EDCF- Korea EXIM Bank	Construction of Substations for Kigoma-Nyakanazi Transmission Line Project.	2026	Project consists of 1) Construction of New 400/132/33kV Kigoma (Kidahwe) Substation for the transmission line connecting of 280 km Kigoma-Nyakanazi Transmission Line, and 2) Extension of existing Nyakanazi substation of 220/33Kv to 400/220 kV with consideration of the future voltage level extension.	Substation component is funded by the Economic Development Cooperation Fund (EDCF) - Korea EXIM Bank. Transmission line financed by AfDB.	Millions of people in Rural region will benefit from this electricity connectivity project			Pillar III Pillar V
USAID	Power Africa-Empower East and Central Africa Program	Up to July 2028	Implemented by RTI International, Power Africa - Empower East and Central Africa (EECA) is a US funded program with a goal to increase the availability of and access to affordable, reliable, sustainable, and modern electricity in Tanzania and other countries in East and Central Africa regions. The objective of the program is to end energy poverty, accelerate a carbon free future and bolstering	Technical assistance to IPPs and Utility for unlocking investment of magnitude cost for the following transactions: i. Iringa Solar – USD 72.5 million	Support to utilities and off-grid companies to connect: i. Mainland (TANESCO): 1,320,000 ii. Zanzibar (ZECO): 28,500		445 MW	Pillar I Pillar III

			energy sector investment and innovation.	ii. Dodoma Solar – USD 72.5 million iii. Singida Solar – USD 72.5 million iv. Makambako Wind – USD 198 million v. Singida Region Wind – USD 198 M			
Sweden	Rehabilitation Hale Hydro Power Plant	Dec 2027	Installed capacity is 21 MW, it old and currently generating 4 MW only. The rehabilitation will make it go back to its generation capacity of 21 MW	USD 20 million (60% Sweden and 40% GoT)		21 MW	Pillar I
Sweden	Tanzania Clean Cooking Project, managed by AECF	Dec 2026	Catalyze the clean cooking sector through enhanced private sector participation. transformational increase in the use of clean cooking solutions in rural, marginalized, and underserved communities.	USD 5.8 million (challenge fund, with matching contribution from private sector)	90,000 beneficiaries		Pillar III
Sweden	Modern Clean Cooking Facility for Africa (MCFA) Project, managed by NEFCO	Dec 2026	The goal of Sida's support to MCFA is to contribute to creating the conditions necessary for developing a self-sustaining clean cooking market in Tanzania	USD 5 million (RBF with matching fund contribution from the private sector)	300,000 – 500,000 beneficiaries 50,000 – 110,000 tier 4-5 and tier 3+ briquette and pellet cookstoves customers		Pillar III

Sweden	Rural Electrification Project	Dec 2025	Rural electrification project through REA, including grid extension and renewable energy (solar and hydro mini-grids)	USD 60 million (The grid extension is Sweden fund, but the renewable component has private sector contribution and as match fund)	520,000 connections		Pillar III
Sweden	Technical Assistance	December 2026	1) Support for development of National Energy Information Management System (NEIMS) 2) Trust funds executed by World Bank to facilitate Clean Cooking, Renewable Energy and Climate Change, Energy Efficiency and Demand side Management, and Gender and Productive Uses of Electricity	USD 2.2 million			Pillar I Pillar III
British International Investment (BII)	Rift Valley Energy	2027	BII signed an agreement to provide $15m, with the potential to increase this to $25m, to Rift Valley Energy. It will finance the installation of an additional 7.6MW of renewable energy (wind and hydropower) for Tanzania's national grid. This will provide energy to about 170,000 people per year and connect 4,000 businesses and households to the grid for the first time. About 1,800 new power-enabled jobs will be created and it is expected to avoid up to 17,000 tonnes of carbon emissions per year by the end of 2027.	USD 15 million	170,000 people per year 4000 businesses and households connected to the grid for the first time	7.6 MW	Pillar I Pillar III
European Union	Support to rural electrification - REA's Turnkey III Programme	2017 - 2024	Improved livelihoods and foster social and economic development in rural areas through provision of access to	EUR 65,000,000 (grant)	340,000 connections	1MWp solar PV standalone systems	Pillar I Pillar III

			electricity for homes and rural water and health facilities.				
European Union	Electrification of North-Western Tanzania	2017 – 2024	Connect large parts of North-Western Tanzania to the national grid. The EU grant covers connection costs for low-income households in the vicinity of the line, increasing therefore access to electricity for poor households in 30 villages in Geita, Kagera and Kigoma regions.	EUR 7,600,000 (grant to KfW)	10,000 connections		Pillar I
European Union	Energy Sector Reform Budget Support Operations	2022 - 2026	Budget Support to incentivize Public Energy Sector Policy Dialogue, M&E capacities at Ministry of Energy, Decrease of Distribution Losses and increase in metered connections at TANESCO	EUR 31,600,000 (grant)	1,500,000 Connections		Pillar III Pillar V
European Union	Energy Sector Reform Energy Data and Statistics	2022 - 2026	Technical Assistance to MoE and National Bureau of Statistics to generate, archive and publish data and statistics on the Energy Sector	EUR 3,200,000 (grant)			
European Union	Cook Fund for accelerated market roll-out of clean cooking solutions	2021 - 2026		EUR 19,400,000 (grant)		580,240	Pillar III
European Union	Integrated Approach for Transformation of Tanzania Fuel Wood Value Chain	2023 - 2026	To enhance governance and surveillance systems for sustainable forest management in the regions of Dar es Salaam, Mwanza, Tabora, Morogoro, Pwani, and Tanga.	EUR 2,391,626 (grant)		n/a	Pillar III
European Union	Sustainable Forest management and renewable energy through inclusive community empowerment	2023 - 2026	To increase the capacities of individual women and men and the commitments by local communities (including wood fuel producers) in the rural districts of Mvomero, Morogoro DC, Ulanga and Malinyi in Morogoro region to engage in sustainable forest	EUR 2,000,000 (grant)		8,000	Pillar III

			management practices along the Wood-fuel value chain.				
European Union	Integrated Sustainable Charcoal Value Chain Promotion Project	2023 - 2026	To improve capacities and commitments by local communities in five districts in Pwani Region to improve productivity along the charcoal value chain, sustainably manage forests and improve their socio-economic wellbeing.	EUR 1,525,887 (grant)	750		Pillar III
European Union	Integrated Forest and Biomass Energy Solutions for Tanzania (IFBEST)	2023 - 2026	Enhance environmental sustainability through sustainable forest management and wood fuel production in Tanga region.	EUR 2,000,000 (grant)	1,000		Pillar III
European Union	Accelerating Reforestation for the Development of Households in Tanga (ARDHI Tanga)	2024 - 2027	Contribute to sustainable forest management and wood-fuel production in Tanga through enhanced natural resource management and sustainable wood-fuel value chains.	EUR 2,000,000 (grant)	1,200		Pillar III
European Union	Zambia-Tanzania Power Interconnector: Investments on Tanzanian Side	2020- 2026	Construction of 400Kv Transmission line and sub-stations (Iringa – Kisada-Mbeya- Tunduma – Sumbawanga) to interconnect Tanzania with Zambia, and capacity building to TANESCO. The EU grant will finance both an investment of power sub-station and switchgear at Tunduma (TZ- Zambia BORDER) and a technical assistance component.	EUR 30,000,000 (grant blended with AFD loan)			Pillar II
European Union	Kakono Hydro Plant	2023-2029	Construction of a hydropower plant and the associated transmission infrastructure paving the way for the Tanzania-Uganda interconnector, supporting the regional stability of the grid. The EU contribution will cover costs for investment and Technical Assistance.	EUR 36,000,000 (grant blended with AFD loan)		87	Pillar I

European Union	Uganda-Tanzania Interconnector	tbc	To improve the regional network by extending and connecting Tanzanian and Ugandan national grids and hybridizing the electricity supply of Mafia Island with solar energy. The EU grant will cover costs for investment and technical assistance.	EUR 44,000, 000 (grant – tbc) (blending with AFD)				Pillar II
Agence Française de Développement (AFD)	Tanzania-Zambia Transmission Interconnector	2018 - 2026	The Project Development Objective is to (i) increase power transmission capacity to southern regions of Tanzania and (ii) strengthen institutional capacity in Tanzania and of the Eastern Africa Power Pool for regional power trade.	EUR 100,000,000 loan (alongside WB loans and EU Grant)				Pillar II
Agence Française de Développement (AFD)	Transmission Grid Rehabilitation & Upgrade Project (TTGRUP)	2013-2025	The Project aims at enhancing the efficiency and reliability of the transmission network by rehabilitating 10 substations and improving the network's remote operation. It also aims at preparing interconnections and strengthening TANESCO's technical capacities.	EUR 53,000,000				Pillar V
Agence Française de Développement (AFD)	Contribution to REA's Rural Electrification Programme	2017-2026	The project supports REA's Rural Electrification Programme (Round IIB) and hybridization of Mafia Island.	EUR 100,000,000				Pillar III
Agence Française de Développement (AFD)	Tanzania Solar Development Programme	2019-2030	The project aims at 1) building a 150MW photovoltaic plant, 2) modernizing the transmission network to facilitate the integration of renewable energy and 3) strengthening national expertise on renewable energies.	EUR 130,000,000 (phase 1) EUR 75,900,000 (phase 2)			150MW	Pillar I
Agence Française de Développement (AFD)	Kakono Hydropower Plant	2029	Project comprises of 1) Construction of 87.8 MW hydropower plant, 2) 38.5-km 220 kV transmission line to the existing substation at Kyaka	The project is co-financed by AfDB (USD 161.47 million), AFD (Euro 110 million), EU (Euro 35 million) and	12,176 (Connections)	-	87.8 MW	Pillar I

				GoT (TZS 17.64 billion) for total of USD 308.85 million			
Agence Française de Développement (AFD)	TANESCO's Gender Action Plan	2030	Promote Gender Equality within TANESCO	EUR 1,000,000 AFD Grant + co-financing by the World Bank			
Agence Française de Développement (AFD)	Uganda-Tanzania Interconnector	2026 +	To improve the regional network by extending and connecting Tanzanian and Ugandan national grids, and hybridising the electricity supply of Mafia Island with solar energy. The EU grant will cover costs for investment and technical assistance.	EUR 70 million			Pillar II
UNIDO	Promotion of Waste to Energy (WtE) Applications in agro-industries in Tanzania	2025	Promoting heat and power generation through agro-industry wastes with focus on the sugar industry sector (heat and power cogeneration projects). At least 16MW of electricity generated through sugar industries (TPC, Bagamoyo Sugar, Manyara Sugar, Zanzibar Sugar).	US$5.27 million plus US$ 15 million (private sector co-financing).		16MW	Pillar I
UNIDO	Promotion of Bioethanol as a Clean Cooking alternative in Tanzania	2026	Promotion of bioethanol cookstoves and fuel as clean cooking solutions in dar es salaam region under the Global Environment facility (GEF). Project has two components one under the EU/CookFund program and the other under GEF.	US$ 2.457 million plus private sector co-financing of US$ 3.5 million	45,000 households		Pillar III
JICA	Improvement of Maintenance of T&D Systems (Phase II)	2021 – 2025	Overall Goal: Distribution system under TANESCO is stably operated. Project Purpose: The load management and outage management for Distribution System is improved in TANESCO.	480 million Japanese Yen			Pillar V

JICA	Capacity Development of Natural Gas Utilization in Tanzania	2023 - 2025	Overall Goal: Utilization of natural gas in Tanzania will be promoted for economic growth in an environmentally friendly manner. Project Purpose: Capacity for planning and implementation of the natural gas utilization is strengthened.	195 million Japanese Yen		Pillar I
JICA	Development and Dissemination of Innovative Oil-Extracting Technology from Crop Process Residue for Rural Electrification and Value Addition of By-products	2019 - 2025	Overall Goal: The model proposed by the project contributes to rural electrification in Tanzania. Project Purpose: Innovative oil extraction technology from crop process residue is developed and its application in micro-grid power generation and production of by-products are proposed.	300 million Japanese Yen		Pillar I Pillar III
JICA	Power and Energy Sector Training Programmes in Japan	2014 to date	1) Short-term Training: JICA Knowledge Co-Creation Program (Group & Region Focus) 2) Long-term Training: Master & PHD on Human Resources Development for Governmental Officers and Researchers in Mineral Resources Rich Countries (KIZUNA Program)			
UKAid	MECS: Tanzania eCooking Scale and Support Programme: TANESCO eCooking Promotion Program	2024-2026	The goal is for TANESCO to promote eCooking to staff and customers and facilitate acquisition of eCooking appliances through on-bill financing.	GBP 838,211	10,500	Pillar III
UKAid	MECS: Tanzania eCooking Scale and Support Programme: eCooking Performance	2024-2026	The goal is to develop 4 performance standards for eCooking appliances to ensure high quality appliances in the market.	GBP 110,000		Pillar III

	Standards Development					
UKAid	MECS: Tanzania eCooking Scale and Support Programme: National eCooking Awareness Raising Campaign	2024-2026	The goal is to raise awareness of eCooking affordability and feasibility across Tanzania (to 10% of population).	GBP 400,000		Pillar III
UKAid	MECS: Tanzania eCooking Scale and Support Programme: eCooking Repair and Maintenance	2024-2026	The goal is to develop a network of trained technicians (300 in number) who can repair and maintain eCooking appliances across Tanzania.	GBP 308,000		Pillar III
UKAid	MECS: Tanzania eCooking Scale and Support Programme: eCooking in Schools	2024-2026	The goal is to transition 50 schools to a clean cooking future through eCooking.	GBP 750,086		Pillar III
UKAid	MECS: Tanzania eCooking Scale and Support Programme: Sustainable Supply Chain & Impact Survey	2024-2026	The goal is to support access to eCooking appliances for 8000 households by supporting the supply chain.	GBP 910,000		Pillar III
British High Commission	Morden Energy Cooking Services in Tanzania (MECs)	April 2024 to March 2026	Programme aims to support Tanzania transition to cleaner cooking fuels through piloting e-cooking, raising public awareness on alternative clean cooking fuels, advocating for policy change, providing technical support to TANESCO to champion e-cooking and supporting Government access climate finance. The programme also supports accelerating clean cooking transition in schools in Tanzania.	£3,500,000	Target is to roll out up to 8000 Electric Pressure cookers, and have 20 schools transitioned to clean cooking by March 2026	Pillar III

British High Commission	Transforming Energy Access in Tanzania (TEA)	April 2024 to March 2026	The programme provides additional grant funding for early, mid, and late-stage research and innovation clean projects through Energy Catalyst Round 10. The programme also promotes renewable energy, energy efficiency, and productive use of electricity through World Bank Energy Sector Management Assistance Programme (ES-MAP)	£2,000,000				Pillar I Pillar III
Royal Norwegian Embassy	Support to the Rural Energy Agency	June 2026	This program has comprised of 1) Rural Electrification focusing on densification and customer connections 2) Village Electrification Initiative along Backbone Transmission Investment Project (BTIP-VEI) focusing on expansion of grid transmission and distribution network along backbone for connecting a large number of rural people 3) Domestic Biogas component focusing on promoting application of biogas for cooking; and 4) Productive Use of Energy (PUE) focusing on promoting income generation activities as well as livelihood improvements.	NOK 700 million	113,797 household connections	725 Biogas plants		Pillar III
Royal Norwegian Embassy	Capacity Building on Maintenance in Zanzibar Electricity Corporation (ZECO)	Dec 2024	The expected outcomes of the project are 1) Improved access to reliable and affordable electricity supply, 2) Improved quality of electricity supply, and 3) A competent maintenance unit performing preventive maintenance planning and work.	NOK 82 million	154 households connected via solar mini grid 96,500 households connected through grid		130kWp in Kokota and Njau Islets	Pillar III
Royal Norwegian Embassy	Support for increasing rural energy access for livelihood improvement	June 2026	The expected outcomes from the project are: 1) Increased electrification of hamlets in rural areas, 2) Increased productive use of electricity (PUE), and 3) Increased application of clean cooking solutions in rural areas.	NOK 185 million	32,639 householdsconnections			Pillar III

ANNEX IV
ONGOING PROJECTS FINANCED WITH THE GOVERNMENT OF TANZANIA

Project Name	Timeline	Project Description	Funding	Contribution to Compact Targets			
				Access to Electricity (People or connections)	Access to Clean Cooking (households)	Renewable Energy installed (MW or MWp)	Relevant Pillar(s) & Binary Targets
Julius Nyerere Hydropower Project (JNHPP)	2019–2025	The project comprises (1) construction of a 2,115 MW hydropower plant; (2) a 400 kV transmission line, 160 km from JNHPP to Chalinze substation; and (3) a 400 kV transmission line, 174 km from JNHPP to Kibiti.	I (1) TZS 6.6 trillion for power plant; (2) US$69.7 million for transmission line to Chalinze; (3) US$64 million for transmission line to Kibiti.	222,000 connections	22,000 connections	2,115 MW	Pillar I Pillar III
Chalinze-Dodoma Transmission Line (400 kV)	2026	Construction of a 400 kV double-circuit transmission line, 345 km from Chalinze to Dodoma.	US$159.9 million	50,203	4,600		Pillar I Pillar III
Chalinze-Bagamoyo Transmission Line (220 kV)	2028	Construction of a 220 kV single-circuit transmission line, 90 km from Chalinze to Bagamoyo and its associated substation at Bagamoyo.	US$ 57.89 million	20,000	3,500		Pillar I Pillar III
Upgrade from 132 kV to 220 kV Ubungo-Kunduchi-Ununio Substation and Establishment of a 220/132/33 kV, 2x120 MVA GIS Substation at Ununio.	2026	Construction of a 220kV transmission line from Ubungo to Ununio with its associated 220/132/33 kV, 2x120 MVA GIS substation at Ununio.	US$13 million				Pillar I Pillar III
Construction of 220 kV line 47 km from Pugu Substation to Dundani-Mkuranga and	2026	Construction of 220 kV transmission line, 47 km from Pugu to Dundani with its	US$10 million				Pillar I Pillar III

Establishment of a 2x120 MVA Grid Substation (Lot 1)		associated substation at Dundani.					
Backbone Investment Project Phase II, Lot 6-1, 400/220 kV Shinyanga Substation	2026	Construction of a 400/220 kV, 2X250 MVA Shinyanga substation.	US$25 million				Pillar I Pillar III
Construction of a 220 kV Transmission Line 47 km from Pugu Substation to Dundani-Mkuranga and Establishment of 2x120 MVA Grid Substation (Lot 1)	2026	Construction of a 220 kV transmission line, 47 km from Pugu to Dundani with its associated substation at Dundani.	US$10 million				Pillar I Pillar III
Construction of a 5.2 km, 220/33 kV Transmission Line and Establishment of 2x120 MVA Substation at Zegereni Industrial Area	2026		US$20 million				Pillar I Pillar III
Construction of Substation Imalilo-Bariadi Simiyu	2026	The project involves construction of a 220/33 kV Underline Substation at Imalilo-Bariadi District in the Simiyu region.	US$19 million				Pillar I Pillar III
Construction of a 5.2 km, 220/33 kV Transmission Line and Establishment of a 2x120 MVA Substation at Zegereni Industrial Area	2025	Construction of 5.2 km double-circuit transmission line and 220/33kV, 2x120MVA substation at Zegereni industrial area	US$340,000				Pillar I Pillar III
Supply and Insta Transformers 33 KV, 2x10 MVAR at Songwe Mkwajuni.	March 2023 to July 2024		US$340,395				Pillar I Pillar III
Hamlets Electrification	2024–2029	The project involves the electrification of hamlets in rural areas of mainland Tanzania.	US$1.7 billion	1.32 million	125,000	N/A	Pillar III

Implementation of Clean Cooking Solutions for 52 Secondary Schools and One Vocational Training Center for Tanzania Education Authority	2024–2026	The project will involve the supply and installation of 43 cooking systems and cooking appliances; the supply of 6 kg LPG Starter Packs to 2,192 teachers; and supply and installation of improved cooking stoves to 52 secondary schools and one vocational training center. The project will benefit a total of 54,405 students and 2,192 teachers, as well as other staff.	TZS 5.8 billion	N/A	74,000	N/A	Piller III
Implementation of Clean Cooking Solutions Project for National Service Camps in Tanzania	2024–2026	The project involves the acquisition of 291 improved cooking stoves and 110 tons of rafiki briquettes as starter packs; the acquisition of 180 LPG stoves, including 180 pots; the acquisition of 60 charcoal-briquette- making machines; construction of nine biogas plants, including provision of nine improved cooking stoves the acquisition of 44 wood-cutters; and capacity-building training for 50,000 youth on production of charcoal briquettes, and operation and maintenance of clean cooking energy solutions.	TZS 5 billion		63,000		Piller III
Implementation of Clean Cooking Programs for Tanzania Prison Services	2024–2026	The project involves the construction of 126 biogas plants, including the provision of 377 improved cooking stoves to prison facilities; the installation of 64 LPG facilities, including the provision of 256 improved cooking stoves to prison facilities; the installation of a natural gas system, including the provision of six improved cooking stoves at	TZS 35 Billion		340,000		Piller III

		Lilungu Prison; the acquisition of 865 tons of rafiki briquettes and 344 improved cooking stoves; distribution of 15 kg LPG starter packs to 15,920 prison staff; the acquisition of 61 charcoal-briquette-making machines at 61 prison stations; and capacity-building training for 280 prison staff on the operation and maintenance of clean cooking energy solutions. The program will be implemented in 211 prison stations nationwide.			
Distribution of Improved Cooking Stoves (ICS)	2024–2026	The project involves the distribution of 200,000 ICS in rural areas by selling stoves with a subsidy of 75 percent.	US$6 million, financed by the World Bank under the TREEP Program	250,000	Piller III
Distribution of LPG Starter Packs	2024–2025	The project involves the distribution of 452,445 LPG cylinders of 6 kg in rural areas by selling starter packs with a subsidy of 50 percent.	TZS 8.64 billion	452,445	Piller III
Natural Gas Pipeline Distribution Project (Clean Cooking Initiative), Financing Construction of Natural Gas Pipeline Distribution Networks in Lindi and Pwani Regions	2023–2025	The project involves construction of about 44.4 km (22.9 km in Mnazi Mmoja-Lindi, and 21.5 km in Mkuranga-Pwani) natural gas distribution network, connecting 980 households (451 households in Mnazi Mmoja-Lindi, and 529 households in Mkuranga-Pwani) implemented by TPDC with support from REA.	TZS 6.82 billion grant	980	Piller III
Zanzibar Voltage System Improvement	2024–2025	Installation of voltage regulator, capacitors bank, and STATCOM.	18 billion TZS, Revolutionary Government of Zanzibar funds		Pillar V
Zanzibar Solar 45 MW **IPP**	2027	Construction of a solar PV power plant with a capacity of			Pillar I

		30 MW, and construction of a solar PV power plant with a capacity of 15 MW.	US$27 million US$13.5 million	
Total Eren Solar (100 MW) **IPP**	2030	Construction of solar PV power plant with a capacity of 100 MW.	US$80 million	Pillar I
Sinotan Wind Plant (100 MW) **IPP**	2030	Construction of solar PV power plant with a capacity of 100 MW.	US$125 million	Pillar I
Upepo Energy-Wind Plant (200 MW) **IPP**	2030	Construction of a wind power plant with a capacity of 200 MW.	US$313.955 million	Pillar I

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