

**PROGRAM-FOR-RESULTS INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: PID0036546

Program Name	Program-For-Results: Tanzania Rural Electrification Expansion Program
Region	<i>AFRICA</i>
Country	<i>TANZANIA</i>
Sector	Transmission and distribution of electricity (75%), Renewable Energy (25%)
Lending Instrument	Program for Results
Program ID	<i>P153781</i>
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Borrower(s)	REPUBLIC OF TANZANIA
Implementing Agency	Rural Energy Agency (REA)
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I. Country Context

Tanzania is a low-income country with a population of about 51.8 million in 2014, projected to increase to 74 million by 2030. At present, about 73 percent of the population lives in rural areas, but during the next 15 years Tanzania is expected to go through a period of intensive urbanization, with approximately half of its citizens projected to be living in major and secondary cities by 2030. Tanzania's labor force is projected to increase from 20 million in 2014 to close to 45 million in 2030.

Macroeconomic reform over the past two decades has brought monetary and fiscal stability in Tanzania. From 2002 until the present, the country's annual Gross Domestic Product (GDP) growth rate averaged seven percent, one of the highest in Sub Saharan Africa. There has also been some progress in poverty reduction in the recent past. The 2012 National Household Budget Survey estimates the reduction in the poverty rate from 34 percent in 2007 to 28 percent in 2012. However, much remains to be done, especially in rural areas where over 80 percent of the poor and the extreme poor live. While statistics show that economic growth has trickled down to the poor, including the extreme poor, almost half of Tanzania's adult population nevertheless earns less than US\$1.90 per day. Poor households tend to have much lower access to essential infrastructure, including piped water, electricity, and tarmac roads. Obstacles to access infrastructure and services, particularly electricity and roads, seriously limit the possibilities of the poor to improve their living standards.

The Government of Tanzania (GoT) has outlined its medium term objective of becoming a middle-income country through the Tanzania Development Vision (TDV) 2025. To expedite the

achievement of the TDV, in 2013 the Government launched the “Big Results Now” Initiative (BRN). The BRN focuses government efforts on accelerating delivery of defined priority results in six areas of the economy—(i) energy and natural gas; (ii) agriculture; (iii) water; (iv) education; (v) transport; and (vi) mobilization of resources—with a major emphasis on leveraging private sector investment. In the priority area of energy and natural gas, the key focus is to improve reliability and access to power supply by increasing gas-based power generation capacity and access to electricity in rural areas.

II. Sectoral and Institutional Context

Background. In the past several years, Tanzania’s electricity access¹ rate has risen noticeably, from 2.5 percent in 2010 to approximately 24 percent in 2014. Several factors have contributed to this achievement. These include (a) the acceleration of rural and urban electrification implemented under the BRN; (b) the 2013 resolution of the Parliament to provide additional financing to the Rural Energy Fund (REF), using a petroleum levy; and (c) a reduction in connection fees for the final consumer as a result of improved technologies and an increase in Government subsidies, effective since January 2013.

While noticeable progress has been achieved in urban and peri-urban areas, the pace of rural electrification, currently at 7 percent, lags substantially behind the national average of 24 percent. Given the importance of electricity access for reducing extreme poverty for both urban and rural populations and fostering opportunities for productive economic activities (including agriculture), scaling up access to modern forms of energy is a significant component of the GoT’s long-term economic growth plan. The GoT is targeting to increase the country’s overall electricity connectivity level to 50 percent by 2025 and at least to 75 percent by 2033.

The GoT adopted a market-oriented National Energy Policy (NEP) in 2003 and updated it in 2015. The 2015 NEP stresses that the lack of access to affordable and reliable electricity presents a major constraint to achieving the desired socioeconomic transformation in Tanzania. To attain the planned access targets, the GoT has embarked on an ambitious program to accelerate significantly the connection of rural households to the national grid. The National Rural Electrification Program (NREP) for 2013–2022 is guided by the National Electrification Program Prospectus (the Prospectus), prepared by the Government of Norway in 2013 and published in July 2014. Currently, the Prospectus represents the GoT’s main guideline for electrification efforts, including in rural areas. The Prospectus also lays out a strategy for investments. A detailed Rural Electrification Master Plan (Master Plan), which will provide comprehensive annual investment plans and connection numbers, is under preparation and is expected to be completed by the end of 2016.

Power sector reform and sector financial sustainability. Tanzania has been gradually reforming its power sector for more than a decade by now. Its power utility, Tanzania Electricity Supply Company (TANESCO) was corporatized in 2002, governed by the Public Corporations Act, and is still fully government-owned. An autonomous Energy and Water Utilities Regulatory

¹ The distinction between ‘access’ and ‘connection’ remains quite vague in common use in Tanzania, as in many other countries. The Tanzania Rural Energy Agency (REA) currently interprets the term ‘access’ as follows: “Access is defined as the total population nearby the locality benefiting from electricity, irrespective of the population being connected to electricity.”

Authority (EWURA) became operational in 2006. This was followed by adoption of an Electricity Act in 2008, which established a stronger separation between ownership, policy, and regulatory functions and created a clearer framework for sector governance, licensing, and tariff regulation. Private investment in the sector also started in early 2000s, with first large independent power producer (IPP) starting its operation in 2002 (IPTL), followed by another in 2004 (Songas). A number of smaller IPPs have also been constructed since then.

In 2011-2012, as a combination of continued demand growth, underinvestment in power generation, and drought conditions - which severely limited hydropower production - the country experienced a serious electricity supply crisis. To restore supply, TANESCO entered into a number of very expensive short-term contracts with emergency power plants (EPPs) for a total capacity exceeding 300 MW (the peak demand at that time was about 900 MW). Unable to pass through such expensive contracts, TANESCO quickly accumulated significant payment arrears, converting the electricity supply crisis into a financial crisis, which then threatened to become a fiscal and macroeconomic crisis.

In late 2012, the government asked for World Bank help in addressing the problems in the sector. The government developed a Power and Gas Development Program (PGDP), to be supported by a series of three IDA-funded Development Policy Operations (DPOs) over a period of three years. The PGDP was organized around the following pillars: (a) eliminating the financial gap in the power sector by increasing sector revenues and reducing its costs; (b) improving power sector structure, governance, transparency, and investment practices; and (c) preparing an institutional, legal, and policy framework for long-term development of the gas sector in the context of large off-shore discoveries of gas in Tanzania. The program relied heavily on increased investment in the gas-to-power chain, to increase use of domestic natural gas in power generation to eliminate power supply gap and reduce the hydrological risks in a cost-effective manner.

The Bank approved the first power and gas DPO operation (PGDPO-1) in March 2013 and the second (PGDPO-2) in March 2014. The third operation (PGDPO-3), planned for 2015, was postponed due to changes in the senior management of the energy sector early in the year and general elections in October 2015. The new government is now discussing re-engagement with the Bank on the energy policy reforms as a continuation of an updated Power and Gas Development Program.

There have been some important achievements under the PGDP supported by the first two DPOs. The most notable results in the power sector include the following:

- TANESCO finished FY2015 with an operational surplus of about TZS179 billion, for the first time since 2009; for comparison, TANESCO recorded an operating loss of TZS387 billion for the previous financial year, FY2013.²
- Electricity tariffs have about doubled since 2012 while TANESCO reduced technical and non-technical losses from 21 percent in 2012 to about 17 percent in

² In 2014, TANESCO changed the definition of its fiscal from calendar year to the one ending on June 30. As a result, there was no FY2014, by FY2013 was followed by FY2015 which covered the 18-month period from January 1, 2014 to June 30, 2015.

2016 (5.5 percent in transmission and 11.5 percent in distribution, as per TANESCO's tariff application of February 2016). In March 2016, EWURA actually reduced tariffs, albeit only between 1.5 and 2.4 percent (depending on tariff categories). EWURA also eliminated the power supply connection fee of TZS 5,000 and TANESCO service surcharge, reducing barriers for new customers to connect.

- Gas-to-power program, as a key medium-to-long term cost reduction measure, has advanced:
 - a large gas transmission pipeline has been completed, connecting the producing near-shore/on-shore producing fields at Mtwara and Songo Songo to Dar es Salaam;
 - a new 150-MW gas power plant (Kinyerezi I) has been completed and construction of another 240-MW gas-based generation plant (Kinyerezi II) started; and
 - gas production has increased and gas is now available to all existing and newly commissioned power plants in Dar es Salaam area, eliminating the need for using much more costly liquid fuels in those plants and significantly reducing the cost of generation.
- The need for expensive, liquid-fuel based emergency power supply contracts, which in 2012 and 2013 exceeded 300 MW, has now been eliminated.
- The cost of electricity supply was lowered from about 262 TZS/kWh in FY2012 to 229 TZS/kWh in FY2015.
- TANESCO has signed a contract with a transaction adviser to help procure private investment in a new 200-300 MW gas-fired IPP through a transparent, competitive tendering process.
- The Government has adopted a long-term power sector restructuring plan with a phased implementation, to transform the sector into a more transparent, better governed, and more efficient structure. The plan envisages gradual unbundling of TANESCO into separate generation, transmission and distribution businesses, creating a more competitive and more efficient electricity market in the country, with increased private investments.

Nevertheless, the power sector reform remains a work in progress. TANESCO remains burdened by significant payment arrears accumulated since 2011, which will need to be restructured and refinanced. The gas-to-power investment program needs to advance further to ensure secure and reliable, cost effective supply in the long term, in conjunction with further investments in renewable technologies and stronger regional integration. To reduce burden on public resources, there is a need to attract more private investments through a better structured, more transparent and competitive processes.

Key actors. Several institutions and actors play leading roles in rural electrification in Tanzania:

- **Rural Energy Agency (REA).** The REA, established through the Rural Energy Act of 2005, has the mandate for rural electrification. The REA implements grid extension in rural areas; supports private sector small-scale rural power generation projects (both grid and off-grid) and provides technical assistance (TA), training,

and capacity building to private developers for project planning, preparation, and financing. Under the oversight of the Rural Energy Board (REB),³ the REA finances rural electrification projects using resources from the REF. Both the GoT and development partners (DPs) provide resources to the REF. The scope of projects, financed by the REA using the REF resources, is detailed in annex 4.

- **Tanzania Electric Supply Company (TANESCO).** TANESCO is the state-owned, vertically integrated national utility, responsible for electricity generation, distribution, transmission, and sale of electricity to the Tanzanian Mainland and bulk power supply to the island of Zanzibar. TANESCO takes the lead on implementation of urban electrification and, at the same time, assumes responsibility for the supervision, quality assurance, performance evaluation, and infrastructure commissioning related to rural electrical infrastructure (the construction of which is procured by the REA).
- **Small power producers (SPPs).** The SPPs are private companies that develop renewable energy generation projects on a small scale (less than 10 MW). They are licensed to sell electricity either to local communities or to the national grid under a power purchase agreement with TANESCO, or to both TANESCO and the local communities. The REA's SPP support was successfully piloted through the Bank-supported Tanzania Energy Development and Access Expansion Project (TEDAP).
- **Ministry of Energy and Minerals (MEM).** The MEM is responsible for developing and reviewing Government policies related to electricity supply and distribution, including electrification of rural areas. The MEM guides TANESCO and the REA on the preparation of electrification plans, leads the development of the energy sector, and takes all the necessary measures to organize the industry and to create conditions, enabling sustainable and efficient performance of the sector.
- **Energy and Water Utilities Regulatory Authority (EWURA).** While EWURA was created under the Energy and Water Utilities Regulatory Authority Act (EWURA Act) in 2001, it became operational only in 2006. EWURA is responsible for the regulation of four sectors: electricity, water, transport and distribution of petroleum and natural gas. The EWURA's core functions are licensing or regulating access to the market, tariff setting, and establishing and monitoring technical standards that promote quality and reliability in electricity services and transport and distribution of petroleum and gas resources.

The country is at an early stage of rural electrification and is taking an approach that includes both on-grid and off-grid solutions. The Bank has supported the Government, TANESCO, and the REA in this two-pronged approach to electrification through TEDAP (see Box 1), laying the foundations for the proposed program for results (PforR) operation. Both the REA and TANESCO play roles in the current on-grid rural electrification model, effective since 2012. The REA procures the services of contractors to construct the grid extension in rural areas (the

³ The REB comprises eight delegates from different government agencies, the private sector, civil society, and one DP representative (currently the African Development Bank [AfDB]).

procurement function assumed by the REA since 2012 has helped eliminate major bottlenecks related to the TANESCO's procurement process). Given the REA's limited capacity and lack of technical expertise and absence of regional- and district-level offices, TANESCO assumes responsibility for supervision of contractors, quality assurance, infrastructure commissioning, and operation and maintenance of the networks and equipment, once the construction is completed.

While the REA takes the lead role in supporting and promoting off-grid electrification, it relies heavily on the private sector to bring both financial and human resources to bear on the challenge of providing access to electricity in remote areas. The REA provides support to public-private partnerships for off-grid electrification through two tracks. First, the REA promotes and supports the SPPs during project start-up activities (for example, project design and preparation). Second, the REA promotes the deployment of certified solar lanterns, solar home systems, and PV installations for public institutions in remote rural areas. The market for PV electrification in Tanzania is large. Several firms, based in Tanzania, are adopting successful business models and adapting cutting-edge technologies for this market.

The key issues related to the GoT's ambitious goals to scale up rural electrification and the GoT- and DP-supported strategies to address them include:

- **Sector governance.** Tanzania has made some major strides in reforming its power sector. The recently adopted Electricity Supply Industry Reform Strategy and Roadmap 2014–2025 promotes the gradual transformation of TANESCO, starting with the ring-fencing of its strategic business units. This measure will be followed by unbundling TANESCO into generation, transmission, and distribution companies (for example, generation) and business units (for example, transmission and distribution). Several DPs, including the Bank, support the implementation of the road map through ongoing and prospective projects. However, it is broadly recognized that sector governance should further improve during the interim period. The necessary measures, supported by both the Government and DPs, include the need to implement transparency in the management and operations in the REA, TANESCO, and other sector institutions; modernize sector regulation; clarify institutional responsibilities to avoid political interference; and strengthen capacity for effective and coordinated planning. The proposed PforR operation addresses improving transparency and functional coordination among the MEM, the REA, and TANESCO with regard to their responsibilities for policy guidance on electrification, including mechanisms for subsidy policy implementation, financing and planning, and electrification project implementation.
- **Availability of financing to scale up rural electrification.** To date, the bulk of REF resources are expected to be internally generated (for example, transfers from the Government budget, contributions from the Electricity Levy, Petroleum Levy, Pre-Destination Inspection Levy, and the accrued interest of 3 percent on the REF deposits), with the remainder to be drawn from the DPs (currently 17 percent). However, in its annual investment planning, the REA has faced the following uncertainties: (a) Government transfers may be late or reduced; (b) not all revenues from the Petroleum Levy and Pre-Destination Inspection Levy might be transferred

(as was the case in preceding budget cycles); and (c) not all planned project funding was approved and provided by the DPs due to the low quality of project preparation. These uncertainties require the REA to adjust its budget periodically throughout the financial year. Recently, a mechanism to transfer the Petroleum Levy collections directly to the REF (not through the Ministry of Finance [MoF]) was approved by the parliament. If this provision is realized as planned, it should help alleviate some of the uncertainties in securing the REF funds.

- **Affordability.** A drastic reduction in the high cost of connection fees,⁴ which became effective in January 2013, has contributed to increasing the number of new connections (from 103,000 in 2012 to more than 160,000 in 2013). The employment of improved low-cost technologies and higher subsidies imbedded in the tariff (on average 51 percent for rural customers and 35 percent for urban customers who pay the lowest subsidized tariff) made the electricity cost more affordable. However, the affordability barrier still exists. Customers still have to pay out of pocket for internal wiring, the cost of which presents a barrier to scaling up household connections for low-income families. Low-cost network designs coupled with technical standardization and improved subsidy delivery mechanisms will help address affordability (the REA is executing several low-cost pilot projects to help develop the respective specifications and costs for new network design). The Government of Norway recently supported the GoT in the preparation of a new Energy Subsidy Policy, which was included in its updated NEP 2015. A subsidy implementation strategy and subsidy delivery modalities are now needed. The proposed PforR operation, under Results Area 3, will support the Government subsidy on the preparation of the implementation strategy and subsidy delivery mechanism.
- **Harmonization of DP support.** The REA serves as a lead coordinating agency for bilateral and multilateral assistance from the DPs, private project developers, nongovernmental organizations, community-based organizations, and other stakeholders who intend to implement or support rural electrification. In the past, several DPs, in particular the Government of Norway and the Swedish International Development Cooperation Agency (SIDA), have provided concessional and grant resources through direct contributions to the REF. The REA and several DPs, including the Government of Norway, SIDA, the U.K. Department for International Development (DfID), and the Bank, reached an agreement that future TA to the REA should be pooled and financed through the REF. The purpose of this agreement has two objectives: to align all donor-supported TA and capacity building under the NREP and to simplify the REA's monitoring and reporting requirements through the establishment of a unified results monitoring framework.

Gender mainstreaming. Addressing gender inequality is a key focus of the development agenda for Tanzania. The National Women and Gender Development Policy 2000 gives direction to stakeholders on advancing gender issues socially, culturally, economically, and politically. Despite these national priorities and commitments, women and girls still face significant

⁴ TZS 272,000 (exclusive of value added tax [VAT]) for a single-phase service line and TZS 772,989 (exclusive of VAT) for a three-phase service line.

obstacles with regard to legal protection and control of personal and household assets, and they register lower education and health outcomes. Recognizing the inherent gender-based differences in impact and opportunities associated with the provision of energy services, the REA has developed a systematic mainstreaming of its gender program, consisting of an institutional assessment and gender action plan. The Bank's Gender and Energy Program, funded by the Bank's Energy Sector Management Assistance Program (ESMAP), also supported this effort. The PforR will build on the work done by the REA to ensure that gender is both mainstreamed in the NREP and aligned with the REA's gender commitment in its operations.

III. Program Scope

The proposed PforR operation supports a subset of the NREP, consisting of a time slice of the grid investments outlined in the Prospectus (2016–2022) and the off-grid investments and distributed technologies by the private sector, implemented by the REA. The remaining approach—that is, densification—is being financed by the Government of Norway, SIDA, the European Union (EU), and the DfID. In addition, the PforR will support the joint efforts of the GoT and DPs in strengthening the capacity of the relevant sector institutions. Considering the level of available financing from the DPs combined with the low level of private sector participation in relation to the investment needs outlined in the Prospectus, public sector financing is crucial for expanding electricity access and improving sector performance in areas that will be connected to the grid at later stages.

On-grid Electrification

The PforR will support activities related to the implementation of NREP's Phases 2, 3 and 4 to achieve new connections to the Grid (for example, the design and construction of MV (33kV and 11kV) and LV lines; installation of MV/LV distribution transformers; and procurement and installation of service cables, meters, and procurement of materials for connection and metering of new rural customers, etc.). The REA has an ambitious target of connecting, on average, 214,890 households per year to the grid during 2016–2022. While these targets will be refined under the master plan, the technical assessment conducted by the Bank indicates that these targets are too ambitious and estimates that the REA will realistically be able to connect between 100,000 and 110,000 households per year. Accordingly, the proposed DLIs reflect more realistic connections targets. The REA has already identified a preliminary list of initial investments in 1,200 villages that will connect about 113,000 customers to the grid during the first two years of the PforR implementation. These numbers are tentative as the exact number of connections will be clear only after the completion of the construction and realization of actual connections.⁵

Off-grid Electrification

With regard to off-grid electrification, the proposed PforR will provide funding through a

⁵ For example, not all households in the village will have a stand-alone meter, thus a shared connection (meter) could serve two or three families. The number of connections per village could also differ because in addition to the households, public and social facilities will also be connected (such as schools, health clinics and hospitals, administrative buildings, and so on). Furthermore, water-pumping stations, managed by the district water associations, will be linked to the grid as well. As part of the TA under the PforR, the REA will be supported in identifying additional investments through feasibility studies.

window under the existing CL developed under TEDAP (see box 1) for the SPP development that could potentially draw up to US\$90 million in the CL backing. A new, second window under the CL will be directed at providing financing to vendors for the delivery of quality-verified solar products to consumers in rural areas. Finally, a Payment Security Mechanism (PSM) will be set up to ensure that the SPPs in operation and the ones expected to sign SPPAs with TANESCO are paid on time (see annex 1 for further details on how the CL and PSM will operate).

In complement to the IDA funding for the PforR, the Government's program, NREP, will benefit from the country's participation in the Scaling up Renewable Energy Program (SREP) in Low Income Countries, which is one of the Bank-administered Climate Investment Funds. As part of the SREP-Tanzania Investment Plan, the country will receive US\$25 million⁶ to scale up renewable energy projects to reduce the country's dependency on fossil fuels. The SREP resources will be used to increase the renewable energy capacity to supply electricity to rural areas. The SREP support for Tanzania also provides a grant to the International Finance Corporation (IFC)⁷ for transaction advisory support to assist the SPPs in obtaining private financing. Additional information is provided in Annex 10.

Program Beneficiaries

Beneficiaries of the program include the following:

- **Rural households.** Rural households gaining access to electricity through the grid or through off-grid electrification solutions will be the key beneficiaries. Access to electricity enables newly connected consumers to undertake productive and income-generating activities and enables children to study. Although hard to measure, health benefits shall also occur because of the connection of hospitals and health centers and reduction of indoor air pollution due to reduced kerosene consumption.
- **Social institutions.** Benefits will also arise from the improved service provided by rural public institutions (for example, health, education, water delivery, and public administration) that gain access to electricity. Improvements in the quality of public service delivery are expected through increased electricity connections, especially of rural public facilities such as schools, clinics, hospitals, and water pumping stations used by poor and vulnerable households, thus contributing to reducing poverty and enhancing the socioeconomic welfare of the country.
- **Productive enterprises.** Improved reliability of the electricity supply service and access to the grid will contribute to increased productivity and income of productive enterprises to reduce their dependency on expensive diesel generation that has a substantially more expensive per unit cost compared to the cost of grid supply. In addition, increased supply reliability will boost productivity and reduce material losses.

⁶ This includes US\$19 million SREP funding through the Bank, US\$1 million for project preparation, and an additional US\$5 million through IFC.

⁷ IFC support will not be channeled through the REF.

- **SPPs and solar companies.** These companies will benefit from access to capital that enables the enterprises to sustain and scale up their operations. Lack of capital is one of the major constraints for renewable energy companies to access and service rural and remote areas, which are less profitable than urban and peri-urban areas. The capital made available under the CL will provide incentives for existing and new companies to deliver their services to rural areas.
- **Electricity sector institutions.** The sector institutions, including the MEM, EWURA, the REA, and TANESCO, are expected to benefit from the capacity strengthening to improve efficiency, transparency, and accountability of the sector; strengthen the institutions' performance; and enhance their capacity and skills for sustained delivery of the NREP.
- **Macroeconomic benefits.** Better quality of electricity services will also contribute to attracting investment in various economic sectors, through the improved overall perception of the country as a viable investment destination for local, regional, and international investors.
- **Gender-differentiated benefits.** Providing rural households, social institutions, and productive enterprises with new energy access and improved energy services has the potential to promote gender equality, create employment and business opportunities for women, and improve development outcomes with regard to, for example, education and maternal health. Evidence shows that these benefits are often realized only if gender-sensitive approaches are integrated in the design and implementation of rural electrification interventions. Under the proposed PforR, gender-differentiated benefits will be included in the connection practices, and the corresponding impacts will be tracked.

IV. Program Development Objective(s)

The PDOs are to (a) increase access to electricity in rural areas and (2) scale up the supply of renewable energy in rural areas while strengthening sector institutional capacity. The program will concentrate on three key results areas:

- Expanding rural access to electricity
- Increasing supply of renewable electricity in rural areas
- Strengthening the capacity of the sector to deliver the NREP

The following indicators have been selected to measure progress towards the PDO:

- PDO Indicator 1: People provided with access to electricity under the program by household connections
- PDO Indicator 2: Number of non-residential connections implemented under the program
- PDO Indicator 3: Generation capacity of renewable energy constructed under the program
- PDO Indicator 4: People provided with access to electricity via off-grid supplies under the program (SPP and solar PV)

- PDO Indicator 5: Capacity and policy for delivery of energy access and renewable energy generation strengthened

V. Environmental and Social Effects

The environmental risks of the program are considered Low. The only type of investment that requires a specialized analysis and could affect natural habitat is the installation of mini hydroelectric generating stations, the hydrologic effects of which can have ecological and socioeconomic impacts downstream. Given the sizes of the plants, these impacts are likely to be localized and not significant. Social risks are also low; the amount of land required for facilities and rights-of-way is small and physical displacement can normally be avoided.

The key findings of the Environmental and Social Systems Assessment (ESSA) with respect to environment and social impact assessment and management are that Tanzania has the legislative and regulatory basis and the institutions to ensure consistency with the six core principles outlined in the Bank's OP 9.00, Program-for-Results Financing. Implementation is not consistently effective in the areas of Environmental and Social Impact Assessment (ESIA) preparation, review, and approval; Environmental and Social Management Plan implementation, field supervision, monitoring, and enforcement; and stakeholder consultation. The ESSA includes measures to mitigate the underlying risks, which primarily relate to the lack of personnel for field supervision in the REA and TANESCO (the latter supervises grid extension activities on the REA's behalf) and ESIA consultants who lack experience and skills, and implementation of training for environmental management officers in the district local Government authorities (LGAs).

The most significant social findings are that Tanzania has land laws and land acquisition procedures that, if judiciously followed, would result in outcomes generally in line with Core Principle 4, provided additional attention is given to livelihood restoration and to the rights of project-affected people who cannot prove ownership of the land. In practice, acquisition of rights-of-way for 33 kV and 11 kV distribution lines relies heavily on voluntary contributions of land and land-based assets (crops and trees), while it avoids personal and public structures but has lacked proper documentation of the processes when land was provided voluntarily. In the course of the PforR preparation, consultations with the project-affected persons have been done in a general manner. The ESSA includes the recommended measures to bring the land acquisition up to national standards and additional steps to meet Core Principle 4. The main thrust of the measures is for the REA is to develop systematic procedures to guide its staff in acquiring land and rights-of-way using, as a resource, the Resettlement Policy Framework developed for TEDAP and which can be updated for the subject PforR.

The ESSA also found that Tanzania does not have any laws specifically aimed at protecting the rights of indigenous peoples. However, Tanzania does recognize vulnerable disadvantaged groups as a category of potentially affected people, and various processes—such as environmental impact assessments—do consider potential impacts on them. The measures identified in the ESSA to achieve the objectives of Core Principle 5 are mainly for the REA to develop policy and procedures to ensure that the possible presence of vulnerable and disadvantaged groups is considered when potential investments are appraised and that if any are likely to be affected, the principles of free prior-informed consultation are applied.

The ESSA report was publicly disclosed as a draft for stakeholder review and consultation on

January 18, 2016, and a stakeholder workshop was convened in Dar es Salaam on January 19, 2016. The final ESSA report incorporated the workshop participants' opinions and recommendations and was disclosed on February 26, 2016.

Grievance redress. Communities and individuals who believe that they are adversely affected as a result of a Bank-supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address pertinent concerns. Affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the Bank's attention and Bank management has been given an opportunity to respond. For information on how to submit complaints to the Bank's corporate GRS, visit www.worldbank.org/GRM. For information on how to submit complaints to the Bank's Inspection Panel, visit www.inspectionpanel.org.

VI. Project financing

REA assumes that over the period 2016-2022 rural electrification investments as outlined in the Prospectus will cost US\$227 million per year, largely supported through Government funding (subsidies, petroleum and other levies). This results in a total Program cost of US\$1.367 billion. Table 1 shows the breakdown of the total funding contributions to the NREP.

Table 1. Program Financing (NREP, 2016-2022)

Source	Amount (US\$ million)	% of Total
GoT	900	65%
IDA	200	15%
SIDA	70	5%
SREP	25	2%
DfID	42	3%
EU	50	4%
Government of Norway	80	6%
Total	1,367	100%

VII. Program Institutional and Implementation Arrangements

The REA, under the oversight and coordination of the MEM, will be the lead implementing agency for the PforR. The GoT will establish a Program Steering Committee (PSC)—consisting of representatives from the MEM, the REA, TANESCO, other relevant agencies, the DPs, the private sector, and civil society—to ensure the coordinated implementation of the PforR. The MEM permanent secretary will chair the steering committee.

Regarding Results Area 1, grid extension, TANESCO will support the REA in the implementation of the PforR (especially on the network planning, quality assurance, and supervision aspects), and the REA and TANESCO will enter into a memorandum of understanding (MoU) delineating this arrangement. Because of the capacity constraints

highlighted in the fiduciary assessment, the REA will engage consulting firms to prepare the design, cost estimates, and supervision of contracts for electrification subprojects. Over time, this capacity will be transferred to the REA in two areas: (a) development of feasibility studies and support of procurement process and (b) project management. However, at the outset, project management will be supported by a project management consultant (PMC). As the recruitment of the PMC is seen as a crucial element to the success of the Program, it has been included in the Program Action Plan. The functions of the PMC will include the supervision and verification of the quality of the completed feasibility studies and construction works. Supervision reports will be submitted to the REA and the Cooperative Rural Development Bank (CRDB), which is the REA's Trust Agent (TRA) for approval and payment processing. A separate agreement will be concluded between the REA, CRDB, and PMC delineating the respective roles and responsibilities.

Regarding Results Area 2, off-grid electrification, for the two CL financing windows that will provide financing to SPP developers and quality-verified solar system providers, respectively, and for the SPP PSM, the Tanzania Investment Bank (TIB) will serve the role of financial intermediary. For this Results Area, the PforR instrument and DLIs have been specially tailored to the unique challenges of facilitating private sector investments through activities targeting the specific barriers identified as constraining the growth of the off-grid electrification market in Tanzania. These three financial instruments are described below:

- Under the CL window targeted at SPP developers and their need to obtain project financing with relatively long payback periods attuned to the relatively capital-intensive nature of renewable energy investments, the PFIs will be asked to take the risk of lending to the SPPs for a tenor that would normally be used in the absence of CL support (for example, five years), but the loan amortization would be done over a longer tenor (for example, 10 years). If the project is performing well at the end of the initial period, the PFI may choose either to refinance the outstanding balance using the CL resources or extend the loan. If the PFI extends the loan, the funds reserved under the CL will be released and made available to other SPP projects.
- For the second CL window directed at solar product vendors, a US\$10 million Loan Loss Reserve Fund (LLRF) will be established at the REA to cover potential losses by the TIB for extending loans to the qualifying off-grid solar companies. With this LLRF, the TIB will be able to extend loans for between US\$14 million and US\$20 million to qualified companies, depending on the risk coverage level. The loans may be used for any number of preapproved activities designed to expand the ability of the beneficiary companies to grow their business. Particular attention will be given to supporting companies that use Pay-As-You-Go (PAYG) technology, which minimizes the need for up-front payments by customers, making solar more broadly affordable to a larger share of rural consumers. For any loan made under this facility, the TIB will be able to claim any losses incurred from the LLRF, following the procedures and a risk coverage level to be specified.
- For the PSM, an umbrella reserve (escrow) account managed by the TIB will be endowed using SREP loan funds to the GoT. Separate accounts for each participating SPP, equal to at least three months' worth of payments under the SPPA, will be

established. The cost structure will consist of the annual administration fee which will be borne by the respective SPPs and interest earnings. In the event of late payment by TANESCO for a given monthly invoice, the SPPs will turn the invoice over to the SPP and draw its payment from the PSM, which will behave like an ESCROW account. The PSM will then have the right to recover the SPP's invoice value plus the interest owed from TANESCO. TANESCO will be given a period of up to six months to repay the PSM the invoiced amount plus the interest owed. The loan will bear an interest rate equal to the prime rate, as specified for late payments under the SPPA. In case the SPP designated accounts are exhausted and TANESCO fails to repay the late payment and interest to the TIB, the operation of the PSM will be suspended until TANESCO pays up all late payments plus interest to the PSM. Credit line funds for SPPs seeking to sell power to TANESCO will also be suspended until TANESCO makes current its accounts with the PSM. Support to stand-alone mini grids not selling to TANESCO may continue. This funding suspension will apply until all reserve account obligations have been replenished by TANESCO. If they are not replenished within two years of the imposition of the suspension, all support under Results Area 2 for the SPPs seeking to sell to TANESCO will be terminated.

Gender mainstreaming. With respect to addressing gender equality and ensuring that the poor households can obtain access to electricity during the PforR implementation, a needs-based methodology for administering the connection subsidy will be developed by the MEM under Results Area 3. However, in the near term, before this methodology is developed, the following actions have been identified:

- (a) TANESCO's application form for connecting to the grid should require applicants to identify whether they are a male- or female-headed household or enterprise.
- (b) As part of connection awareness campaigns, additional consultative meetings should be held with women and female-headed households to explain electrification procedures and safety practices and answer specific questions, which are unlikely to be raised in a larger, mixed group. Standard terms of reference (ToR) for feasibility studies for electrification contractors must require the contractor to gather and present information about the target population by the gender of the head of household.
- (c) The contractors' ToR should require that the final profile of the connections made, using the REA's subsidy resources, reflects the gender mix of the head of households prevalent in the community as recorded in the completed feasibility studies. Sex-disaggregated data regarding beneficiaries with respect to households and business owners connected to the grid will be collected, monitored, and reported (through the REA's TRA). Given that grid connection rates are low in rural areas, attention will be paid to ensure that no gender disparities in rural access rates emerge during the PforR implementation.

All the implementation arrangements, processes, and procedures will be reflected in the REA's Program Operations Manual (POM), which will be regularly and appropriately updated. Adoption of the POM is a PforR effectiveness condition. A disbursement condition for the establishment of the PSM is that TANESCO must settle all past outstanding obligations to the

SPP sector prior to the operationalization and endowment of the PSM.

VIII. Contact point

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