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Report No.: 103827-TZ

PROGRAM APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 141.2 MILLION

(US$200 MILLION EQUIVALENT)

AND A

PROPOSED SCALING-UP RENEWABLE ENERGY PROGRAM (SREP) GRANT

IN THE AMOUNT OF US$9 MILLION

TO THE

UNITED REPUBLIC OF TANZANIA

FOR A

RURAL ELECTRIFICATION EXPANSION PROGRAM – PROGRAM FOR RESULTS

MAY 31, 2016

ENERGY AND EXTRACTIVES GLOBAL PRACTICE
AFRICA REGION

CURRENCY EQUIVALENTS

(Exchange rate effective April 30, 2016)

Currency Unit	=	Tanzania Shilling (TZS)
US$1	=	TZS 2188.4767
US$1	=	SDR 0.70555199

Fiscal Year
1 July – 30 June

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
AG	Attorney General
AO	Accounting Officer
APP	Annual Procurement Plan
AWPB	Annual Work Plans and Budget
CHM	Complaints Handling Mechanism
CRB	Contractor Registration Board
CUIS	Common Use Items and Services
ERB	Engineers Registration Board
BRN	Big Results Now
CAG	Controller and Auditor General
CAS	Country Assistance Strategy
CASPR	Country Assistance Strategy Progress Report
CL	Credit Line
CRDB	Cooperative Rural Development Bank
DfID	U.K. Department for International Development
DLI	Disbursement Linked Indicator
DP	Development Partner
DPO	Development Policy Operation
EC	Evaluation Committee
EIRR	Economic Internal Rate of Return
EMO	Environmental Management Officer
ESIA	Environmental and Social Impact Assessment
ESMAP	Energy Sector Management Assistance Program
ESSA	Environmental and Social Systems Assessment
EU	European Union
EWURA	Energy and Water Utilities Regulatory Authority
F&C	Fraud and Corruption
FM	Financial Management
FSA	Fiduciary Systems Assessment
GoT	Government of Tanzania
GPN	General Procurement Notice

GPSA	Government Procurement Service Agency
GRS	Grievance Redress Service
IAU	Internal Audit Unit
ICB	International Competitive Bidding
IFC	International Finance Corporation
IPP	Independent Power Producer
LGA	Local Government Authority
LTPP	Long-term Perspective Plan
LV	Low Voltage
MCC	Millennium Challenge Corporation
MEM	Ministry of Energy and Minerals
M&E	Monitoring and Evaluation
MKUKUTA	Mpango wa Pili wa Kukuza Uchumi na Kuondoa Umaskini Tanzania (Second Plan for Growth and Poverty Reduction of Tanzania)
MoFP	Ministry of Finance and Planning
MoU	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
MV	Medium Voltage
NAO	National Audit Office
NCB	National Competitive Bidding
NEMC	National Environmental Management Council
NEP	National Energy Policy
NPV	Net Present Value
NREP	National Rural Electrification Program
OGPFM	Open Government and Public Financial Management
PAC	Parliamentary Accounts Committee
PAYG	Pay-As-You-Go
PCCB	Prevention and Combating of Corruption Bureau
PDO	Program Development Objective
PE	Procuring Entity
PEFA	Public Expenditure and Financial Accountability
PER	Public Expenditure Review
PFI	Participating Financial Institution
PFM	Public Financial Management
PforR	Program-for-Results
PGDP	Power and Gas Development Program
PMC	Project Management Consultant
PMU	Procurement Management Unit
POM	Program Operations Manual
PPA	Public Procurement Act
PPAA	Public Procurement Appeal Authority
PPRA	Public Procurement Regulatory Authority
PSC	Program Steering Committee
PV	Photovoltaic
REA	Rural Energy Agency
REB	Rural Energy Board

REF	Rural Energy Fund
RELW	Short-Term Renewable Energy (including Solar) Loan Window
RPF	Riparian Fencing Project
SIDA	Swedish International Development Cooperation Agency
SPP	Small Power Producer
SPPA	Small Power Purchase Agreement
SREP	Scaling-up Renewable Energy Program
SSMP	Sustainable Solar Market Package
TA	Technical Assistance
TB	Tender Board
TANESCO	Tanzania Electric Supply Company
TDV	Tanzania Development Vision
TEDAP	Tanzania Energy Development and Access Expansion Project
TIB	Tanzania Investment Bank
ToR	Terms of Reference
TRAG	Trust Agent
PROGRAM	Tanzania Rural Electrification Expansion Program
UD	User Department
VAT	Value Added Tax

Regional Vice President:	Makhtar Diop
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Country Director:	Bella Bird
Practice Manager:	Lucio Monari
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Co-Task Team Leader:	Richard Hosier

UNITED REPUBLIC OF TANZANIA

Tanzania Rural Electrification Expansion Program – Program for Results

Table of Contents

PAD DATA SHEET

UNITED REPUBLIC OF TANZANIA

Tanzania Rural Electrification Expansion Program – Program for Results

PROGRAM APPRAISAL DOCUMENT

Africa
Energy and Extractives

Basic Information

Date:	May 31,2016	Sectors:	Transmission and Distribution of Electricity (75%), Renewable Energy (25%)
Country Director:	Bella Bird	Themes:	Rural Services and Infrastructure (75%), Infrastructure Services for Private Sector Development (25%)
Practice Manager/Senior Global Practice Director:	Lucio Monari/Anna Bjerde (acting)		
Program ID:	P153781		
Team Leader(s):	Natalia Kulichenko/Richard Hosier		

Program Implementation Period:	Start Date: June 21, 2016	End Date: July 31, 2022
Expected Financing Effectiveness Date:	September 21, 2016	
Expected Financing Closing Date:	July 31, 2022	

Program Financing Data

[ ] Loan	[X] Grant	[ ] Other
[X] Credit		

For Loans/Credits/Others (US$, millions):			
Total Program Cost:	US$1,367 million	Total Bank Financing:	US$209 million
Total Co-financing :	US$1,158 million	Financing Gap : 0	

Financing Source	Amount (US$, millions)
BORROWER/RECIPIENT	900
IDA	200
SREP GRANT	9
OTHER DONORS (DfID, EU, Government of Norway, SIDA, SREP loan)	258
Total	1,367

Borrower: United Republic of Tanzania

Responsible Agency: Rural Energy Agency (REA)

Contact:	Lutengano Mwakahesya	Title:	Director General
Telephone:	+255 22 2412001/3	E-mail:	lmwakahesya@rea.go.tz

Expected Disbursements (in US$, millions)

Fiscal Year	2017	2018	2019	2020	2021	2022
Annual	52.5	37.0	37.0	36.5	23.0	23.0
Cumulative	52.5	89.5	126.5	163.0	186.0	209.0

Program Development Objective(s)

The program 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.

Compliance			
Policy			
Does the program depart from the CAS in content or in other significant respects?		Yes [ ] No [x]	
.			
Does the program require any waivers of Bank policies applicable to Program-for-Results operations?		Yes [ ] No [x]	
Have these been approved by Bank management?		Yes [ ] No [ ]	
Is approval for any policy waiver sought from the Board?		Yes [ ] No [x]	
Overall Risk Rating: Substantial			
Legal Covenants/Conditions			
Name	**Recurrent**	**Due Date**	**Frequency**
Program Steering Committee		Three (3) months after the Effective Date	Once
Description of Covenant: *FA-Schedule 2 Section I C1b*. The Recipient shall establish, not later than three (3) months after the Effective Date, and thereafter maintain, throughout the implementation of the Program, a steering committee ("Program Steering Committee"), with a composition, mandate, and resources acceptable to the Association, and which shall be chaired by the Permanent Secretary of the Ministry of Finance and Planning.			
Mid-term Review		Thirty (30) months after Effective Date	Once
Description of Covenant: *FA-Schedule 2 Section III A.3*. The Recipient shall, not later than thirty (30) months after the Effective Date, undertake in conjunction with all agencies involved in the Program, a comprehensive mid-term review of the Program during which it shall exchange views with the Association and implementing agencies generally on all matters relating to the progress of the Program, and the performance by the Recipient of its obligations under this Agreement (including the performance by said implementing agencies).			
Withdrawal condition	yes		Continuous
Description of Condition: *FA-Schedule 2 Section IV B1*. Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made: (a) from the Credit Account until the Association has received payment in full of the Front-end Fee; (b) for purposes of Section 2.03 of the General Conditions (renumbered as such pursuant to paragraph 6 of Section II of the Appendix to this Agreement and relating to Program Expenditures), for DLRs achieved prior to the date of this Agreement; and (c) for any DLR, until and unless the Recipient has furnished evidence, verified by the Independent Verification Agent according to protocols set forth in the Verification Protocol and thus satisfactory to the Association, that said DLR has been achieved.			

Subsidiary Agreement		Before effectiveness	
Description of Condition: *FA-Article V-5.01; GA Article V 5.01b.* The Subsidiary Agreement has been executed on behalf of the Recipient and the Program Implementing Entity.			
Effectiveness of Grant Agreement		Before effectiveness	
Description of Condition: *FA-Article V-5.01.* The SCF Grant Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.			
Program Operations Manual		Before effectiveness	
Description of Condition: *FA-Article V-5.01; GA Article V 5.01d.* The Program Implementing Entity has adopted a Program Operations Manual acceptable to the Association.			
IDA Financing Agreement		Before effectiveness	
Description of Condition: *GA-Article V-5.01c.* The IDA Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.			

Team Composition

Bank Staff

Name	Title	Specialization	Unit
Natalia Kulichenko	Senior Energy Specialist	Task team leader	GEE01
Richard Hosier	Senior Energy Specialist	Co-task team leader	GEE07
Vladislav Vucetic	Lead Energy Specialist	Project lead sector specialist	GEE01
Mirlan Aldayarov	Senior Energy Specialist	Institutional arrangements specialist, technical assessment	GEE01
Lara Born	Junior Professional Officer	Technical analysis and overall coordination	GEE01
Patrick Balla	Energy Specialist	Off-grid development specialist	GEE01
Guillermo Hernandez	Energy Specialist	Project transmission and distribution specialist, technical assessment	GEE04
Teuta Kacaniku	Infrastructure Finance Specialist	Project financial specialist	GEEFS
Sudeshna Banerjee	Senior Economist	Project economic analysis specialist	GEE01

Koffi Ekouevi	Senior Economist	Rural electrification specialist, technical assessment	GEE04
Mei Wang	Senior Counsel	Country lawyer	LEGAM
Adam Shayne	Chief Counsel	Country lawyer	LEGAM
Gerard Joseph Mataban Jumamil	Counsel	Country lawyer	LEGAM
Bassem Nehme	Financial Analyst	Program financial analysis	GEE07
Florentina Mutafungwa	Energy Specialist	Program financial analysis specialist	GEE01
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Winter Chinamale	Senior Procurement Specialist	Project procurement	GGODR
Sanjay Srivastava	Lead Environmental Specialist	Project environmental safeguards specialist	GENDR
Jane Kibassa	Senior Environmental Specialist	Project environmental safeguards specialist	GENDR
Helen Shahriari	Senior Social Scientist	Project social safeguards specialist	GSURR
Mary Bitekerezo	Senior Social Development Specialist	Project social safeguards specialist	GSURR
Inka Schomer	Gender and Energy Specialist	Project gender specialist	GEEDR
Gloria Sindano	Program Assistant	Project assistant	AFCE1
Bernadette Milunga	Program Assistant	Project assistant	GEE01
Faustina Chande	Program Assistant	Project assistant	AFCE1

Non-Bank Staff

Name	Title	City
Subodh Mathur	Senior Institutional expert	Bethesda, MD
Rene Mendonca	Senior Power engineer	Miami, FL
John Maclean	Senior Financial specialist	Seattle, WA
Thomas Walton	Senior Environmental Safeguards specialist	Washington, D.C.
Alexandra Planas	Senior Energy specialist	Bogota, Colombia
Carlos Eduardo Vieira Batarda	Statistical Analysis specialist	Dar es Salaam, Tanzania

I. STRATEGIC CONTEXT

A. Country Context

1. Tanzania is a low-income economy, with a population of about 51.8 million in 2014, projected to increase to 74 million by 2030.[1] 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 about 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.

2. Macroeconomic reform during the past two decades has brought monetary and fiscal stability in Tanzania. From 2002 to 2015, the country's annual gross domestic product growth rate averaged 7 percent,[2] 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.[3] However, much remains to be done, especially in rural areas where over 80 percent of the poor and the extreme poor live.[4] While statistics show that economic growth has trickled down to the poor, including the extreme poor, almost half of Tanzania's adult population earns less than US$1.90 per day.[5] 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.

3. The Government of Tanzania (GoT) has outlined its medium-term objective of becoming a middle-income country through the Tanzania Development Vision (TDV) 2025. In 2013, to expedite the achievement of the TDV, the Government launched the Big Results Now (BRN) Initiative. The BRN focuses Government efforts on accelerating the delivery of defined priority results in six areas of the economy, including (a) energy and natural gas; (b) agriculture; (c) water; (d) education; (e) transport; and (f) 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-fired power generation capacity and access to electricity in rural areas.

B. Sectoral and Institutional Context

4. **Background**. In the past several years, Tanzania's electricity access[6] rate has risen noticeably. The number of people with access to electricity has reportedly increased from 7 percent

[1] World Bank 2015. *Tanzania Country Economic Update.*
[2] World Bank 2015. *Tanzania Country Economic Update*.
[3] The poverty figures between the two years are not directly comparable due to changes in the assessment methodology.
[4] World Bank. 2014. *Tanzania Mainland Poverty Assessment*.
[5] While the latest poverty rate using the national poverty line (defined by the Tanzanian Government) was 28.2 percent in 2012, the poverty rate using the revised international poverty line (defined by the World Bank as US$1.90 per day) was 48.3 percent in the same year.
[6] 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:

in 2011 to 36 in 2014[7]. Several factors have contributed to this achievement, including (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.

5. 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. 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.

6. The GoT adopted its National Energy Policy in 1992, revised in 2003 and updated 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 with support from 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 the first draft is expected to be completed by the end of 2016.

7. **Power sector reform and sector financial sustainability.** Tanzania has been gradually reforming its power sector for more than a decade now. Its power utility, Tanzania Electric 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 Authority (EWURA) became operational in 2006. This was followed by the 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 began in the early 2000s, with the first large independent power producer (IPP) starting its operation in 2002 (Independent Power Tanzania Limited), followed by another IPP in 2004 (Songas). A number of smaller IPPs have also been constructed since then.

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

"Access is defined as the total population nearby the locality benefiting from electricity, irrespective of the population being connected to electricity."

[7] http://www.tra.go.tz/documents/BUDGET%20SPEECH%20MINISTER%20OF%20FINANCE%20FINAL%20FINAL.pdf

the electricity supply shortages into an alarming financial situation in the sector, which then threatened to become a fiscal and macroeconomic crisis.

9. 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 offshore discoveries of gas in Tanzania. The program relied heavily on increased investment in the gas-to-power chain so as to increase use of domestic natural gas in power generation and thereby eliminating the power supply gap and reduce the hydrological risks in a cost-effective manner.

10. 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 senior management of several energy sector institutions 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 PGDP.

11. 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:

- For the first time since 2009, TANESCO finished FY2015 with an operational surplus of about TZS 179 billion; in comparison, TANESCO recorded an operating loss of TZS 387 billion for the previous financial year, FY2013.[8]

- Electricity tariffs have about doubled since 2012 while TANESCO reduced technical and nontechnical losses from 21 percent in 2012 to about 17 percent in 2016 (5.5 percent in transmission and 11.5 percent in distribution, according to 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 the TANESCO service surcharge, reducing barriers for new customers to connect.

- The 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 nearshore/onshore producing fields at Mtwara and Songo-Songo to Dar es Salaam.

[8] 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, but FY2013 was followed by FY 2015, which covered the 18-month period from January 1, 2014 to June 30, 2015.

- A new 150 MW gas power plant (Kinyerezi I) has been completed and construction of another 240 MW gas power plant (Kinyerezi II) has started.

- Gas production has increased and gas is now available to all existing and newly commissioned power plants in the 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 TZS 262 per kWh in FY2012 to TZS 229 per kWh in FY2015.

- TANESCO has signed a contract with a transaction adviser to help procure private investment for a new 200–300 MW gas-fired IPP through a transparent, competitive tendering process.

12. The Government has adopted a long-term power sector restructuring plan with 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.

13. Nevertheless, power sector reform remains a work in progress. TANESCO is still burdened by significant payment arrears accumulated since 2011, which will need to be restructured and refinanced. The Government, together with TANESCO, is currently preparing a plan for restructuring TANESCO's arrears, as a continuation of the DPO program.

14. The gas-to-power investment program needs to advance further to ensure secure, reliable, and cost-effective supply in the long term, in conjunction with further investments in renewable technologies and stronger regional integration. The Government intends to finance an extension of the Kinyeresi I gas power plant (185 MW) and continues to negotiate additional gas supply with gas production companies. To reduce the burden on public resources, there is a need to attract more private investments through better structured, more transparent, and competitive processes.

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

- **REA.** The REA, established through the Rural Energy Act of 2005, has the mission to promote and facilitate availability and access to modern energy services in rural mainland Tanzania. 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),[9] 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.

- **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).

- **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 create conditions, enabling sustainable and efficient performance of the sector.

- **EWURA.** While EWURA was created under the 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. EWURA's core functions are licensing or regulating access to the market, setting tariffs, and establishing and monitoring technical standards that promote quality and reliability in electricity services and transport and distribution of petroleum and gas resources.

16. 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 procurement function assumed by the REA since 2012 has helped eliminate major bottlenecks related to 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

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

responsibility for supervision of contractors, quality assurance, infrastructure commissioning, and operation and maintenance of the networks and equipment, once the construction is completed.

Box 1. Tanzania Energy Development and Access Expansion Project (TEDAP)

TEDAP is one of the Bank's flagship projects in Tanzania that addresses rehabilitation and construction of urban transmission and distribution networks and off-grid electrification. TEDAP, financed through an IDA Credit and a Global Environment Facility grant, became effective in 2008. The project development objective is "to improve the quality and efficiency of the electricity service provision in the three main growth centers of Dar es Salaam, Arusha, and Kilimanjaro and to establish a sustainable basis for energy access expansion." The global environment objective is "to abate greenhouse gas emissions through the use of renewable energy in rural areas to provide electricity." The project has two components: an on-grid component addressing the quality of urban electricity service provision in Dar es Salaam, Arusha, and Kilimanjaro and an off-grid component, focused on stimulating private sector-led development of renewable energy in remote rural areas unlikely to be connected to the electricity grid. Off-grid electrification has been completed while the project activities related to construction and improvement of transmission and distribution networks are still ongoing and expected to close in FY2017.

TEDAP also supported EWURA to strengthen the regulatory environment for SPPs; assisted private developers seeking to design and build rural, renewable SPP plants to sell electricity to TANESCO, to local communities, or to both; and deployed solar photovoltaic (PV) equipment through Sustainable Solar Market Packages (SSMPs). TEDAP support to the SPPs involved a matching grant program to cost-share the development of projects; a performance grant program to provide results-based support to SPP developers, building localized electricity supply networks; and a Credit Line (CL) to enable the participating financial institutions (PFIs) to extend loans of up to 15 years to SPP developers.

The results of the TEDAP support to EWURA for the regulation of the SPP sector resulted in probably the strongest and most transparent enabling environment for the development of SPPs in Africa. The SPP rules, recently reviewed and revised into SPP 'Second Generation Rules', incorporated adjustments to the standardized Small Power Purchase Agreement (SPPA) and standardized SPP tariffs, shifting from being calculated on an 'avoided-cost' basis to a 'technology-specific' basis.

For the SPP program, over 30 SPP developers received matching grants to move their projects from the concept stage to the feasibility study phase, including obtaining environmental approvals from the National Environmental Management Council (NEMC). Of this original pool of projects supported through TEDAP, six projects are now in operation (three biomass and three small hydro), selling power to TANESCO. One small hydro SPP is selling electricity exclusively to local consumers. In total, 22 MW of the SPP-generated renewable electricity is generated for sale to TANESCO, with an additional 7 MW due to be commissioned in the nearest future. The CL, set up under TEDAP, enabled five of these SPPs to obtain financing on favorable terms and tenors required for capital-intensive renewable energy projects. An independent evaluation of the off-grid component showed that the program was a success. However, the matching grant program allowed some of the inexperienced developers to initiate the projects that have never been completed to the required standards to move ahead to financial close.

The SSMP model used a hybrid approach, combining competitive public procurement for PV systems for rural institutions and a concession for the winning company to sell PV lanterns and systems in the same rural districts. The model has not yet yielded the expected results because the companies familiar with the competitive procurements did not have the necessary corporate skill set to develop local private PV markets. An independent evaluation of the SSMP model found that not only had it failed to deliver on its promise in Tanzania, but it had also encountered the same difficulty in other countries where it had been tried. A demand for quality solar products exists in Tanzania and a new model for delivery of renewable energy products that minimize upfront investment costs will be supported under the proposed PforR.

17. 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.

18. 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 transformation of TANESCO, starting with the ring-fencing of its strategic business units. This measure will be followed by gradually unbundling TANESCO into generation, transmission, and distribution segments. 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 contributed by 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 and Planning [MoFP]) 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,[10] 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.

- **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 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.

19. **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 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.

[10] 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.

C. Relationship to the CAS/CPS and Rationale for Use of Instrument

20. By increasing access to electricity, the PforR will contribute to the GoT's poverty reduction plans and support the achievement of the Bank's twin goals of reducing poverty and boosting shared prosperity. The country's Poverty Reduction Strategy—Mpango wa Pili wa Kukuza Uchumi na Kuondoa Umaskini Tanzania (MKUKUTA II)—focuses on the following clusters: (a) economic growth and reduction of income poverty; (b) improvement of quality of life and social well-being; and (c) good governance and accountability. The PforR contributes to the achievement of the MKUKUTA II goals, specifically Goal 2: "Reducing income poverty through promoting inclusive, sustainable, and employment-enhancing growth," by extending access to energy services and improving the service quality, primarily in rural areas, as outlined in the Prospectus.

21. While the FY12–FY15 Country Assistance Strategy (CAS) remains relevant in guiding the World Bank Group's engagement in Tanzania, the June 2014 CAS Progress Report (CASPR, Report No. 80313-TZ), which extended the CAS period to June 30, 2016, proposes a more focused approach to Bank Group interventions. It states that increasing access to and reliability of power supply and sustainable management of natural gas reserves and mining resources are at the center of the country's competitiveness and job creation. The proposed PforR operation is fully aligned with the CAS/CASPR's objectives of addressing key infrastructure gaps, including in the power and extractives sectors, and promoting sustainable management of natural resources.

22. The PforR operation is aligned with the World Bank's Energy Directions Paper, designed to help partner countries secure affordable, reliable, and sustainable energy supply needed to meet the twin goals of reducing poverty and boosting shared prosperity. Increased access to reliable electricity supply will not only lower costs and improve the profitability of business enterprises, which can help drive economic growth; it will also enhance the ability of public institutions, for example, hospitals and schools, to deliver quality social services. Increased access to electricity can also spawn small businesses in rural areas, which can be a source of employment, thus reducing dependency on agricultural incomes. Households benefit from savings in moving from traditional energy sources (kerosene or diesel) to electricity, as well as from the provision of higher quality of lighting compared to kerosene lamps. Although hard to measure, health benefits will also occur because of the reduction of indoor air pollution due to reduced kerosene consumption.

23. The proposed operation adopts the PforR financing instrument, a first for the rural electrification sector in Bank operations and in the energy sector in the Africa region. The Bank and the GoT agreed to use the PforR approach to streamline and accelerate electrification implementation. Specifically, the use of the PforR instrument allows for a strong focus on achieving tangible results to increase electricity access and scale up renewable electricity generated by the SPPs and quality-certified renewable energy (including solar PV) systems. At the same time, the PforR will improve the REA's capacity to deliver the NREP through its own systems and procedures, strengthen the REA's focus on output/outcome monitoring and evaluation (M&E), and reinforce the institutional capacity needed to deliver the NREP to achieve the planned targets. By providing contributions to the REF, the PforR approach will reduce uncertainty about the availability of REF financing, and enhance DP coordination through a pooled funding mechanism. Other DPs contributing to the REF plan to adopt several of the disbursement linked indicators (DLIs) used under the PforR for their own disbursements, thus aligning sector support around a common, performance-based framework.

II. PROGRAM DESCRIPTION

A. Government Program

National Rural Electrification Program

24. The REA and the private sector are implementing the NREP (the Government program), during 2013–2022, as outlined in the Prospectus. The GoT plans to achieve about 1.3 million connections in rural areas (including public facilities), increasing the average access rate to electricity (both urban and rural) from the current 24 percent to 35 percent by 2022. The Prospectus estimates the required investment for 2013–2022 at about US$3.5 billion, including US$2.06 billion for rural areas. The costs for preparatory works (feasibility studies, engineering studies, and so on), administrative tasks, and supervision are not included in these estimates. The supervision ancillary costs are estimated at 15 percent of the investment costs. The NREP focuses on electrifying development centers[11] through four different approaches: (a) electrification by densification (that is, the connection of new customers to the grid in already electrified settlements); (b) electrification by new connections to the grid; (c) electrification through off-grid investments; and (d) development of distributed technologies, particularly off-grid solar and other renewable technologies. The approach of supporting both grid and off-grid models and attracting private sector investments and expertise is consistent with the rural needs of Tanzania and reflects best practices and diversification in promoting access in Sub-Saharan Africa.

25. The PforR technical assessment acknowledges that the Government program, NREP, which is at an early implementation stage, exhibits ambitious financing requirements while some key planning aspects are yet to be determined. For instance, the Prospectus provides only average connection targets for densification and does not specify the prerequisite medium voltage (MV) line extension plans to sustain the electrification pace. These and other details (for example, specified annual connection targets aligned with the available networks and the construction rate of new MV and low voltage [LV] networks) will be elaborated in a FRural Electrification Master Plan (Master Plan), the first draft of which is expected to be completed by the end of 2016. While the Master Plan is under development, the REA is implementing the NREP based on feasibility studies (prepared with support from the DPs), including economic and financial analyses for the investments.

On-grid Electrification

26. Under the grid extension approach, the REA implements the NREP in four phases:[12]

- **Phase 1:** The ongoing investments aiming to extend the grid to 1,500 settlements from 2013–2015.

[11] A development center is typically a settlement with at least 1,500 inhabitants in 2012, with some existing social or administrative infrastructure (school, dispensary, police station, and so on); good access by roads; and some business activities. Focusing on the electrification of such settlements promises to maximize the benefits of electrification.

[12] A map of the phases is provided in Annex 12.

- **Phase 2:** The 2016–2019 investments to electrify settlements within 10 km of the existing 33 kV MV networks, available by the end of 2015, and to extend MV networks to enable the execution of Phases 3–4.

- **Phases 3–4:** The 2020–2022 investments to electrify development centers within 40 km of the MV grid, identified by the end of 2019. Under Phases 3–4, the electrification will also be done in settlements that are within 10 km of feeder lines to be linked to the constructed MV grid.

27. In the selection of settlements for electrification, the REA adheres to the Government policy requiring prioritization of the provision of electricity access to all district headquarters. The REA also prioritizes the connection of public and social facilities that serve the majority of the rural population in a given district (for example, schools, hospitals and health centers, community water pumping stations, and so on). While electrifying these facilities, households along the line are also connected using the connection subsidies, which are rendered on a first-come, first-served basis. Such an approach has potential negative impacts on the rural poor and disadvantaged groups. The proposed PforR operation, under Results Area 3, will support the preparation of a study on reducing the cost and unlocking of electricity connection challenges as well as the preparation of a strategy on enhancing energy access, as part of the implementation of the NEP 2015.

Off-grid Electrification

28. Regarding off-grid electrification, the Prospectus defines a category of non-electrified small towns, referred to as 'priority development centers', which have more than 1,500 inhabitants. About 154 of these development centers have been identified and considered candidates for off-grid electrification to be provided by private sector SPPs connecting to the TANESCO grid, and mini grids, operated by both TANESCO and the private sector. The estimated cost of off-grid investments is about US$176 million. The power supply sources include small hydro plants (for 18 settlements), rice-husk-fueled gasifiers (for 63 settlements), and diesel-PV hybrid systems (for 73 settlements), which then feed into local grids.

29. Beyond these priority development centers, the Prospectus identifies additional development centers (population of less than 1,500 inhabitants per center) that could also be supplied by traditional renewables, that is, small hydro and biomass. The total population of these development centers is about 450,000 people; 347 identified settlements could be supplied from about 141 small hydro sites, located within 20 km of a given settlement (some hydro sites serve multiple development centers). The Prospectus estimated that mini grids using small hydro or biomass could supply nearly 600 development centers and almost 1.5 million people, for whom the electrification through a grid extension by 2020–2022 could not be economically justified.

30. The REA's existing SPP pipeline combines projects intended to (a) supply electricity only to the local community; (b) supply electricity to TANESCO's existing isolated grids; and (c) sell power primarily to TANESCO's main grid. At present, the total capacity of the SPPs included in the pipeline amounts to about 66 MW.

B. Program Development Objective/s (PDO) and Key Results

31. The PDOs 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.

32. The program will concentrate on three key results areas:

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

C. PforR Program Scope

33. The proposed PforR will support the Government in implementing the NREP based on these existing plans and will support the targets to be determined in the more detailed Master Plan, as the Government adopts and implements it over time.[13]. 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. The linkage between the NREP and the PforR is shown in Figure 1.

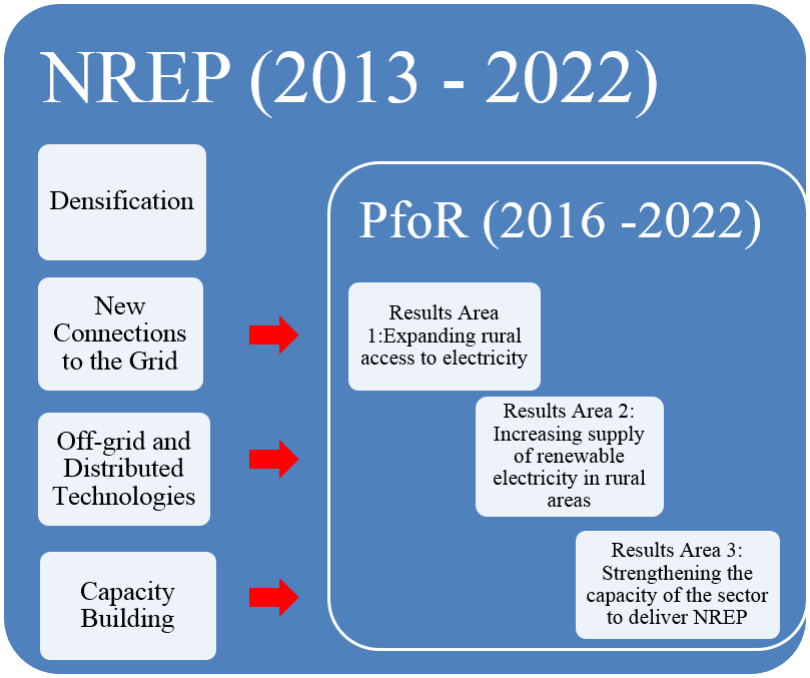
Results Area 1: Expanding rural access to electricity

34. The PforR will support activities related to the implementation of Phases 2, 3, and 4 of the NREP to achieve new connections to the grid (for example, the design and construction of MV [33 kV and 11 kV] and LV lines; installation of MV/LV distribution transformers; procurement and installation of service cables and meters; procurement of materials for connection and metering of new rural customers; and so on). The REA has an ambitious target of connecting, on average, 215,000 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

[13] World Bank. 2015. *Program for Results: Two-Year Review*. Operations Policy and Country Services. PforRs support not only well-defined government programs but also implementation of national programs that are under development, providing resources for strengthening in-country institutional capacity to deliver the anticipated results.

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.[14]

Figure 1. Government Program (NREP) and PforR Linkage



Results Area 2: Increasing supply of renewable electricity in rural areas

35. With regard to off-grid electrification, the proposed PforR will provide funding through a window under the existing CL developed under TEDAP (see Box 1) for the SPP development that could potentially draw up to US$99 million in CL backing. A new, second window under the CL will be directed at providing financing to vendors for the delivery of quality-verified renewable energy products to consumers in rural areas.

36. 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 million[15] 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

[14] 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. Under the PforR, the REA will be supported in identifying additional investments through feasibility studies.

[15] This includes US$19 million SREP funding through the Bank (out of which a US$9 million grant forms part of the proposed operation; while an additional US$10 million loan might be processed at a later stage), US$1 million for project preparation, and an additional US$5 million through IFC.

SREP support for Tanzania also provides a grant to the International Finance Corporation (IFC)[16] for transaction advisory support to assist the SPPs in obtaining private financing. Additional information is provided in Annex 10.

Results Area 3: Strengthening the Capacity of the Sector to Deliver the NREP

37. A key element of the proposed PforR is to help strengthen the capacity of the Government institutions to implement the NREP. To strengthen the REA's organizational structure and improve its project planning and preparation capacity, the PforR will assist the REA in strengthening its Planning and Preparation Department. The REA will submit an annual capacity-building plan, including targeted training activities and key technical and managerial recruitments. The annual capacity-building plan will cover the REA and other key actors in the sector, including TANESCO, renewable energy project developers, and related market actors such as project financiers. The activities in the annual capacity-building plan are to be aligned with the efforts of other DPs, according to a recent agreement on joint coordinated TA aligned with the GoT capacity-building plans.

Program Beneficiaries

38. 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 would 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 higher per unit cost compared to the cost of grid supply. In addition, increased supply reliability will boost productivity and reduce material loses.

- **SPPs and Renewable Energy 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

[16] IFC support will not be channeled through the REF.

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; the institutional performance; and capacity and skills for implementation 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.

Program Financing

39. The Prospectus estimates the required investment for 2013–2022 at about US$3.5 billion, including US$2.06 billion for rural areas. Over 2016–2022, during the implementation of the proposed PforR operation, rural electrification investments will cost US$227.83 million per year, largely supported through Government funding (subsidies, petroleum, and other levies). This results in a total cost of US$1.367 billion during 2016–2022. Table 1 shows the breakdown of the total funding contributions to the NREP.

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

Source	Amount (US$, millions)	% of Total
GoT	900	65
IDA	200	15
SIDA	70	5
SREP	25[17]	2
DfID	42	3
EU	50	4
Government of Norway	80	6
Total	**1,367**	**100**

[17] The contribution from the SREP includes a US$9 million grant and US$10 million loan. Activities to be financed by the SREP loan will be defined at a later stage as additional financing to the proposed Program.

40. The largest share (about 90 percent) of funding will be used for grid extension, necessary for reaching a rapid scale of grid expansion and the access agenda aimed by the Government. The tentative allocations across the three different areas of the NREP (electrification by new connections to the grid; electrification through off-grid investments; and development of distributed technologies, particularly off-grid solar and other renewable technologies) are detailed in Table 2.

Table 2. Program Expenditures under the NREP (in US$, millions)

Capital expenditures		**1,230**
i.	Cost of connecting the settlement to the MV backbone grid	369
ii.	Cost of setting up the initial distribution network: LV/MV lines, transformers, Single Wire Earth Return lines	369
iii.	Cost of network extension to connect SPPs[18]	246
iv.	Customer connection cost	246
Operating expenditures		**137**
i.	Operational and consultancy costs	68
ii.	Staff costs	41
iii.	Administrative costs and REA Board associated costs	14
iv.	Other miscellaneous costs	14
Total		**1,367**

D. Disbursement Linked Indicators and Verification Protocols

41. The following indicators have been selected to measure progress toward the PDO:

- PDO Indicator 1: People provided with access to electricity under the Program by household connections (number)
- PDO Indicator 2: Non-residential connections implemented under the Program (number)
- PDO Indicator 3: Generation capacity of renewable energy constructed under the Program (MW)
- PDO Indicator 4: People provided with access to electricity via off-grid supplies under the Program (SPP and Renewable Energy, including solar PV) (number)
- PDO Indicator 5: Capacity for delivery of energy access and renewable energy generation strengthened (yes/no)

42. Table 3 provides an overview of the results of the PforR, including the linkages between the areas under the NREP, the PforR support, the PDO indicators, and the DLIs against which disbursements will be made. The choice of the DLIs is based on the following criteria: (a) the

[18] Including capital expenditures to be financed through CL.

importance of the indicator to signal a critical action/output along the results chain; (b) an expected benefit, providing a strong financial incentive to deliver the result; (c) practical aspects of verifying the achievements; and (d) capacity of the REA to achieve the DLI during the implementation period of the PforR.

Table 3. PforR Results

<table>
<tr><th rowspan="5">Tanzania Rural Electrification Program</th><th>Government Program</th><th>PforR Areas</th><th>PDO Indicators</th><th>DLIs</th></tr>
<tr><td>Densification</td><td colspan="3">Not part of the PforR program</td></tr>
<tr><td>Grid Extension</td><td>Result Area 1: Expanding rural access to electricity</td><td rowspan="3">PDO Indicator 1: People provided with access to electricity under the Program by household connections

PDO Indicator 2: 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 renewables, including solar PV)

PDO Indicator 5: Capacity for delivery of energy access and renewable energy generation strengthened</td><td>• DLI#1: Cumulative number of grid electricity connections, including those under mini-grids, made under the program</td></tr>
<tr><td>Off-grid Electrification</td><td>Result Area 2: Increasing supply of renewable electricity in rural areas</td><td>• DLI#2: Cumulative number of proposed MWs covered by SPP Loans for Small Power Projects reaching financial close under the CL
• DLI#3: Cumulative value of eligible Renewable Energy Sub-loans reaching financial close</td></tr>
<tr><td>Capacity Development</td><td>Results Area 3: Strengthening the capacity of the sector to deliver the NREP</td><td>• DLI#4: Annual capacity building and project preparation activities completed
• DLI#5: Implementation of the National Energy Policy of 2015 (“NEP”) to enhance access to modern energy services in the Recipient’s rural areas completed</td></tr>
</table>

43. The DLIs were selected to either provide funds as results are achieved or to provide funds at a strategic point where an intermediate milestone directly linked to the expected outcome has been achieved. DLI 1 was selected as it is directly convertible to PDO Indicator 1 (five persons per household connection on average). DLI 2 is defined as the number of MWs being built with the loans refinanced under the CL. The SPP loans are necessary to ensure that these plants are constructed, and they must be constructed before PDO 3 (Generation capacity of renewable energy constructed under the program) and PDO 4 (People provided with access to electricity via off-grid supplies under the program) can be achieved. DLI 3 is the value of renewable energy (including solar PV) loans reaching financial close. This DLI is a critical intermediate indicator that must be achieved before renewable, including solar PV, companies are able to expand their businesses, increase sales, and provide electricity to people as measured by PDO Indicator 4.

44. The DLIs listed under Results Area 3 (4 and 5) relate to strengthening the broader national implementation capacity, and institutional framework for the sector. These DLIs are critical for the long-term sustainability of the sector and scaling-up on-grid and off-grid electricity services in rural areas in Tanzania. DLI 4 strengthens the required capacities of the REA through capacity-

building activities that are decided upon on an annual basis and therefore, are directly addressing the immediate capacity constraints of the REA at the time of the preparation of the plans. More specifically, the plans will incorporate concrete actions to ensure technical, financial, environmental, and social sustainability of the program. Additional milestones are included under the DLI that addresses sector constraints at the time of the preparation of the technical assessment and its implementation has been assessed as crucial for the overall success of the NREP. DLI 5 supports the implementation of the NEP 2015. While a subsidy policy has been adopted under the NEP 2015, its implementation needs to be supported through the preparation of a strategy for enhancing access to modern energy services and an analytical assessment study to address electricity connection challenges in rural areas. Both DLIs are complementary to Results Areas 1 and 2 and will ensure better results for both the results areas.

45. **Verification protocol.** The REA is responsible for the verification of the achievements of the DLIs using an independent, third-party verification agency. Currently, the REA's independent Trust Agent (TRAG) is the Cooperative Rural Development Bank (CRDB) - INTERFINi Consortium, which will remain the third-party verification agency under the program. The verification protocol for the DLIs builds on the existing national verification systems wherever possible. The verification will be conducted annually. The verification methodology will include database verification and random site visits by the verification agency TRAG.

46. The complete results framework is provided in Annex 2. The full list of DLIs (together with disbursement arrangements and verification protocols) is provided in Annex 3.

E. Capacity Building and Institutional Strengthening

47. A key element of the proposed PforR is to help strengthen the capacity of Government institutions (primarily the REA) to implement the NREP. The technical assessment (see summary in Annex 4) identified the following capacity challenges to the implementation of the NREP and the proposed operation: (a) the REA's limited capacity in planning and preparing rural electrification projects; (b) limited capacity of other actors involved in rural electrification (for example, TANESCO and renewable energy developers); and (c) the need for a strategy to implement the electricity subsidy policy.

48. To strengthen the REA's institutional capacity structure and improve its project planning and preparation capacity, the PforR will assist the REA in strengthening its Planning and Preparation Department. The REA will prepare an annual capacity-building plan, including targeted training activities and key technical and managerial recruitments for the REA and other key actors in the sector, such as TANESCO, renewable energy project developers, and other related market actors, for example, project financiers. The activities in the annual capacity-building plan are to be aligned with the efforts of other DPs, according to a recent agreement on joint coordinated TA aligned with the GoT capacity-building plans. Support will also be provided to the MEM to implement the NEP 2015 with respect to rural electrification, including the preparation of a study on reducing the connection cost and unlocking of electricity connection challenges, as well as the preparation of a strategy for enhancing energy access, with the objective to increase the affordability of the provision of energy services in Tanzania. This would include, but not be limited to, a review of the economics of various rural electrification investments; definition of appropriate levels and structures for subsidies; and development of a mechanism to

finance connection fees for households, including the cost of inside-the-house customer-side-of-the-meter wiring and controls and so on.

III. PROGRAM IMPLEMENTATION

A. Institutional and Implementation Arrangements

49. 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 MoFP, MEM, REA, TANESCO, other relevant agencies, the DPs, the private sector, and civil society—to ensure the coordinated implementation of the PforR. The permanent secretary of MoFP will chair the steering committee.

50. 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 CRDB, which is the REA's TRAG for approval and payment processing.[19] A separate agreement will be concluded between the REA, CRDB, and PMC delineating the respective roles and responsibilities.

51. Regarding Results Area 2, off-grid electrification, for the two CL financing windows that will provide financing to SPP developers and quality-verified renewable energy companies, respectively, while the Tanzania Investment Bank (TIB) will serve the role of a financial intermediary. For this results area, the PforR instrument and related 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.

- 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 Participating Financial Institutions (PFIs) will be asked to take the risk of lending to the SPPs for a tenor of up to 12 years. That loan can then be pre-financed up to the limited established for the SPP Credit Line.

[19] The 2005 Rural Energy Act empowers the REB to appoint a TRAG that is responsible for monitoring the implementation of REF-supported projects, disbursing grant payments from the REF to project developers, and ensuring that preconditions set by the REB for making grant payments are met by the project developers.

- For the second CL window directed at renewable energy (including solar) companies, a US$10 million Short-Term Renewable Energy (including Solar) Loan Window (RELW) will be established by REA to help TIB and PFIs to issue short-term (< five year tenor) loans. The condition will be that the CL funds will cover no more than 80 percent of the loan costs and the TIB or PFI funds must cover at least 20 percent of the loan costs. Losses will be shared on a *pari pasu* basis. With this RELW, the TIB will be able to extend loans for between US$12.5 million and US$20 million to qualified companies, depending on the loan cost-sharing 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 companies that provide technologies that minimize the need for up-front payments by customers, for example, Pay-As-You-Go (PAYG) systems making renewable energy technologies more broadly affordable to a larger share of rural consumers.

52. For Results Area 3 that addresses strengthening the capacity of the sector to deliver the NREP, REA will be preparing and implementing annual capacity building plans. The REA capacity building will focus on enhancing technical and managerial expertise and skills to plan and deliver rural electrification projects identified in the Master Plan. The Results Area 3 also will provide resources, through the REA, to prepare new power generation projects to be executed by TANESCO. In addition, MEM also will carry out two studies aimed at defining the ways to reduce barriers to enhance energy access, with the objective to increase the affordability of the provision of energy services in Tanzania

53. **Gender mainstreaming.** With respect to addressing gender equality and ensuring that the poor households 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 TRAG). 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.

54. 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.

B. Results Monitoring and Evaluation

55. The REA, as the implementing agency, is responsible for the M&E of the PforR program and recruitment of a third-party agency for verification of the achievement of the DLIs. The REA's independent TRAG is the TRAG CRDB - INTERFINi Consortium, which will remain the third-party verification agency under the Program. The REA has a well-established M&E system that tracks progress on the implementation of all REA-supported energy projects and includes a results-based monitoring approach, detailed in the REA's M&E framework. The M&E framework provides information on the quarterly implementation status and achieved results. The results-based monitoring-reported information tracks physical implementation progress and financial expenditures against planned activities and budgets. PforR monitoring is fully aligned with the REA's M&E system and will be led and managed by the REA's M&E unit, while evaluations will be partly managed internally within the REA and partly by external and independent evaluators reporting directly to the REB and REA management. A summary of reports, to be prepared by the REA to comply with the monitoring requirements under the PforR, is provided in Annex 4.

C. Disbursement Arrangements

56. **Disbursement arrangement.** The DLIs for the PforR are provided in Annex 3, together with the disbursement amounts for each of the DLIs and the protocols for their verification.

57. **Advance payment.** An advance of 25 percent of the total PforR amount, or US$52.25 million, will be disbursed following the effectiveness of the legal agreement for the financing. When the DLIs, against which the advance is disbursed are achieved, the amount of the advance will be deducted (recovered) from the total amount due to be disbursed under such DLI(s). The advance amount recovered by the World Bank is then available for additional advances ('revolving advance'). The World Bank requires that the Borrower refund any advances (or portion of advances) if the DLIs have not been met (or have only been partially met) by the closing date.

IV. ASSESSMENT SUMMARY

A. Technical (including Program economic evaluation)

58. **Strategic relevance.** The proposed PforR, supporting the NREP, is strategically relevant and fully aligned with the Government's goals, in the energy sector, included in the TDV 2025, BRN, and MKUKUTA II. Moreover, the PforR is consistent with the Tanzania Long-term Perspective Plan (LTPP) 2011/12–2025/26, the road map for implementing the targets outlined in the TDV 2025, and the Electricity Supply Industry Reform Roadmap, which includes improved access to modern energy services as one of the preconditions for transforming rural Tanzania. The PforR is also consistent with the Bank's engagement in Tanzania as specified in the most recent CAS and CASPR, including the CAS Outcome 2.1—improved access, quality and sustainability of electricity—and builds on previous Bank interventions in the sector, including the ongoing TEDAP. The PforR will include other donors' support to expand the benefits of rural electrification (the Government of Norway, SIDA, EU, and DfID, among others) under the REA's coordination.

59. **Evaluation of the NREP.** The technical assessment acknowledges that the NREP is at an early stage and the financing plan for nationwide electrification is ambitious. Since 2012, the funding from the REF and the mechanisms and procedures established by the REA have been successful in accelerating the pace of rural electrification in Tanzania. Other DPs, most notably SIDA, DfID, and Government of Norway, have agreed to provide their rural electrification financing directly through the REF to allow the REA to build further momentum. Together, the progress made and the momentum achieved have convinced the task team that the PforR instrument will be the best way of supporting the REA to achieve its mandate. Further guidance on the future electrification sites and annual targets will be provided through a Rural Electrification Master Plan, with the first draft to be finalized by the end of 2016, and through feasibility studies, some of which have been prepared and others that will be part of the PforR implementation.

60. **Technical soundness.** With regard to on-grid electrification, the infrastructure works are based on technically proven concepts and experiences of the REA and TANESCO and will adopt improved concepts informed by the lessons learned from completed projects. Tanzania is piloting low-cost technologies, with support from the U.S.-based National Rural Electrification Cooperative Agency, *la Société Tunisienne de l'Électricité et du Gaz* (the Tunisian utility), and others. As these pilots reach completion and begin to operate, there will be a need to update and homogenize the current guidelines and practices into new standards for the use of low-cost distribution network technologies across the sector.

61. Regarding off-grid (SPP and other renewable) electrification, EWURA has adopted arguably the clearest and most effective regulations governing generation by the SPPs in all of Africa. The SPPs in Tanzania are private developers generating electricity from renewable sources of less than 10 MW in response to EWURA's adoption of 'light-handed' regulatory principles that allow for full cost-recovery tariffs. If the facilities have an installed capacity of less than 100 kW, they are encouraged to register, but do not need to obtain a license. If the capacity installed by an SPP exceeds 100 kW but is less than 1 MW, a license is required, but no price regulation or review is required unless a significant share of beneficiaries complains. If this happens, the SPP's case may be reviewed with the understanding that tariffs will reflect costs in addition to a reasonable rate of return. For systems between 1 and 10 MW, licensing and tariff review are required, but the principle for the latter is again that tariffs should reflect costs and a reasonable rate of return. Regarding technical standards, there is an emerging need for clear standards for mini grids and possibly micro grids to enable the deployment of new, low-cost technologies across this subsector with the aim of adopting grid-consistent standards to facilitate eventual connection of these isolated grids to the main grid. This activity is currently being implemented through cooperation between the REA, TANESCO, EWURA, and the Tanzanian Bureau of Standards with the support of IFC.

62. **Lessons learned.** As this is the first PfoR operation in the energy sector in the Africa region, the program design has adopted lessons learned from previous PfoR operations in different sectors, for example, urban and health including the following: (a) direct disbursement from the MoFP to the implementing agency, the REA, rather than disbursement to the general budget to speed up the disbursement process; (b) provision of additional consultants with PforR experience to support the implementing agency during preparation and implementation of a relatively new and unfamiliar financing instrument; and (c) flexibility through annual capacity building plans that can be adapted to realities during implementation.

63. **Institutional arrangements.** The REA has extensive experience in implementing rural electrification projects along with the implementation of Bank-financed operations. Given the expanded scope of the REA's responsibilities under the proposed PforR, external consultants will support the REA in implementing the program and help build the REA's capacity to prepare feasibility studies, handle procurement, and manage project contractors.

64. **Program expenditure framework.** Tanzania has a relatively well-established structure of planning and budgeting, both at the central and decentralized levels. Energy is considered a Government priority sector, consisting of 5.5 percent of the GoT budget with a high share spent on power infrastructure investment, including for generation and transmission. Currently, the GoT is the primary financing source for the NREP and supported by DP funds. Electricity and fuel-related levies constitute the largest share of the REF income, while the GoT budget subventions (2014/15 budget) contributed about one-third of the REF revenues and the DP funding accounted for around 17 percent. In its annual investment planning exercise, the REA has been facing unpredictability and irregularity in expected budget transfers to the REF, affecting budgeting and causing cash flow interruptions and disruptions in contract implementation. Adoption of regulations, requiring the Fuel Oil Levy to be transferred directly to the REF (rather than through the MoFP), have substantially increased the level of predictability of the REF funding. In addition, starting in 2013, DP financing for rural electrification has been increasing significantly. DP financing contributes positively to the predictability of available funds in the REF. The proposed approach of using country fiduciary and M&E systems through the PforR should help mitigate the risk of the REA having to comply with differing DP requirements in relation to the donor funding.

65. NREP expenditures and, therefore, the PforR funds, will be split into two major budget expenditure categories: capital budget (that is, investments in access expansion projects) and operating budget (that is, operating costs of the REA). Based on the historical budgetary trends and forecasted financial projections above, capital expenditures will comprise 90 percent of the total expenditures, while 10 percent is allocated for operating costs. Within the capital expenditures, the largest share (about 90 percent) of funding will be used for grid extension and densification, necessary for reaching a rapid scale of grid expansion and the access agenda aimed by the Government. The rest of the capital expenditures will be directed to renewable energy projects (for example wind mast installation) and feasibility studies.

66. The quality of the REA's past budget execution was satisfactory. The PforR operation will support performance-based transfers to the REF to finance rural electrification projects. It will include immediate first-priority investments. Before preparing the engineering designs, the REA will undertake a feasibility-level assessment of the prospect for achieving economies of scale in selected regions identifying the lowest cost engineering network designs that offer affordable solutions to rural communities and finding right/optimum engineering solutions. Pooling donors and GoT funds together will contribute to achieving economies of scale as well.

67. **Results framework and M&E.** The REA has a robust M&E framework and system. The identified DLIs strike a balance between incentives to achieve the key outputs and outcomes and verification of the results achievement. The DLIs have been aligned with the REA's existing key performance indicators to the extent possible. The PforR results framework includes both DLIs and core sector indicators.

68. **Program economic justification.** Considering the level of available financing in the REF combined with the low level of private sector participation in relation to the investment needs outlined in the Prospectus, public sector funds, including concessional financing, is crucial for expanding electricity access and improving sector performance in Tanzania. The World Bank is playing a convening role not only in bringing additional donor financing to support the GoT's rural electrification efforts, but also in harmonizing the donor's engagement in the sector. The operations of all donors are aligned and coordinated with the proposed Program, specifically with regard to streamlining project preparation, including the standardization of bidding documents, investment assessment criteria, and M&E frameworks. In the off-grid subsector, the World Bank plays a leading role in helping the REA support private sector initiatives along with support from SIDA and DfID.

69. The conducted economic analysis for the Program follows the standard benefit-cost framework. The stream of benefits and costs resulting from the program was identified and data were gathered for their measurement. An economic analysis was undertaken for Results Area 1 and the SPP-related activities under Results Area 2. Overall, the program has an estimated economic internal rate of return (EIRR) of 12.98 percent and a net present value (NPV) of US$224.42 million. A sensitivity analysis was also undertaken. With 15 and 20 percent cost increases, the program still yields a positive EIRR above the discount rate of 10 percent and positive NPV. Annex 4 presents the full economic analysis.

Table 4. Economic Analysis

	Results Area 1	Results Area 2	Total Program
EIRR (%)	12.00%	56.52%	12.98%
NPV (US$, millions)	147.54	76.88	224.42

B. Fiduciary

70. The objective of the Fiduciary Systems Assessment (FSA) was to examine whether the Government systems provide reasonable assurance that the financing proceeds will be used for their intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability. The FM systems were assessed to gauge the extent to which the planning, budgeting, accounting, controls, funds flow, financial reporting, and auditing systems and practices provide reasonable assurance on the appropriate use of program funds and safeguarding of its assets. Equally, the program procurement systems have been assessed to establish the extent to which the planning, bidding, evaluation, contract award, and contract administration arrangements and practices provide a reasonable assurance in support of the achievement of the program results. The procurement assessment was carried out with the objective of reviewing the current procurement systems used in the REA and their performance, along with a review of how the systems can be progressively strengthened. In addition, the assessment considered how the GoT's governance systems manage the risks of fraud and corruption (F&C) and how such risks, if determined, will be mitigated. The assessment primarily covered the REA and MEM, although certain aspects of the REA-TRAG relationship have also been reviewed. The FSA also covered the institutional and implementation arrangements for the program and the REA's fiduciary management capacity and implementation performance. Overall, the legal and regulatory framework for the program's fiduciary systems was found to be

comprehensive and in line with the international principles and standards for public procurement and FM, including the measures for addressing the risks of F&C.

71. **FM.** FM risk for the Program is rated Moderate. Based on the assessment, the overall FM risk rating for the MEM and REA is Moderate. Both the MEM and REA have experience in implementing Bank-financed projects such as TEDAP. The FM performance was rated Satisfactory for projects funded by IDA and implemented by the subject entities. In addition, the country's public financial management (PFM) risk is assessed as Moderate. The rating is based on the fact that the GoT has taken various measures to address PFM issues raised in the 2013 Public Expenditure and Financial Accountability (PEFA) report and continues to make progress on its PFM reforms.

72. **Procurement.** Procurement risk is rated High. The procurement assessment focused, in particular, on (a) a review of the existing systems; (b) a procurement profile of the implementing entity (data relating to the overall budget and expenditure profile, share of procurable expenditures, frequently procured goods and services, and availability of markets for frequently procured goods); (c) identification of areas in which the REA should improve procedures and performance; (d) availability of procurement and technical staff to manage the complete procurement cycle; (e) identification of bodies to exercise oversight on procurement activities at all levels and frequency of their monitoring/oversight of procurement processes and procedures; and (f) identification of risks and proposing mitigation measures. A key risk to the program includes inadequate staffing of the Procurement Management Unit (PMU), Directorate of Technical Services, and Internal Audit Unit (IAU). It was found that there is inadequate (i) design and preparation of technical specifications and requirements: (ii) preparation of bidding documents and requests for proposal for large packages; and (iii) evaluation of bids/proposals for large packages and contract management. There are also delays in releasing funds from the GoT; delays in vetting contracts above TZS 1 billion by the Attorney General Office; a weak records filing and data management system; and inadequate contract management arrangement and contract management. Furthermore, there are inherent risks in the Public Procurement Act (PPA) 2011, including the procedure for receiving complaints during the cool-off period of 14 days. During the Program implementation, these risks will be addressed, monitored, and evaluated.

73. **F&C.** The F&C risks have been identified and embedded as part of the broader fiduciary risks and mitigation measures. The F&C assessment also involved a review of the complaints handling mechanisms (CHMs) in the sector and how they can be strengthened within the proposed PforR. The GoT has committed to implementing the Program in compliance with the Bank's Anticorruption Guidelines.

74. Overall, the FSA concluded that, despite some identified weaknesses, the Program fiduciary systems should provide reasonable assurance that the financing proceeds under the Program will be used for the intended purposes. Certain mitigation measures were recommended during the PforR implementation. However, given the identified risks and the new nature of the PforR instrument, the overall fiduciary risk is rated Substantial.

C. Environmental and Social Effects

75. 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.

76. 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 World Bank's Operational Policy 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 (EMOs) in the district local government authorities (LGAs).

77. 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,[20] 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 were held with affected people in some of the Program implementation areas. 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 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.

78. The ESSA also found that Tanzania does not have any laws specifically aimed at protecting the rights of indigenous peoples[21]. 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[22] are mainly for the REA to develop policy and

[20] Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards.
[21] The Tanzanian Constitution emphasizes unity among its citizens and calls for an equal treatment of all ethnic groups by not giving special preference to individual ethnicities.
[22] Give due consideration to the cultural appropriateness of, and equitable access to, program benefits, giving special attention to the rights and interests of the indigenous peoples and to the needs or concerns of vulnerable groups.

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.

79. 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 April 21, 2016.

80. **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, because of the 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.

D. Risk Assessment

81. The overall risk rating of the program is Substantial as shown in Table 5. While the GoT has experience with the use of the PforR lending instrument in the urban, health, and education sectors, this is the first PforR operation in the energy sector in the Africa region and Tanzania. The proposed operation has benefited from the lessons derived from the existing PforR operations, including limiting the amount of entities involved in the receipt of the disbursed funds to avoid unnecessary delays, as well as choosing DLIs that are realistic, well defined, and yield tangible results. Since this is the first PforR operation for the energy sector in Tanzania, it is expected that there will be a learning curve for the GoT and the implementing agency. The risk categories that are rated substantial are discussed below. Annex 7 includes more detailed information on the assessed risks.

Table 5. Integrated Risk Assessment Summary - SORT

Risk Category	Rating (H, S, M, L)
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Low
8. Stakeholders	Moderate
9. Other: Financial Viability	Substantial
OVERALL	**Substantial**

82. **Political and governance.** In light of the elections in October 2015, investment priorities defined in the Prospectus could be revised under the new Government. In addition, the new Government might consider transforming the REA into a rural distribution utility, allowing it to own assets, collect payments, and generate revenues. The PforR team will maintain close dialogue with the GoT and discuss with the MEM potential changes in rural electrification prioritization and the evolution of the role of the REA with the new Government, with the objective to mitigate any potential risk to the proposed Program.

83. **Sector strategies and policies.** Delays in the implementation of gas and power infrastructure policies as well as delays in building institutional capacity for petroleum and gas negotiations with producers pose some risks. Parallel implementation of the Bank-financed Energy Sector Capacity Building Project (P126875), as well as exploring other options for technical support from other DPs should help mitigate these risks. Alignment with the BRN will provide an overall environment in which investments and reforms in the sectors are being monitored and followed through, in accordance with identified priorities, which should help reduce these risks.

84. **Technical design of the Program.** On-grid-related technical features are not unique, while on the off-grid side, the low quality of the SPP investments being supported is a risk as many of the SPP developers working to prepare rural electrification projects for financing have limited experience with the rigor of project preparation for commercial finance. This will also be addressed under the Program through Results Area 3, as well as respective capacity building for the private sector.

85. **Institutional capacity for implementation and sustainability.** Given the expanded scope of the REA's responsibilities under the proposed PforR, the REA's capacity to prepare feasibility studies, handle procurement, and manage project contractors needs to be strengthened. As part of this PforR operation, the REA will engage consulting firms to prepare the design, cost estimates, and supervision of contracts for electrification subprojects.

86. **Fiduciary.** With the implementation of ambitious GoT plans, the workload of the PMU at the REA is increasing considerably, which could result in implementation delays if not properly

strengthened. In addition to strengthening the REA PMU, the Program Action Plan for the PforR includes recruitment of additional procurement specialists.

87. **Other - financial viability.** Financial viability of SPP projects due to possible delayed payments from TANESCO is a potential risk. TANESCO will report to the PSC on a quarterly basis the status of its accounts with SPPs. If those accounts show arrears to SPPs, the Steering Committee, chaired by the Permanent Secretary of the MoFP, shall convene and demand an explanation from TANESCO for these late payments and insist that they be brought current within one month. On the on-grid side, financial viability for consumers who still cannot afford the connection fees is a potential risk. Through Results Area 3, MEM will undertake an assessment and prepare a strategy to reduce barriers to increasing access to modern energy in rural areas, as part of the implementation of NEP 2015.

88. **Climate and disaster risks.** Climate and disaster risk screening has been completed for the proposed PforR. The screening identified current and future key drivers of risks as being linked to increased variability in precipitation, resulting in potential droughts and/or flooding. The team has confirmed that the technical specifications for equipment will take into consideration these risks, especially with regard to future increases in droughts and floods. For the expected civil works associated with small hydro power stations, an increasing range of rainfall variations will be considered in the planning phase to ensure that hydro project plans are realistic and the resulting infrastructure is able to withstand and operate under the increased variability.

E. Program Action Plan

89. The Program Action Plan includes legally binding actions that are considered crucial for advancing rural electrification in Tanzania and were identified as potential constraints in the three assessments (technical, fiduciary, and ESSA).

- The technical assessment acknowledges that the Prospectus is the only document that outlines an implementation plan for the NREP but that the Prospectus has significant gaps, including the lack of annual investments and connection targets. To strengthen sector planning and coordination, a Rural Electrification Master Plan shall be prepared as part of the program. Planning, procurement, and coordination capacity of sector institutions will be further strengthened through deployment of REA staff to the regional level and staffing of the PMU.

- The fiduciary challenges identified in the fiduciary systems assessment will be addressed through procurement training and the establishment of a records keeping management system. In addition, the GoT is requested to set up a system for timely disbursement of funds to the REA to meet its contractual obligations and avoid the risk of late disbursement as experienced in the previous PfoR operations.

- The ESSA highlighted the risk of villages affected by wayleave not being compensated for loss of assets and livelihood. To address this risk, the REA's preparation, monitoring, supervision, and enforcement capacity as well as the capacity for preparing the ESIA need to be strengthened.

90. A list of the actions agreed upon is provided in Annex 8.

Annex 1: Detailed Program Description

Program Development Objective

1. The PDOs 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.

2. The proposed PDO indicators are the following:

- PDO Indicator 1: People provided with access to electricity under the Program by household connections (number)
- PDO Indicator 2: Non-residential connections under the Program (number)
- PDO Indicator 3: Generation capacity of renewable energy constructed under the Program (MW)
- PDO Indicator 4: People provided with access to electricity via off-grid supplies under the Program (SPP and renewables, including solar PV) (number)
- PDO Indicator 5: Capacity for delivery of energy access and renewable energy generation strengthened (yes/no)

3. The proposed PforR operation (the Program) is a subset of the NREP being implemented by the REA for both on-grid and off-grid rural electrification. It aims to support three of the electrification avenues identified in the Prospectus: grid extension; off-grid electrification; and within the category of off-grid electrification, distributed solar and other renewable technologies. Since certain capacity gaps and areas of improvement were identified in the course of the PforR preparation, the Bank-supported PforR activities also include TA (under Results Area 3) to strengthen the capacity of the sector institutions to sustain and improve the delivery of the NREP. The proposed PforR will be implemented over six years (2016–2022).

National Rural Electrification Program (Government program)

4. In 1999, the GoT published the TDV 2025 to guide its long-term economic and social development efforts. TDV 2025 aims at (a) achieving a high-quality livelihood for the Tanzanian people; (b) attaining good governance through the rule of the law; and (c) developing a strong and competitive economy. An adequate level of physical infrastructure was identified as a major requirement to meet the TDV's objectives in all sectors. Investment in energy, among other infrastructure priorities, was deemed as central to the stimulation of local and foreign investment and for creating wealth and employment-generating activities.[23]

5. In June 2012, the GoT published the Tanzania LTPP 2011/12–2025/26, the road map for implementing the targets outlined in TDV 2025. The LTPP is being implemented in a series of three five-year development plans (FYDP1, FYDP2, and FYDP3). The LTPP clearly identified

[23] web.worldbank.org/archive/website01013/WEB/.../**TANZANIA**.DOC.

infrastructure bottlenecks, particularly in energy, as one of the main constraints to Tanzania's growth. Improved access to modern energy services was identified as one of the preconditions for transforming rural Tanzania.[24]

6. According to Tanzania's LTPP, the main challenge in the energy sector in meeting the objectives of TDV 2025 is to develop a reliable, economically accessible, and appropriately priced energy supply.[2] To address energy sector challenges, a Power Sector Master Plan for the development of the power generation sector and a master plan for the development of the electricity transmission sector are under development, among others.

7. Tanzania's FYDP1 (2011/2012–2015/16) was published in June 2012. This development plan identifies the need for large investments in energy and transport infrastructure as one of five crucial elements to unleash Tanzania's latent growth potential. Strategic interventions in the energy sector include (a) increasing electricity generation to 2,780 MW by 2015; (b) upgrading and constructing new transmission and distribution lines to cope with increased power generation; (c) improving power supply/transmission to rural areas; (d) enhancing the Natural Gas Development projects; and (e) fast-tracking the Bio-fuels Development Project, with an expected total cost of TZS 14,619,211 million for all energy interventions. FYDP1 also calls for additional emphasis on scaling up rural electrification to cover district headquarters, townships, villages, and commercial centers, and acknowledges rural electrification as the key to improving growth, economic development, and living standards.[25]

8. To expedite the achievement of the TDV, in 2013, the Government launched the BRN Initiative. The BRN focuses Government efforts on accelerating the delivery of defined priority results in six areas of the economy—energy and natural gas, agriculture, water, education, transport, and 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.

9. The GoT adopted the NEP in 1992, revised in 2003 and updated in 2015. The 2015 NEP stresses that the lack of access to affordable and reliable electricity presents a major constraint in achieving the desired socioeconomic transformation in Tanzania. To achieve the planned national access targets stipulated in the NEP, the GoT has embarked on an ambitious program to significantly accelerate the connection of rural households to the national grid. The National Electrification Program Prospectus (the Prospectus), financed by the Government of Norway and published in July 2014, currently represents the GoT's main guideline for electrification efforts, including in rural areas. The Prospectus lays out a guiding strategy for investments for the NREP for 2013–2022. A Rural Electrification Master Plan, which will provide detailed annual investment plans, is under preparation and its first draft is expected to be completed by the end of 2016. Figure 1.1 outlines policies and plans governing the NREP.

[24] http://www.mipango.go.tz/index.php?option=com_docman&Itemid=49.
[25] http://www.mipango.go.tz/index.php?option=com_docman&Itemid=45.

Figure 1.1. Policies and Plans Governing the NREP

10. The Prospectus focuses on electrifying development centers through four different approaches, depending on relevant local conditions: (a) electrification by densification; (b) electrification by new connections to the grid; (c) off-grid investments; and (d) development of distributed technologies. The Prospectus is aligned with TDV 2025's objectives of achieving a high-quality livelihood for the Tanzanian people and developing a strong and competitive economy. Urban electrification lies within TANESCO's responsibility through the scheme of electrification by densification, that is, the connection of new customers to the distribution network in already electrified settlements. Rural electrification[26] is the responsibility of the REA. To achieve the planned national access targets of 35 percent by 2022 and more than 75 percent by 2035, the Government has an ambitious program to significantly accelerate the connection of rural households to the national grid. The agency also supports SPPs to supply electricity to both remote communities and the national grid along with the installation of off-grid renewable energy sources, including solar home systems.

11. The REA assumes that during 2016–2022, rural electrification investments, as outlined in the Prospectus, will cost US$227.83 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 1.1. Expected Connections per Year 2016–2022

On-grid connections	1,289,340.00
Off-grid connections	63,840.00
Total	**1,353,180.00**
Breakdown by connection category	
5% education	67,659.00
5% health	67,659.00
30% business	405,954.00
60% households	811,908.00
Total	**1,353,180.00**

[26] According to the 2005 Rural Energy Act, 'rural area' means an area outside an urban authority; an 'urban authority' means a town council, a municipal council, or a city council according to the Local Government (Urban Authorities) Act, 1982.

12. The Prospectus defines a category of small towns, referred to as 'priority development centers' or centers of population with more than 1,500 inhabitants, that were non-electrified in 2013. Of these, 266 development centers are not expected to be connected to the grid by 2020 and about 154 of them have been identified and considered for off-grid electrification. Of this total, about 13 are within the reach of a potential small hydro plant; 61 have a biomass supplier near enough to be considered eligible for electrification through a gasifier; and 73 are considered priority development centers (more than 5,000 inhabitants) whose only electrification option is for a PV-diesel-battery hybrid system. In this way, electrification is intended to progress from the relatively lower-cost technology options to increasingly higher-cost options as the reach of electrification grows. It is envisaged that all of these communities will eventually be connected to the main grid, but the development of mini grids will enable standards of living to be improved by electricity access much sooner than if the only solution was to await the arrival of the main grid. Table 1.2 contains a summary of the status of these development centers, the number of potential consumers to be served, and an approximate investment cost for these development centers identified as having priority for electrification under the Prospectus.

Table 1.2. Off-Grid Priority Development Centers Not Connected to Grid by 2020

Off-grid Technology	Number of Settlements	Number of Customers in 2022	Investment Costs (US$, millions)
Small Hydro Plant	18 (13 hydro plants)	40,436	28.3
Gasifier	61	9,256	72.8
Diesel-PV Hybrid	73	57,943	75.2
Total	154	107,635	176.3

Source: Prospectus, page 54.

13. Beyond these priority development centers, the Prospectus identifies additional development centers (with a population of more than 1,500) that could be supplied by traditional renewables: small hydro and biomass. The Prospectus identifies 347 such settlements (including the 18 hown in Table 1.2) that could be supplied from a total of 141 small hydro sites located within 20 km (some hydro sites serve multiple development centers). The total population of these development centers is roughly 450,000.

14. The Prospectus estimated that mini grids using small hydro or biomass could supply nearly 600 development centers and almost 1.5 million people, for whom the electrification through a grid extension by 2020–2022 could not be economically justified. After identifying those development centers that might be served through the mini or micro grids generating power through traditional renewables, there remain about 3,400 settlements with nearly 10 million inhabitants that would not be reached by 2022. Roughly, 1,950 of these settlements are within 10 km of the grid and would be prime targets for further grid connection, but about 1,450 localities, with about five million inhabitants in 2013, would still not be within economical reach of the grid. At least 400 of these have some social infrastructure (schools, dispensaries, and so on) and can be considered targets for further mini-grid electrification using diesel-PV-battery hybrid systems.

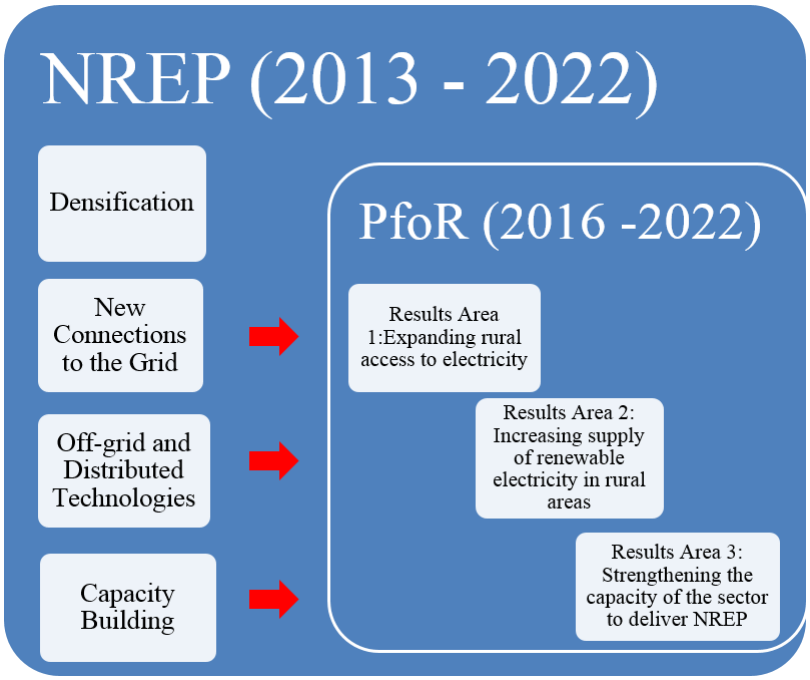
15. In these smaller, remote regions, the advantages of mini- and micro-grid development will need to be weighed against the alternative of using stand-alone PV lanterns and systems until such a time that the communities can be reached by the grid—'distributed technologies'—as referred to in the Prospectus. In this way, the NREP, defined in the Prospectus document, was written as a program to match electricity technologies to population settlements and needs. Public sector

resources can be used for all types of electrification methods, including connections to the main grid, mini-grids and off-grid access. However, to reach the ambitious goals set in the Prospectus, leveraging private sector resources—especially for the off-grid and mini-grid initiatives—will be essential.

Bank-financed PforR Program

16. The proposed PforR aims to support three of the electrification avenues of the NREP identified in the Prospectus: grid extension; off-grid electrification; and within the category of off-grid electrification, renewable technologies, including solar PV. The proposed program is strategically relevant and fully aligned with TDV 2025. It is also consistent with the Bank's intended engagement in Tanzania as specified in the CAS 2012–2015, Objective Two: Build Infrastructure and Deliver Services; CAS Outcome 2.1: Improved access, quality, and sustainability of electricity;[27] and the June 2014 CASPR, which extended the CAS to June 30, 2016. The Program will join other DPs' efforts (the Government of Norway, SIDA, EU, and DfID, among others) to expand the benefits of rural electrification under the REA's coordination.

Figure 1.2. Program Boundaries



17. The PforR will concentrate on three key results areas:

(a) Result Area 1: Expanding rural access to electricity

(b) Result Area 2: Increasing supply of renewable electricity in rural areas

(c) Result Area 3: Strengthening capacity of the sector to deliver the NREP.

[27] http://documents.worldbank.org/curated/en/2011/05/14196937/tanzania-country-assistance-strategy-cas-period-fy2012-2015.

Results Area 1: Expanding Rural Access to Electricity

18. Results Area 1 will support activities related to the implementation of the following Phases of the NREP to achieve new connections to the grid (including the design and construction of MV [33 kV and 11 kV] and LV lines; installation of MV/LV distribution transformers; and procurement of materials for connection and metering of new rural customers):

Phase 2: The 2016–2019 investments to electrify settlements within 10 km of the existing 33 kV MV networks, available by the end of 2015, and to extend MV networks to enable the execution of Phases 3–4.

Phases 3–4: The 2020–2022 investments to electrify development centers within 40 km of the MV grid, identified by the end of 2019. Under Phases 3–4, the electrification will also be done in settlements that are within 10 km of feeder lines to be linked to the constructed MV grid.

19. During PforR preparation, the REA identified potential investments for the first two years of implementation of the program in the following six regions: Tanga, Kagera, and Mara in the north and Lindi, Ruvuma, and Mtwara in the south. The REA will use advances under the PforR to complete feasibility studies for all 24 regions (excluding Dar es Salaam) during the first year of implementation and will launch a bidding process in the pre-identified six regions and in other suitable regions depending on the results of the feasibility studies for the first two years of implementation. The Millennium Challenge Corporation (MCC) completed feasibility studies for grid extension in four additional regions in mainland Tanzania, including Shinyanga, Tabora, Morogoro, and Pwani. The connection of the remaining regions will be carried out in Years 3 and 4 of program implementation, aiming at having all expected new customers connected by the end of Years 5 and 6.

20. After the feasibility studies are completed, a list of additional villages for grid extension will be determined. Those villages that had not been included originally (from the pre-identified list for the first two years of investments) but which after the completion of the feasibility studies turn out to be eligible, would also be included in the list.

21. **Program exclusion for Results Area 1.** The program will exclude activities that involve procurement of (a) works estimated to cost US$50 million equivalent or more per contract; (b) goods estimated to cost US$30 million or more per contract; (c) non-consulting services estimated to cost US$20 million equivalent or more per contract; and (d) consultant services estimated to cost US$15 million equivalent or more per contract.

Results Area 2: Increasing Supply of Renewable Electricity in Rural Areas

22. Results Area 2 of the program will support the continuation of the REA's successful Off-Grid Electrification Program that was initiated with Bank support under TEDAP. Under this Results Area, the Credit Line established under TEDAP will be continued and expanded to incorporate a second window for supporting short-term loans to renewable energy (including solar) companies. The CL will continue to focus on providing refinancing for the SPPs so that they can obtain local commercial debt financing of sufficiently long tenure to make their projects economically viable. A new, second window of the CL—the Short-Term Renewable Energy

(including solar) Window--will support loans to eligible renewable energy product vendors seeking to expand their operations in non-electrified rural Tanzania.

23. **CL support to renewable energy providers in rural areas.** The CL will assist both SPP developers and quality-verified renewable energy companies to obtain credit by opening two financing windows under a CL through the financial intermediary TIB.

24. **SPP CL.** The first window is 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. While the TEDAP CL structure had proven successful at enabling the SPPs to obtain longer-term financing from PFIs, the revisions envisaged would result in greater leverage of PFIs' own resources, a lower interest rate loans to the SPPs, and an overall increase in the cost-effectiveness of the CL. The operating SPPs that were financed under the TEDAP CL are presented in Table 1.4.

25. Table 1.3 provides a summary of the existing SPP pipeline, combining projects intended to supply electricity only to the local community, those seeking to supply electricity to TANESCO's existing isolated grids, and those seeking to sell power primarily to TANESCO's main grid. The pipeline itself is quite fluid and projects enter and graduate or depart as developers make progress or encounter setbacks. For the first set of projects, the 'Small, Isolated' category, these are designed to sell electricity only to the local communities surrounding them and are not initially expecting sales to TANESCO. As a result, they face significant barriers for obtaining commercial financing as there is no large, financially secure off-taker. Their financing is typically based on donations from one source or another and their size is typically less than 1 MW. For those plants that seek to sell power to TANESCO through either the existing isolated grids or main grids, they are better candidates to access the CL to obtain local financing of a suitable tenor, but they may also sell power to the surrounding communities. The total capacity of the SPPs included in this category amounts to about 66 MW, which could potentially draw up to US$99 million in CL backing. However, because many of these developers are inexperienced, projects move slowly and quite unpredictably toward financial closure. The initial funding available to support the CL's SPP window is estimated at US$32 million.

26. In addition, IFC has allocated US$5 million as part of the Tanzania SREP Investment Plan. IFC will focus these funds on supporting the development of a Transaction Advisory Service Facility, intended to help the SPPs by providing a 'one-stop shop' for SPP developers seeking financing support. This IFC project is now effective and beginning operations in consultation with the REA, MEM, and IFC.

Table 1.3. SPP Pipeline Summary

Category of Plant	Size Limit (MW)	Number of Projects	Cumulative Capacity (MW)	Cumulative Connections Anticipated (if known)	Estimated CL Draw (US$, millions)[a]	Off-taker Considerations
Small Isolated	<1	6	2.181	4,787	n.a.	Community off-takers only
	>1	1	1.7	20 villages	n.a.	Community off-takers only
TANESCO Isolated Grids	1–10	4	9.3	n.a.	13.95	Valid TANESCO Letters of Intent
TANESCO Main Grid	0.5–10	12	56.8	n.a.	85.2	Valid TANESCO Letters of Intent
Total		23	69.981		99.15	

Note: a - Assumption: US$2.5 million/MW * MW * 60 percent coverage by the CL.

27. **Short-Term Renewable Energy Loan Window (RELW) on the CL.** The second window under the CL will be directed at providing either term finance or working capital to vendors of quality-verified solar and renewable energy products in rural areas. To date, the PFIs accessing the existing TEDAP CL to extend the tenor of loans for the SPPs have not provided loans to suppliers of renewable energy or solar PV equipment (neither lanterns nor solar home systems). While some expressed an interest in the sector, the suppliers and PFIs have so far not been willing to put their capital at risk to help grow the sector. To date, larger internationally owned solar system suppliers operating in Tanzania have obtained equity from international sources, but not local debt financing. The locally owned renewable energy companies face even greater constraints in financing the growth of their businesses as they have no access to either international equity or local debt financing. Therefore, the CL window will support renewable energy and solar vendors who are selling quality-verified products in rural Tanzania and are interested and willing to expand but, at the same time, are severely constrained by their limited access to finance.

28. Under the second window, US$10 million will be provided through the REA for the RELW to cost share loans to eligible renewable energy (including solar) companies. Depending on the needs of the companies, the financial products to be offered will include both working capital (~one to two years years) for short-term import and supply chain finance and term loans for longer-term (less than 5 years) needs for providing customer finance. With this US$10 million RELW, the TIB and PFIs will be able to extend loans of between US$12.5 million and US$20 million to qualified companies, depending on the cost and risk-sharing formula. 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 technologies which minimizes the need for up-front payments by customers, for example PAYG systems, making renewables (including solar) more broadly affordable to a larger share of rural

consumers. For any loan made under this facility, the TIB and PFIs will agree to recover costs on a *pari pasu* basis.

29. At the time of the PforR midterm review, this facility will be evaluated with regard to its success and reach. If it has proven successful, and there is a commitment from the participating PFIs to begin lending to the renewable energy and PV sector in earnest, the Bank and other stakeholders will assess whether the benefits of opening participation in this facility more broadly to the PFIs outweigh the costs, and what cost-sharing formula should be used going forward.

Table 1.4. Renewable SPP Generators with Valid SPPAs with TANESCO

Name of Plant	Technology	Export Capacity (MW)	Isolated / Main Grid	Currently Operating?	Expected Date of Commission	Comment
TANWAT/Njombe	Biomass-wood	1.5	Main	Yes	–	Auto-generation-Exports Surplus; SPPA runs to 2.4 MW
TPC/Moshi	Biomass-bagasse	9.0	Main	Yes	–	Auto-generation-Exports Surplus
Mwenga/Mufindi	Hydro	4.0	Main	Yes	–	Also sells to local consumers
Ngombeni/Mafia Island	Biomass-wood	1.5	Isolated	Yes	–	1.2 MW currently installed
Andoya/Mbinga	Hydro	1.0	Isolated	Yes	–	0.5 MW currently installed; main grid expected in ~2 years
Tulila/Songea	Hydro	7.5	Isolated	Yes	–	5.0 MW currently installed; main grid expected in 2 years
Darakuta/Manyara	Hydro	0.5	Main	No	October 2015	0.24 MW currently installed - On track for commissioning
Yovi/Kilosa	Hydro	0.9	Main	No	October 2015	On track for commissioning
Next Gen Solawazi/Kigoma	Solar	5.0	Isolated	No	February 2016	Will sell to Kigoma Isolated Grid
EA Power/Tukuyu	Hydro	10.0	Main	No	n.a.	–
Mapembasi/Njombe	Hydro	10.0	Main	No	n.a.	–
Nkwilo-Sumbawanga	Hydro	2.9	Isolated	No	n.a.	–

Results Area 3: Strengthening the Capacity of the Sector to Deliver the NREP

30. A key element of the proposed PforR is to help strengthen the capacity of the Government institutions to implement the NREP. The objectives of the capacity-building and support to be provided under Results Area 3 are as follows:

- Improve the planning, accounting, and procurement capacity of REA and TANESCO to maximize grid extension investments;
- Enhance coordination and collaboration between REA and TANESCO;
- Strengthen capacity of the planning and preparation department in REA; and
- Support the implementation of the National Energy Policy of 2015 in delivering modern energy to rural areas

31. To strengthen the REA's organizational structure and improve its project planning and preparation capacity, the PforR will assist the REA in strengthening its Planning and Preparation Department. The REA will submit an annual capacity-building plan, including targeted training activities and key technical and managerial recruitments. The annual capacity-building plan will cover the REA and other key actors in the sector, including TANESCO, renewable energy project developers, and related market actors such as project financiers. The activities in the annual capacity-building plan are to be aligned with the efforts of other DPs, according to a recent agreement on joint coordinated TA aligned with the GoT capacity-building plans.

Program Financing

32. According to the suggested disbursement plan for the six-year PforR period, the Bank will finance 15 percent of the investment, other DPs 20 percent, and the GoT 65 percent (see table 1.5). This financing plan was developed based on the REA's expected cash-flow requirements.

Table 1.5. Program Financing (NREP, 2016–2022)

Source	Amount (US$, millions)	% of Total
GoT	900	65
IDA	200	15
SIDA	70	5
SREP	25[28]	2
DfID	42	3
EU	50	4
Government of Norway	80	6
Total	**1,367**	**100**

Implementation Arrangements

[28] The contribution from the SREP includes a US$9 million grant and US$10 million loan. Activities to be financed by the SREP loan will be defined at a later stage as additional financing to the proposed Program

33. The key institutional actors in the rural electrification sector include the REA and its REB and REF, TANESCO, the SPPs, the MEM, and EWURA.

- **REA.** The Rural Energy Act No. 8 of 2005 established the REA and REF. The REA is an autonomous institution responsible for promotion and facilitation of investment and access to modern energy services in the rural areas of mainland Tanzania. The REA is a public agency under the MEM. The agency provides grants and subsidies to developers of rural energy projects and facilitates provision of TA, research and development, training, and other forms of capacity building to qualified developers in relation to planning and preparation of a project before an application for a grant. The REA is governed by the REB, which is entrusted to oversee the REF. The REA is responsible for overall management of the REF subject to directives and mandate from the REB.

- **REB.** According to the law, the REB is the governing board of the REA and REF. It carries the oversight functions, including the appointment of a TRAG who shall be responsible for the administration of the REF.

- **REF.** The REF provides capital subsidies to rural energy projects. Funding from the REF is intended to be available to developers of energy projects implemented by private entities, public entities, cooperatives, and local community organizations. The sources of funds for the REF are Government revenues, contributions from international financial organizations, multilateral and bilateral agencies, and other DPs. The REF also receives funds from electricity generation levies—up to 3 percent on the commercial generation of electricity to the national grid and up to 3 percent on the generation of electricity in specified isolated systems. In addition, the REF revenues include fuel importation pre-inspection fees of up to 0.06 percent of the value of import and fees from publications, seminars, consultancy services, interest income, and other services provided by the agency. According to the 2005 Rural Energy Act, the REA is required to prepare financial statements, which disclose its operational expenditures, receivables, and disbursements out the REF. The National Audit Office (NAO) audits the financial statements of the REA (including those of the REF) annually. The NAO is allowed by the law to subcontract audit of public entities to a private sector auditor. TANESCO is the state-owned, vertically integrated national utility that is responsible for bulk power supply to the island of Zanzibar and electricity generation, distribution, transmission, and sale of electricity to the Tanzanian mainland. TANESCO takes the lead on implementation of urban electrification and, at the same time, assumes responsibility for supervision, quality assurance, performance evaluation, and infrastructure commissioning related to rural electrical infrastructure (the construction of which is procured by the REA).

- **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 in the implementation of urban electrification and, at the same time, assumes responsibility for the supervision, quality assurance, performance

evaluation, and infrastructure commissioning related to the rural electrical infrastructure (the construction of which is procured by the REA).

- **SPPs.** The SPPs are private companies that develop renewable energy generation 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 contract with TANESCO or to both TANESCO and the local communities. The REA's SPP support was successfully piloted through the Bank-supported TEDAP.

- **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 necessary measures to organize the industry and create conditions to enable sustainable and efficient performance of the sector.

- **EWURA.** EWURA was created under the EWURA Act in 2001. However, it became operational only in 2006. EWURA is responsible for the regulation of four sectors: four sectors: electricity, water, transport, and distribution of petroleum and natural gas. 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 service provision.

34. **Program implementation arrangements.** The REA, under the overall oversight and coordination of the MEM, will implement the PforR. The GoT will establish a PSC—consisting of representatives from the MoFP, MEM, the REA, TANESCO, other relevant agencies, the DPs, the private sector, and civil society—to ensure the coordinated implementation of the program (see Figure 1.3). The Permanent Secretary of the MoFP will chair the steering committee.

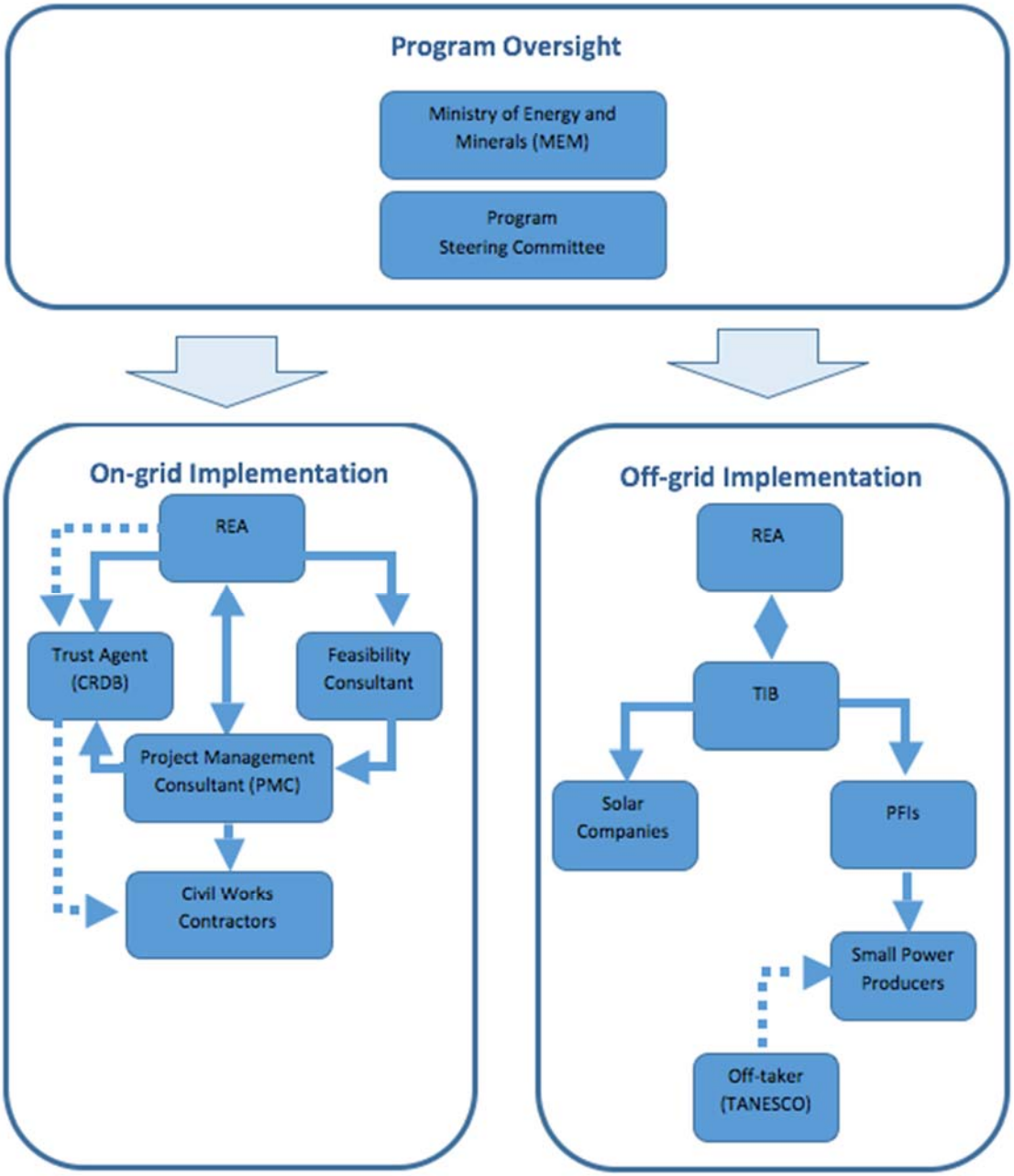
35. The functions of the PMC will include supervision and verification of the quality of the completed civil works. Supervision reports will be submitted to the REA and CRDB (the REA's TRAG) for approval and payment processing. A separate agreement will be concluded between the REA, CRDB, and PMC, delineating the respective roles and responsibilities. Additionally, the REA and TANESCO will enter into an overarching MoU, clearly specifying the engagement of TANESCO in supporting Program implementation. On the on-grid implementation side, TANESCO will support the REA in implementation of the Program (especially on the network planning, quality assurance, and supervision aspects), and the REA and TANESCO will enter into a MoU delineating this arrangement. The REA will engage consulting firms to carry out design, cost estimates preparation, and supervision of contracts due to capacity constraints highlighted in the fiduciary systems assessment.[29] In the longer term and in a gradual manner, this capacity will be transferred to the REA in two areas: (a) developing feasibility studies and supporting procurement process; and (b) project management. However, at the outset, project management will be supported by a PMC. The functions of the PMC will include supervision and verification

[29] Specific recommendations for strengthening REA capacity are provided by the Bank's Fiduciary Assessment, including the assessment of the FM, procurement, and governance capacity.

of the quality of the completed feasibility studies and construction works. Supervision reports will be submitted to the REA and CRDB (REA's TRAG) for approval and payment processing.

36. **PMC.** For the implementation of the CL under Results Area 2, the REA will sign an Administrative Agreement with the TIB to administer the two-window CL on its behalf (with separate windows for the SPPs and solar and renewable equipment vendors). This will be similar in nature to the agreement that was signed and implemented under TEDAP. In this instance, the agreement will specify that the funds for both the SPP and Renewable Energy CLs be provided to cover the CL requirements for the agreements reached during the previous year.

Figure 1.3. Program Implementation Arrangements



37. All implementation arrangements, processes, and procedures will be reflected in the REA's POM, which will be updated regularly. Adoption of the updated POM will be an effectiveness condition of the Program.

Annex 2: Results Framework Matrix

Results Areas Supported by the PforR	PDO/Outcome Indicators	Intermediate Results (IR) Indicators	DLI #	Unit of Measurement	Baseline (Year)	End Target (Year)
Results Area 1: Expanding Rural Access to Electricity	PDO Indicator 1: People provided with access to electricity under the Program by household connections			Number	0 (2016)	2,500,000 (2022)
		IR Indicator 1.1: Cumulative number of grid electricity connections, including those under mini grids, made under the program	**1**	Number	0 (2016)	500,000 (2022)
		IR Indicator 1.2: Transmission and distribution lines constructed or rehabilitated under the program		km	0 (2016)	24,000 (2022)
		IR Indicator 1.3: Households connected to the grid that are female headed		Percentage	24 (2016)	24 (2022)
	PDO Indicator 2: Non-residential connections implemented under the Program			Number	0 (2016)	30,000 (2022)
		IR Indicator 2.1: Educational facilities connected under the program (5%)		Number	0 (2016)	25,000 (2022)
		IR Indicator 2.2: Health care facilities connected under the program (5%)		Number	0 (2016)	25,000 (2022)
		IR Indicator 2.3: Businesses, out of which number of female owned, connected under the program (30%)		Number	0 (2016)	150,000 (2022)
Results Area 2: Increasing Supply of Renewable Electricity in Rural Areas	PDO Indicator 3: Generation capacity of renewable energy constructed under the Program			MW	0 (2016)	33 (2022)
		IR Indicator 3.1: Cumulative number of proposed MWs covered by SPP Loans for Small Power Projects reaching financial close under the CL	**2**	MW	0 (2016)	17 (2022)

Results Areas Supported by the PforR	PDO/Outcome Indicators	Intermediate Results (IR) Indicators	DLI #	Unit of Measurement	Baseline (Year)	End Target (Year)
	PDO Indicator 4: People provided with access to electricity via off-grid supplies under the Program (SPP and renewables, including solar PV)			Number	0 (2016)	310,000 (2022)
		IR Indicator 4.1: Households provided with electricity via SPPs or renewable energy under the program that are female-headed		Percentage	24% (2016)	24% (2022)
		IR Indicator 4.2: SPP projects reaching financial close using CL (cumulative)		Number	0 (2016)	10 (2022)
		IR Indicator 4.3: Loans to renewable energy companies reaching financial close (cumulative)		Number	0 (2016)	12 (2022)
		IR Indicator 4.4: Cumulative value of eligible renewable energy sub-loans reaching financial close	**3**	US$	0 (2016)	12,500,000 (2022)
		IR Indicator 4.5: SPPs successfully in operation selling energy to both TANESCO and rural customers (cumulative)		Number	2 (2016)	9 (2022)
		IR Indicator 4.6: Solar energy systems sold		Number	0 (2016)	10,000 (2022)
		IR Indicator 4.7: Other renewable energy systems sold		Number	0 (2016)	10,000 (2022)
		IR Indicator 4.8 Lanterns sold		Number	0 (2016)	15,000 (2022)
Results Area 3: Strengthening Capacity of the Sector to Deliver the NREP	PDO Indicator 5: Capacity for delivery of energy access and renewable energy generation strengthened			Yes/No	No (2016)	Yes (2022)

Results Areas Supported by the PforR	PDO/Outcome Indicators	Intermediate Results (IR) Indicators	DLI #	Unit of Measurement	Baseline (Year)	End Target (Year)
		IR Indicator 5.1: Annual capacity building and project preparation activities completed	**4**	Milestones	No milestone achieved (2016)	All milestones achieved (2022)
		IR Indicator 5.2: Implementation of the National Energy Policy of 2015 to enhance access to modern energy services completed	**5**	Milestones	No milestone achieved (2016)	All milestones achieved (2022)

Indicator Description

Indicator Name (#)	Description	Frequency	Data Source	Methodology for Data Collection	Responsibility for Data Collection	DLIs	
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)
PDO Indicator 1: People provided with access to electricity under the program by household connections	Data on the number of people with electricity connections is estimated by multiplying the actual number of household connections with an estimate of the average household size (estimate of 5 people per household).	Annual	REA database	REA and TANESCO database	REA		
IR Indicator 1.1: Cumulative number of grid electricity connections, including those under mini grids, made under the Program	This indicator measures the cumulative number of households connected to the grid and mini-grids.	Annual	REA database	TANESCO database	REA	TRAG CRDB - INTERFINi Consortium	Yes

Indicator Name (#)	Description	Frequency	Data Source	Methodology for Data Collection	Responsibility for Data Collection	DLIs	
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)
IR Indicator 1.2: Transmission and distribution lines constructed or rehabilitated under the program	This indicator estimates the number of kilometers of new LV and MV lines. Estimations can be obtained from feasibility studies, winner bids, or geographic information system data.	Annual	REA database	TANESCO database verification, on-site verification	REA		
IR Indicator 1.3: Households connected to the grid that are female-headed	As 24% of rural households are female-headed, equitable access would mean that 24% of rural households connected to the grid should be female-headed.	Annual	REA database	REA database verification, random site visits	REA		
PDO Indicator 2: Nonresidential connections implemented under the Program	This indicator measures the number of non-residential (schools, health centers, businesses) grid connections under the Program. IR 2.3 will be disaggregated by gender.	Annual	REA database	TANESCO database verification, random on-site verification	REA		
IR Indicator 2.1: Educational facilities connected under the Program		Annual	REA database	TANESCO data base verification, random on-site verification	REA		
IR Indicator 2.2: Health care facilities connected under the Program		Annual	REA database	TANESCO database verification, random on-site verification	REA		
IR Indicator 2.3: Businesses, out of which number of female owned, connected under the Program		Annual	REA database	TANESCO database verification, random on-site verification	REA		

Indicator Name (#)	Description	Frequency	Data Source	Methodology for Data Collection	Responsibility for Data Collection	DLIs	
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)
PDO Indicator 3: Generation capacity of renewable energy constructed under the Program	The indicator measures the capacity of renewable energy constructed through the NREP.	Annual	REA database	REA and TANESCO database verification, random on-site verification	REA		
IR Indicator 3.1: Cumulative number of proposed MWs covered by SPP Loans for Small Power Projects reaching financial close under the CL	This indicator represents the number of MWs of SPP loans reaching financial close with CL support.	Annual	REA Database	Database verification, PFI verification	REA	TRAG CRDB - INTERFINi Consortium	Yes
PDO Indicator 4: People provided with access to electricity via off-grid supplies under the Program (SPP and renewables, including solar PV)	The indicator measures people provided with access to electricity via off-grid supplies under the Program (SPP and renewables, including solar PV)	Annual	REA database	Database verification, random on-site verification	REA		
IR Indicator 4.1: Households provided with electricity via SPPs or renewable energy under the program that are female-headed	This indicator represents the percentage of households provided with electricity via SPPs or renewable energy under the program that are female-headed	Annual	REA Database	Database verification, random on-site verification	REA		
IR Indicator 4.2: Cumulative number of SPP projects reaching financial close using CL	This indicator will count the total number of SPP projects reaching financial close with support from the CL over the life of the program.	Annual	REA database	Database verification, PFI verification	REA		

Indicator Name (#)	Description	Frequency	Data Source	Methodology for Data Collection	Responsibility for Data Collection	DLIs	
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)
IR Indicator 4.3: Cumulative number of loans to renewable energy companies reaching financial close	This indicator will count the cumulative number of loans to renewable energy companies reaching financial close	Annual	REA database	Database verification, PFI verification	REA		
IR Indicator 4.4: Cumulative value of eligible renewable energy sub-loans reaching financial close	This indicator represents the value of renewable energy loan financing that occurred under the RELW The amount of disbursement will be equal to the value of loans reaching closure multiplied by 80% (the cost-sharing percentage provided for those loans).	Annual	REA database	Database verification, PFI verification	REA	TRAG CRDB - INTERFINi Consortium	Yes
IR Indicator 4.5: SPPs successfully in operation selling energy to both TANESCO and rural customers (cumulative)	This indicator provides a count of the number of operational SPPs that sell electricity both to TANESCO and to the local community.	Annual	REA database	Database verification, TANESCO verification	REA		
IR Indicator 4.6: Solar systems sold	This indicator measures the number of quality-verified solar systems sold during the previous year.	Annual	REA database	Database verification, PFI verification	REA		
IR Indicator 4.7: Other renewable energy systems sold	This indicator measures the number of quality-verified renewable energy systems sold during the previous year	Annual	REA database	Database verification, PFI verification	REA		

Indicator Name (#)	Description	Frequency	Data Source	Methodology for Data Collection	Responsibility for Data Collection	DLIs	
						Responsibility for Data Verification	Scalability of Disbursement (Yes/No)
IR Indicator 4.8: Lanterns sold	This indicator measures the number of quality-verified lanterns sold during the previous year.	Annual	REA database	Database verification, PFI verification	REA		
PDO Indicator 5: Capacity for delivery of energy access and renewable energy generation strengthened	Indicator measures progress toward the achievements of IR Indicators 5.1 and 5.2.	Annual	REA database	Project-related REA and MEM documentation and organizational verification	REA/MEM		
IR Indicator 5.1: Annual capacity building and project preparation activities completed	This indicator measures the progress toward achieving the milestones as well as the submission of the annual capacity building plan, which means the plan prepared by the REA at the end of each FY for the following FY, which includes an action plan, procurement plan, and annual budget and financing for implementing each year's capacity development and project preparatory activities.	Annual	REA database	Project and institutional documentation	REA	TRAG CRDB - INTERFINi Consortium	No
IR Indicator 5.2: Implementation of the National Energy Policy of 2015 to enhance access to modern energy services completed	Indicator measures progress toward the achievements of milestones.	Annual	REA database	MEM documentation verification	MEM	TRAG CRDB - INTERFINi Consortium	No

Annex 3: Disbursement Linked Indicators, Disbursement Arrangements and Verification Protocols

Disbursement Linked Indicator Matrix[30]

	Total Financing Allocated to DLI	As % of Total Financing Amount	DLI Baseline	Indicative Timeline for DLI Achievement					
				Year or Period 1	Year or Period 2	Year or Period 3	Year or Period 4	Year or Period 5	Year or Period 6
DLI 1: Cumulative number of grid electricity connections, including those under mini grids, made under the program	–	69	0	100,000	200,000	300,000	400,000	450,000	500,000
Allocated amount:	US$151 million	–	–	US$30.2 million	US$30.2 million	US$30.2 million	US$30.2 million	US$15.1 million	US$15.1 million
DLI 2 : Cumulative number of proposed MWs covered by SPP Loans for Small Power Projects reaching financial close under the CL	–	14.6	0	5 MW	10 MW	15 MW	17 MW	17 MW	17 MW
Allocated Amount:	US$32 million in total	–	–	US$5 million	US$10 million	US$12 million	US$5 million	–	–
DLI 3 : Cumulative value of eligible renewable energy sub-loans reaching financial close	US$10 million in total (US$9 million SREP grant; US$1 million IDA)	4.55	–	US$2.9 million	US$6.5 million	US$10.1 million	US$12.50 million	–	–
Allocated Amount:	US$10 million in total	–	–	US$2 million	US$2.5 million	US$2.5 million	US$3.0 million	–	–

[30] Results under DLIs 1–4 start with effective date.

DLI 4: AnPual capacity building and project preparation activities completed	–	6.8	No Planning and Preparation Department strengthened No training and no transaction advisors hired	Annual Capacity Building Plan for FY 2016/17 submitted not later than three (3) months after Effective Date - US$0.5 million	Annual Capacity Building Plan for FY 2017/18 submitted by July 31, 2017 - US$0.5 million Plan to strengthen the capacity of the department for planning and preparation of REA approved by the Rural Energy Board not later than twenty-four (24) months after Effective Date - US$1 million (i) Draft Rural Electrification Master Plan is submitted to the Ministry of Energy and Minerals; and (US$1 million); (ii) Draft Rural Electrification Master Plan is approved by the Ministry of Energy and Minerals not later than twenty-four (24) months after Effective Date - US$2 million Targeted Communities Program approved by the Rural Energy Board not later than twenty-four (24) months after Effective Date -US$1 million	Annual Capacity Building Plan for FY 2018/19 submitted by July 31, 2018 - US$0.5 million	Annual Capacity Building Plan for FY 2019/20 submitted by July 31, 2019 - US$0.5 million Feasibility studies for grid connections for all twenty-four (24) regions in the Recipient's territory completed not later than forty-eight (48) months after Effective Date - US$3.5 million Four (4) consulting services, under terms of reference acceptable to the Association, completed to support TANESCO's new power generation projects for rural electrification - US$3.5 million	Annual Capacity Building Plan for FY 2020/21 submitted by July 31, 2020 - US$0.5 million	Annual Capacity Building Plan for FY 2021/22 submitted by July 31, 2021 - US$0.5 million
Allocated amount:	US$15 million	–	–	US$0.5 million	US$5.5 million	US$0.5 million	US$7.5 million	US$0.5 million	US$0.5 million

DLI 5: Implementation of the National Energy Policy of 2015 completed	–	–	No implementation strategy for subsidy policy completed		Study under NEP for unlocking electricity connection challenges in rural areas completed not later than twenty-four (24) months after Effective Date –	Strategy under NEP for enhancing access to modern energy services approved by the Minister of Energy and Minerals not later than thirty-six (36) months after Effective Date	–		
Allocated amount:	US$1 million	0.5	–		US$0.5 million	US$0.5 million	–		–
Total Financing Allocated:	US$209 million	100	–	US$37.7 million	US$48.7 million	US$45.7 million	US$45.7 million	US$15.5 million	US$15.6 million

DLI Verification Protocol Table

#	IR Indicator	Definition/ Description of Achievement	Scalability of Disbursements (Yes/No)	Protocol to Evaluate Achievement of the DLI and Data/Result Verification		
				Data Source/Agency	Verification Entity	Procedure
1.1	**Cumulative number of grid electricity connections, including those under mini grids, made under the Program**	This indicator measures the cumulative number of households connected to the grid.	Yes	The REA database based on information in reporting from developers and the TRAG	TRAG CRDB - INTERFINi Consortium	TRAG (CRDB - INTERFINi) Consortium to collect baseline data/information for all newly funded projects as aligned to the key performance indicators stipulated in the REA M&E framework and the Projects Appraisal Guideline on a quarterly basis

#	IR Indicator	Definition/ Description of Achievement	Scalability of Disbursements (Yes/No)	Protocol to Evaluate Achievement of the DLI and Data/Result Verification		
				Data Source/Agency	Verification Entity	Procedure
3.1	**Cumulative number of proposed MWs covered by SPP Loans for Small Power Projects reaching financial close under the CL**	This indicator represents the number of MWs of SPP loans reaching financial close with CL support	Yes	The REA database will provide information in reporting from the developers, TRA, and TIB.	TRAG CRDB - INTERFINi Consortium	TRAG (CRDB - INTERFINi) Consortium to collect baseline data/information for all newly funded projects as aligned to the key performance indicators stipulated in the REA M&E framework and the Projects Appraisal Guideline on a quarterly basis, with inputs from the TIB
4.4	**Cumulative value of eligible renewable energy sub-loans reaching financial close**	This indicator represents the value of RELW loan financing that occurred that are eligible for coverage under the RELW. The amount of disbursement will be equal to the value of loans reaching closure multiplied by 80% (the loan cost-sharing percentage provided for those loans).	Yes	A database of loans included under the RELW as evidenced by 'no objections' provided by the REA to the financial intermediary (TIB)	TRAG CRDB - INTERFINi Consortium	TRAG (CRDB - INTERFINi) data from the REA on loans included as covered under the RELW and validate based on data from the financial intermediary (TIB) and renewable energy and solar companies as recipients of the loans.
5.1	**Annual capacity building and project preparation activities completed**	This indicator measures the progress toward achieving the milestones as well as the submission of annual capacity building plan, which means the plan prepared by the REA at the end of each FY for	No	REA	TRAG CRDB - INTERFINi Consortium	TRAG (CRDB - INTERFINi) to verify progress of the indicator against milestones established

#	IR Indicator	Definition/ Description of Achievement	Scalability of Disbursements (Yes/No)	Protocol to Evaluate Achievement of the DLI and Data/Result Verification		
				Data Source/Agency	**Verification Entity**	**Procedure**
		the following FY, which includes an action plan, procurement plan, and annual budget and financing for implementing each year's capacity development and project preparatory activities. Actions listed under the Program Action Plan will have to be included as activities in the capacity building plan.				
5.2	**Implementation of the National Energy Policy of 2015 completed**	This indicator measures the progress toward achieving important milestones necessary to advance the implementation strategy of the NEP 2015.	No	MEM/EWURA	TRAG CRDB-INTERFINi Consortium	TRAG (CRDB - INTERFINi) to verify progress of the indicator against milestones established

Bank Disbursement Table

Category **(including Disbursement Linked Indicator as applicable)**	**Disbursement Linked Result (as applicable)**	**Amount of the Credit Allocated** **(expressed in SDR)**	**Disbursement Calculation Formula**
(1) DLI #1: Cumulative number of grid electricity connections, including those under mini-grids, made under the Program (starting from the date of this Agreement)	DLR #1: 500,000 connections	DLR #1: 106,530,000	(i) The Recipient will receive SDR 352.77 per connection for the first 70,000 connections; (ii) the Recipient will receive SDR 190.28 per connection after the first 70,000 connections; (iii) there must be a minimum of 35,000 connections before any disbursement is made under Category (1).
(2) DLI #2: Cumulative number of proposed megawatts ("MW") covered by SPP Loans for Small Power Projects reaching Financial Close under Part B.1 of the Program (starting from the date of this Agreement)	DLR #2: 17 MW	DLR #2: 22,600,000	The Recipient will receive SDR 1,328,098 per proposed MW covered by SPP Loans reaching Financial Close within the FY for Small Power Projects with no more than 10 MW capacity; provided that: (i) TANESCO does not have overdue payments to Small Power Producers under the terms of their respective standardized power purchase agreements; and (ii) there must be a minimum of 1 proposed MW before any disbursement is made under Category (2).
(3) DLI #3: Cumulative value ($) of eligible Renewable Energy Sub-loans reaching Financial Close under Part B.2 of the Program	DLR #3: $12,500,000	DLR #3: 700,000	(i) The Recipient will receive an amount equivalent to the value of eligible Renewable Energy Sub-loans reaching Financial Close during the FY multiplied by the loan coverage

(starting from the date of this Agreement)			factor of 80% (comprised of 8% from this Credit and 72% from the SCF Grant); (ii) there must be a minimum of SDR360,000 of eligible Renewable Energy Sub-loans before any disbursement is made under Category (3) in each FY except for the final year of the Program.
(4) DLI #4: Annual capacity building and project preparation activities completed	DLR #4.1: Annual Capacity Building Plan for FY 2016/17 submitted not later than three (3) months after Effective Date DLR #4.2: Annual Capacity Building Plan for FY 2017/18 submitted by July 31, 2017 DLR #4.3: Plan to strengthen the capacity of the department for planning and preparation of REA approved by the Rural Energy Board not later than twenty-four (24) months after Effective Date DLR #4.4: (i) Draft Rural Electrification Master Plan is submitted to the Ministry of Energy and Minerals; and (ii) Draft Rural Electrification Master Plan is approved by the Ministry of Energy and Minerals not later than	DLR #4.1: 360,000 DLR #4.2: 360,000 DLR #4.3: 700,000	

	twenty-four (24) months after Effective Date DLR #4.5: Targeted Communities Program approved by the Rural Energy Board not later than twenty-four (24) months after Effective Date DLR #4.6: (i) Annual Capacity Building Plan for FY 2018/19 submitted by July 31, 2018 DLR #4.7: Feasibility studies for grid connections for all twenty-four (24) regions in the Recipient's territory completed not later than forty-eight (48) months after Effective Date DLR #4.8: Annual Capacity Building Plan for FY 2019/20 submitted by July 31, 2019 DLR #4.9: Four (4) consulting services, under terms of reference acceptable to the Association, completed to support TANESCO's new power generation projects for rural electrification	DLR #4.4: (i) 700,000; and (ii) 1,400,000	

	DLR #4.10: Annual Capacity Building Plan for FY 2020/21 submitted by July 31, 2020 DLR #4.11: Annual Capacity Building Plan for FY 2021/22 submitted by July 31, 2021	DLR #4.5: 700,000 DLR #4.6: 360,000 DLR #4.7: 2,500,000	DLR #4.7: SDR 207,000 for each region covered by a feasibility study

		DLR #4.8: 360,000 DLR #4.9: 2,500,000 DLR #4.10: 360,000	DLR #4.9: SDR 618,000 for each consulting services completed

		DLR #4.11: 360,000	
(5) DLI #5: Implementation of the National Energy Policy of 2015 ("NEP") to enhance access to modern energy services in the Recipient's rural areas	DLR #5.1: Study under NEP for unlocking electricity connection challenges in rural areas completed not later than twenty-four (24) months after Effective Date DLR #5.2: Strategy under NEP for enhancing access to modern energy services approved by the Minister of Energy and Minerals not later than thirty-six (36) months after Effective Date	DLR #5.1: 360,000 DLR #5.2: 360,000	
TOTAL AMOUNT		**141,200,000**	

Annex 4: Summary Technical Assessment

Program Assessment

Strategic Relevance

1. The NREP is aligned with TDV 2025's objectives of achieving a high-quality livelihood for its people and developing a strong and competitive economy. The National Electrification Prospectus (the Prospectus), prepared in 2013, guides the implementation of the NREP. As of August 2015, the Prospectus is the REA's main guideline for rural electrification efforts, while a the first draft of the Rural Electrification Master Plan, expected to be completed by the end of 2016, is under preparation.

2. The Prospectus considers both urban and rural electrification. Urban electrification lies within TANESCO's responsibility through the scheme of electrification by densification, that is, the connection of new customers to the distribution network in already electrified settlements. Rural electrification, under the responsibility of the REA, includes the following three schemes: (a) electrification by connection to the LV grid and construction of the MV grid (Phases 1–4); (b) off-grid electrification; and (c) development of distributed technologies.

3. The proposed Program, defined as the rural electrification portion of the Prospectus, is strategically relevant and fully aligned with TDV 2025. It is also consistent with the Bank's intended engagement in Tanzania as specified in the CAS 2012–2015, Objective Two: Build Infrastructure and Deliver Services; CAS Outcome 2.1: Improved access, quality, and sustainability of electricity;[31] and the June 2014 CASPR, which extended the CAS to June 30, 2016. The Program will include other donors' efforts (Norway, Sweden, DfID, and EU, among others) to expand the benefits of rural electrification under the REA's coordination.

4. While the FY12–FY15 CAS remains relevant in guiding the Bank Group's engagement in Tanzania, the June 2014 CASPR, which extended the CAS period to June 30, 2016, proposes a more focused approach to Bank Group interventions. It states that increasing access to and reliability of power supply and sustainable management of natural gas reserves and mining resources are at the center of the country's competitiveness and job creation. The proposed program is fully aligned with the CAS/CASPR's objectives of addressing key infrastructure gaps, including in the power and extractives sectors, and promoting sustainable management of natural resources.

Technical Soundness

5. **Institutional setup.** The REA is an autonomous body under the MEM, with the objective of promoting and facilitating improved access to modern energy services in rural areas of mainland Tanzania, mainly by providing (a) TA, research, and capacity building and (b) subsidies for rural electrification projects. Another core activity of the REA is the coordination of electrification activities, serving as a contact point for multiple donors, private developers, nongovernmental

[31] http://documents.worldbank.org/curated/en/2011/05/14196937/tanzania-country-assistance-strategy-cas-period-fy2012-2015.

organizations, and community-based organizations, among others.[32] Once conventional rural electrification works are completed under the REA's supervision, they are transferred to TANESCO for operation, maintenance, and payment collection. For the SPPs and off-grid electrification program, the projects supported become the property of the private sector actors implementing them. EWURA, which became operational in 2006, is responsible for tariff setting, regulation, and monitoring the technical standards that are established by the Tanzania Bureau of Standards.

6. TANESCO, as the utility responsible for connecting the end users (that is, last mile connections), initiates village-level consultations to raise awareness of the communities with respect to the pending electrification. TANESCO provides applications to potential consumers at a cost of TZS 6,000. Upon receiving an application, consumers must complete it and attach to it either an acceptable household wiring plan or a commitment to use a ready-board to serve their internal household needs. The normal connection fee applied by TANESCO is TZS 177,000 plus VAT (which does not cover the full costs of a rural household connection). If the REA is supporting the project, while the REA's contractor is still working, a limited number of consumers—not to exceed the number of targeted connections for the project—can receive an REA connection subsidy funded by the REF. The allocation system used for this subsidy—which enables those selected to pay only the VAT for the connection fee (TZS 27,000)—is the traditional 'first-come, first-served' mechanism. Once the targeted number of connections for the project has been reached, no further subsidies are available. Late applicants must pay the full connection fee, plus VAT. As of now, the REA has found no way to institute a needs-based system to allocate their scarce subsidy resources.

7. **Funding.** The REF, established by the Rural Energy Act 2005, is the main instrument for funding rural energy projects, and it is managed by the REA. The REF is funded by the GoT budgetary contributions, donors (Sweden and Norway), levies on electricity and petroleum products, and interest earned. Although the REF is intended to be the main funding instrument for rural electrification, other donors have decided to contribute to rural electrification efforts by funding specific projects outside the REF (such as TEDAP, a Bank-financed project). Transfers to the REF have substantially increased since its creation, from US$9.556 million in 2007/08 to the requested US$125 million in FY 2015/2016.

8. **Planning.** The Prospectus aims at supporting the electrification policy and is the main guiding instrument for the electrification efforts of the REA. The Prospectus discusses both urban and rural electrification through the following approaches: (a) ongoing electrification in settlements which already had a distribution network at the end of 2012, referred to as densification; (b) connection of non-electrified settlements to the interconnected grid, referred to as grid extension; (c) installation of isolated grids together with power generation facilities which feed into isolated grids (or the main grid); and (d) renewable energy systems, including stand-alone solar home systems. The third and fourth of these work program areas are collectively referred to as 'off-grid' electrification.[33] As mentioned earlier, the program is defined as the rural portion of the Prospectus, that is, grid extension and off-grid electrification.

[32] http://www.ied-sa.fr/index.php/en/documents-and-links/publications/category/3-reports.html.
[33] http://www.ied-sa.fr/index.php/en/documents-and-links/publications/category/3-reports.html.

9. The technical assessment acknowledges that the program to be supported is at an early stage of development, with some key steps still to be completed. However, technical capabilities of the REA as rural electrification developer and TANESCO as rural electrification operator have been deemed as acceptable. The proposed PforR intervention aims at supporting the rural electrification efforts by the GoT through the REA and also aims at strengthening the REA's capacities to consolidate its role as an effective rural electrification agency, capable of raising funds and making effective use of them to implement best international practices related to technical aspects, procurement, FM, transparency, and accountability, among others.

10. **Technical design of the program.** The Pogram features are not unique nor does the technical design include new or untested technology. It is based on the experiences of the REA and TANESCO. The program will adopt the same concept and will be informed by lessons learned from previous projects.

11. At present, Tanzania is piloting many of the low-cost techniques, such as single-wire earth return and shield wire systems, with support from the National Rural Electrification Cooperative Agency, the Tunisian utility *la Société Tunisienne de l'Électricité et du Gaz*, and others. As these pilots reach completion and begin to operate, there will be a need to adopt these more innovative approaches as new standards to be adopted by the Tanzania Bureau of Standards for use across the sector. In addition, there is a need for a clear statement of the standards for mini grids and possibly micro grids to enable them to deploy these electrification tools across the subsector sector as well.

12. **Readiness.** The MCC just completed detailed feasibility studies for several regions. PforR advances will be used to complete feasibility studies for all 24 regions. The projects, covered by the MCC feasibility, studies can be immediately implemented using the grid investments under this PforR operation.

13. **Off-grid.** On the off-grid initiatives, the Bank's support under TEDAP forms the foundation for what is being pursued under the Program. The off-grid component of TEDAP was successful at helping modify the regulations for the SPPs and mini grids to be more friendly and practical to move this sector ahead. EWURA has already adopted the 'second-generation' SPP regulations which are more transparent and provide preapproved tariffs for the SPPs (less than 10 MW) that are technology based and will provide potentially greater savings to TANESCO, the primary off-taker. Under TEDAP, early support to the SPPs for resource confirmation, feasibility assessments, business plans, and environmental and social assessments was provided through a system of matching grants. Upon evaluation, this approach to providing early stage development support was considered to have had mixed success. The performance grants provided under TEDAP proved useful in assisting the SPPs build their own networks to connect local consumers to their power supplies. This activity will be continued under the results-based financing approach being supported under the REF, using resources from SIDA and DfID. The CL, which was used to provide refinancing to PFIs to enable them to stretch the tenor of the loans to SPP developers to as much as 15 years, has proven critical to enabling five of the 10 SPP plants expected to be in operation by mid-2016 to obtain financing. Based upon an evaluation of this CL, its terms will be slightly adjusted under the Program to increase its cost-effectiveness and reduce the time required for these funds to be freed up for use in another project.

14. For the support to solar home systems, an evaluation of the SSMP that served as key to the provision of solar under TEDAP was undertaken. This evaluation, which considered every case where the SSMP model had been tried in the Bank's client countries, concluded that it had not proven successful in any instance. The understanding reached was that the SSMP approach mixed public procurement for provision of PV to public institutions with a weak head start for those companies to develop private sales in those locations. In almost all cases, this approach attracted what have been labelled as 'tender-preneurs' who know how to respond to bids and target their profit from the public institution provision. However, they have consistently proven to be unable to develop a local market for PV equipment for private sales to households and businesses. As a result, this approach is no longer considered appropriate for utilization.

15. The RELW is built upon not only the needs of renewable energy, solar lantern and solar home system providers in Tanzania but also on the 'best practice' experiences from similar initiatives in Ethiopia and Bangladesh, where IDA resources have been used to provide financing to renewable energy companies, for example solar PV companies, leading to significant growth in the sales of PV products. In Ethiopia, this loan facility was set up through the Development Bank of Ethiopia to provide working capital for importation of quality-verified products and supply chain finance. In Bangladesh, the Infrastructure Development Company Limited provided financing to micro-finance entities that retail solar PV systems, such as Grameen Shakti, to enable them to provide consumer finance for purchasing quality-verified systems.

16. Finally, during TEDAP's lifetime, it quickly became apparent that TANESCO was facing financial difficulties and as a result, was unable to establish a credible record of timely payments to the SPPs with whom they had signed SPPAs. Therefore, through program negotiations, it was agreed that TANESCO would submit a report to the Project Steering Committee on a quarterly basis to PSC documenting the status of their accounts with SPPs. If these accounts show late payments, the PSC shall be convened by the Permanent Secretary of the MOFP to inquire the reason for these late payments and insist that they be brought current within one month. This monitoring and reporting mechanism has been designed with the idea of ensuring timeliness of payment to the SPPs and helping TANESCO to establish a payment record that will reassure the private investors of both TANESCO's ability and willingness to meet their payment obligations to the SPPs.

17. The PforR technical assessment found that the REA's institutional and organizational setup is adequate for the Government's plans to substantially increase access to electricity. At the same time, the technical assessment identified several areas for improvement that the suggested PforR could address to strengthen the REA's technical and implementation capacity. The recommended actions include the following:

- Accelerating the preparation of a Rural Electrification Master Plan, based on the Prospectus (the first draft is expected to be completed by the end of 2016)
- Strengthening coordination among multiple donors, providing support for rural electrification
- Assuring the availability of funds in the REF

- Building capacity in TANESCO to carry out increased work load for TANESCO as rural electrification actions are completed, since the utility will have to handle operation and maintenance of lines and substations, connect new customers, extend local LV networks, install and control prepaid meters

- Strengthening the REA's technical and management capabilities (for example, strengthening the Planning and Preparation Department, a PMU, a Legal Affairs Office, and so on)

- Improving governance through increased transparency in investment decisions

- Addressing gender gaps in access to electricity through gender-mainstreaming activities and monitoring the required sex-disaggregated indicators

Institutional Arrangements

18. **Institutional setup.** The key institutional actors in the rural electrification sector include the MEM, the REA, EWURA, TANESCO, the vertically integrated energy utility, and the SPPs. The Rural Energy Act No. 8 of 2005 was enacted by the parliament of Tanzania to establish the REB, REF, and REA.

19. **Program implementation arrangements.** The PforR will be implemented over six years by the REA, under the overall oversight and coordination of the MEM. A PSC will be established by the GoT, consisting of relevant Government ministries and agencies, DPs, the private sector, and civil society representatives, to ensure coordinated implementation of the program. The PSC will be chaired by the Permanent Secretary of the MoFP. The functions of the PMC will include supervision and verification of the quality of the completed civil works. Supervision reports will be submitted to the REA and CRDB (the REA's TRA) for approval and payment processing. A separate agreement will be concluded between the REA, CRDB, and PMC, delineating respective roles and responsibilities. Additionally, the REA and TANESCO will enter into an overarching MoU, clearly specifying the engagement of TANESCO in supporting the REA's program implementation.

20. While the REA will take implementing responsibility for the IDA credit and SREP grant, a small portion of the funds from Results Area 3 will be directly implemented by the MEM. In addition, as the funds for this project will be channeled through the REF, they will be used in combination with the REA's revenues from the GoT and other DPs. The REA will assume overall responsibility for daily project implementation and activity coordination and will contract out all design, construction, and supervision work.

21. With respect to on-grid implementation, the REA will engage consulting firms, as needed, to carry out design, cost estimates preparation, and supervision of contracts due to capacity constraints highlighted in the fiduciary assessment.[34] Over the longer term, this capacity will gradually be transferred to the REA in the following two areas:

[34] Specific recommendations for strengthening REA capacity are provided by the Bank's Fiduciary Assessment, including the assessment of the FM, Procurement, and Governance capacity.

- Developing feasibility studies and supporting procurement process

- Project management (PMC to be hired initially)

22. Among other things, the functions of the PMC will include supervision and verification of overall quality of completed civil works. Supervision reports will be submitted to the REA and CRDB (REA's TRAG) for approval and payment processing. A separate agreement will be concluded between the REA, TRAG (CRDB), and PMC, delineating respective roles and responsibilities. Additionally, the REA and TANESCO will enter into a MoU clearly specifying the engagement of TANESCO in supporting the REA's program implementation.

23. All implementation arrangements, processes, and procedures will be reflected in the REA's POM, which will be appropriately updated.

24. On the off-grid implementation side, two financing windows will be opened to provide loans to both SPP developers and quality-verified renewable energy equipment providers through the financial intermediary TIB. The first window will use the TEDAP CL structure that has proven successful at enabling the SPPs to obtain longer-term financing from PFIs. The Program will revise the refinancing terms for SPPs to result in greater leverage of the PFIs' own resources. IFC has received a grant from the SREP as part of the Tanzania Investment Program and will collaborate by providing transaction advisory support to assist the SPPs in obtaining private financing.[35]

25. A new second window under the existing CL will be directed at providing short-term finance to vendors of quality-verified renewable energy (including solar) products in rural areas. The PforR, through the REA, will provide an RELW to stimulate loans through TIB and PFIs to Renewable Energy Companies seeking to expand sales in rural areas.

Program Expenditure Framework

26. **Program budget structure and classification.** Tanzania has a relatively well-established structure of planning and budgeting, both at the central and decentralized levels. There is an annual Public Expenditure Review (PER) process that helps fiscal policy formulation and management. Under the PER process, a rapid budget analysis is conducted each year to assess the consistency of the approved budget and actual public expenditures and the government policy priority objectives. As such, a comprehensive review of the expenditure framework of the government's program on energy overall and electrification in particular can be derived from the budget analysis of the BRN in energy and minerals, strategic plan of the REA, REA work plans and financial results reports, annual PERs, and other strategic documents.

27. Energy is considered a Government priority sector and is reflected as such in the government's strategic documents including the BRN program. The overall energy sector priority is also well reflected in a sizeable share of gross domestic product on energy (1.7 percent) or 5.5 percent of the GoT budget. The share of development spending in the energy sector remains relatively high as the result of the need for scaling up investments. Around 90 percent of the total GoT budget for the energy sector is projected to be spent on development projects, while around

[35] IFC support will not be channeled through the REF.

10 percent will be spent on recurrent activities. Large shares of the development budget are anticipated to be spent on power infrastructure investment, including for generation and transmission.

28. Unfortunately, further disaggregation of the national budget expenditures is not possible and there is a need for having a consolidated coverage of the entire budget allocated to the energy sector, including separate agencies in the sector such as TANESCO, the REA, and the TPDC. The large share of publicly funded expenditure in the energy sector, around 67 percent in 2014/15, is budgeted for as current transfers that go to these agencies. Therefore, given that these agencies implement the budget, all expenditures are subsequently undertaken by these agencies. In the current classification system, all the funding provided to the MEM's agencies through the budget is classified as current grants/transfers regardless of type of final expenditure, be it current consumption or capital investment. As a result, it is not possible to reflect exactly how much of the transferred funds are spent on capital investments or on current consumption. Having further step of budget classification and reporting will help in better planning and budgeting for adequate levels of capital investment and the required maintenance costs.

29. **Financial sustainability and funding predictability.** Currently, the NREP is funded from various sources, the primary source being the REF. REF revenue figures show strong financial commitment by the GoT to the rural electrification sector, though the composition of revenues has been evolving with decreasing share of Government direct subsidies and replacing them with higher share of the levies that are directly deposited to the REF. The electricity and fuel-related levies have become the largest contributors to the REF, accounting for 39 percent of the total funds in 2012/13 and further increasing to almost 64 percent in the estimated budget for 2014/15. The GoT budget subventions contributed about a third of the REF revenues and the funding from the DPs—around 17 percent. Levies are expected to further increase in the future, which will lower the REA's dependency on donor contribution, representing a stable source of income for the REF.

30. Financing by donors has been significant. Until the end of FY2012/13 (July 2012–June 2013), the Government of Sweden through SIDA had been the only donor which injected funds into the REF. In FY2013/14, the Government of Norway joined the efforts, with DfID joining in FY2014/15 through a trust fund established with SIDA. Other donors have so far been reluctant to inject into the REF. Overall, donor financing positively contributes to the predictability of funds. However, donor financing brings another risk, which is substantially longer time of processing payments, long review times for contract management changes, and others. The proposed approach of utilizing the country systems through PforR should help mitigate this risk as well.

31. While the donor-funded projects have faced implementation delays, the overall implementation and budget administration track record of the REA has been solid. The longer-term budgeting practices are being institutionalized in Tanzania and the REA has started implementing these practices.

32. Projecting the financial position of the REF, however, remains challenging due to the high unpredictability of the REF revenues. In its annual investment planning exercise, the REA faces two major uncertainties impeding the predictability of the revenues of the REF and corresponding budgeting:

- First is late payment transfers from the MoFP effectively backlogging most of the payments to the end of a fiscal year. It substantially increases the risk of cash flow interruptions and proper contract management for electrification civil works.

- Second is the low budget execution discipline for Government subventions. Historically, not all revenues from the Government Budget Allocation have been transferred to the REF; for example, in the recent years, the average annual release of the government allocation was roughly only 55 percent of the budgeted amounts.

33. These risks are fully recognized by both the GoT and REA and a number of mitigation measures have been taken, including adopting regulations introducing levies that are transferred to the REF directly, bypassing the consolidated budget account. With the new regulation requiring the fuel oil levy to be transferred to the REF, the level of predictability has substantially increased; however, it remains the major impediment.

34. **Adherence of program expenditure.** Overall, the planning and budgeting arrangements for the REA and MEM are adequate and satisfactory for the implementation of the new Program The REA follows a participatory approach in the preparation of Annual Work Plans and Budget (AWPB) involving staff, department directors, director general, and the REB, ensuring adherent budgeting. The Ministry's planning and budgeting follows the existing Medium Term Expenditure Framework (MTEF). The budget process is participatory and begins at the lower level of authorities. The AWPB is prepared based on the policy guidelines issued by the MoFP on the fiscal policy of the Government under the MTEF. The MEM develops an internal budgeting calendar and timelines on the basis of the cycle set by the MoFP. The MEM ensures that the DPs' contributions are fully reflected in their annual budget. The Strategic Budget Allocation System is used for planning and budgeting. Management accounts, which compare physical performance and budget, are prepared on a quarterly basis. Comments related to significant budget variations are acted upon regularly. Staff at the budget unit are adequate, qualified, and experienced to handle the budgetary processes.

35. **Allocation of budget.** Tanzania has managed to attract substantial amounts of financing and TA support for the NREP from different DPs, with a potentially substantial budget for the REA to administer over the next few years. REF expenditures are split into two major budget expenditure categories: capital budget (that is, investments) and operating budget (that is, operating costs of the REA).

36. An analysis of the implemented investment projects reflects that by far the largest portion of the disbursed funds (91 percent) has been used for grid extension projects. NREP expenditures and, therefore, the PforR funds, will be split into two major budget expenditure categories: capital budget (that is, investments in access expansion projects) and operating budget (that is, operating costs of the REA). Based on the historical budgetary trends and forecasted financial projections above, capital expenditures will comprise 90 percent of the total expenditures, while 10 percent is allocated for operating costs. Within the capital expenditures, the largest share (about 90 percent) will be used for grid extension projects reflecting the historically high expenditures in this areas, which is similar to experiences in other countries in Sub-Saharan Africa. The rest of the capital expenditures will be directed to renewable energy projects (for example, wind mast installation) and feasibility studies. The tentative allocations are detailed in table 4.1.

Table 4.1. Tentative Allocation of the NREP

Capital expenditures		**1,230**
v.	Cost of connecting the settlement to the MV backbone grid	369
vi.	Cost of setting up the initial distribution network: LV/MV lines, transformers, SWER lines	369
vii.	Cost of network extension to SPPs[36]	246
viii.	Customer connection cost	246
Operating expenditures		**137**
v.	Operational and consultancy costs	68
vi.	Staff costs	41
vii.	Administrative costs and REA Board associated costs	14
viii.	Other miscellaneous costs	14
Total		**1,367**

37. Capital expenditures will primarily include the construction and associated services costs and (a) the cost of connecting the settlement to the MV backbone grid, including the construction works and associated services; (b) the cost of setting up the initial distribution network: LV/MV lines, transformers, and SWER lines; (c) the cost of network extensions; and (d) customer connection costs. In the case of the off-grid costs, capital expenditures will include (a) costs of the power plants; (b) in the case of hydro plants, the costs of network needed to transport the power to the supplied settlements; (c) the costs of the initial distribution network; and (d) customer connection costs. The costs for preparatory works (feasibility studies, engineering studies, and so on), administrative tasks, and supervision are not included in the capital expenditure category because they will be covered under the REA operational expenditures.

38. The operational expenditures will largely consist of (a) operational and consultancy costs, (b) staff costs, (c) administrative and REA board associated costs, and (d) other miscellaneous costs.

39. **Efficiency of program expenditures.** The REA has full autonomy in budget execution. The quality of the REA's past budget execution was satisfactory, despite several challenges identified. Especially, past procurement expenditure commitments were over and above the amount disbursed from the budgetary allocations. For instance, in FY2014/15, the overall budget was TZS 273,109,224,500 (US$170.7 million) while the amount released was TZS 192,529,299,791 (US$120.3 million). Consequently, on many occasions, the REA failed to meet its contractual obligations to pay contractors and consultants on time according to the terms and conditions governing the contracts due to insufficient funds. As the fiduciary assessment points out, this is due to internal factors such as capacity barriers but also external factors, including the vetting of all contracts above TZS 50 million (about US$28,800) by the attorney general (AG),

[36] Including capital expenditures to be financed through CL

which leads to delays in signing the contract execution. Those challenges have been addressed in the Project Action Plan of the PforR.

40. The PforR operation will support performance-based transfers to the REF to finance rural electrification projects. It will include immediate first-priority investments. Before preparing the engineering designs, the REA will undertake a feasibility-level assessment of the prospect for achieving economies of scale in selected regions, which will pursue finding the lowest cost engineering network designs that offer affordable solutions to rural communities and finding right/optimum engineering solutions. Pooling donors and GoT funds together will contribute to achieving economies of scale as well.

Results Framework and Monitoring and Evaluation

41. The REA has a well-established M&E system in place. The steering document for the REA's M&E framework is the 'REA Monitoring and Evaluation Framework' revised in October 2013. Monitoring reviews and evaluation plans are produced according to a series of standard stages. The first main stage is to define the scope of the review and prepare agreed ToR. This typically sets out the concern to which the review and evaluation plans relate and addresses the geographic coverage, issues to be explored, a broad timetable, the proposed structure, and the methodology to be used. The second main stage is to gather information and evaluate it. The final stage is to write the review and evaluation plans and take them through a series of approval stages, including verification of data by the National Bureau of Statistics. Because the data verification would take time, there may be a period of several months gap between the two consecutive plans for monitoring, reviews, and evaluation. The monitoring plan specifies key performance indicators, indicator descriptions, baselines, indicator target values, data collection and methods of analysis, indicator reporting frequencies, and the officers who will be responsible for data collection, analysis, and reporting. Though outcome indicators will be reported on an annual basis, tracking will be carried out on a quarterly basis. To ensure that the REA M&E activities and results are consistent and useful to the REA funders and partners, M&E criteria are based on the internationally established criteria of the Development Assistance Committee of the Organisation for Economic Co-operation and Development.

42. **Reporting.** A summary of reports to be prepared by the REA to comply with the PforR monitoring requirements is presented in Table 4.2.

Table 4.2. REA's PforR Reporting Requirements

Report	Content	Frequency
Quarterly Reports	A description of progress toward achieving the agreed upon results financial activity during the quarter	Quarterly (15 days after the end of the quarter)
Annual Reports	A description of progress toward achieving the agreed upon results financial activity during the quarter	Annually (45 days after the close of the fiscal year)
Field Reports	A description of physical progress against planned implementation schedule	Regularly
Evaluation Reports	A detailed description of progress toward achieving the intended results according to the strategic plan	Annually (45 days after the close of the fiscal year
Interim Assessment Reports	Ad hoc assessments of specific projects, programs, or thematic areas	No fixed schedule

43. **TRAG.** Section 23 (1) of the Rural Energy Act empowers the REB to appoint a TRAG. The TRAG is required to set up all aspects of the FM system for the REF and have the overall responsibility for disbursements and monitoring usage of grants and support from the REF. The CRDB Public Limited Company was recently appointed as the TRAG after winning a tender initiated by the REA in line with the Rural Energy Act. The TRAG is selected every three years. Before the appointment, the TIB was the agent representing the first cycle of the TRAG. The REA's independent TRAG, the TRAG CRDB - INTERFINi Consortium, will remain the third-party verification agency under the program.

Program Economic Justification

Rationale for Public Provision

44. To achieve the planned access targets (50 percent by 2025 and more than 75 percent by 2035), the REA has an ambitious program to significantly accelerate the connection of rural households to the national grid, to support small renewable energy companies to supply electricity to both remote communities and the national grid, and to stimulate the installation of off-grid solar home systems and other renewable energy systems.

45. Considering the level of available financing in the REF combined with the low level of private sector participation in relation to the investment needs outlined in the Prospectus, concessional financing is crucial for expanding electricity access and improving sector performance in Tanzania.

World Bank Value Added

46. For a number of years, the Bank Group has been supporting Tanzania's power sector reforms and implementation of policy measures to improve the financial viability of the sector and contributing to energy sector infrastructure building through investment lending and DPOs. The proposed program will continue to support the sector by buttressing the GoT's efforts related to

economic transformation of rural areas by increasing connections to households, businesses, and public facilities and scaling up the quantity of rural, renewable electricity generated by the SPPs.

47. The Bank is playing a convening role in bringing additional donor financing to support the GoT's rural electrification efforts. During the FY2017, several donors, including the Government of Norway, SIDA, EU, and DfID, will be providing financing for rural electrification either through direct contributions to the REF or project financing. The operations of all donors are aligned and coordinated with the proposed Bank operation, specifically with regard to streamlining project preparation, including the standardization of bidding documents, investment assessment criteria, and M&E frameworks. In the off-grid subsector, the Bank plays a leading role in helping the REA support private sector initiatives along with support from SIDA and DfID.

Economic Impact of the Program

48. As stated earlier, scaling up access to modern forms of energy remains one of its highest priorities for Tanzania's power sector. Benefits under the program include the following:

(a) At the beneficiary level, providing affordable electricity to more people and improving the quality of supply will promote greater economic growth and equity. Grid extension will allow Tanzania to provide electricity service to areas and groups of people that previously were unreachable through TANESCO's limited electrification program. With increased access to electricity, the Program is expected to improve security (for example, more street lighting); provide opportunities for economic development (food processing industries, medium and small enterprises, and so on); expand access to communication technologies (radio, television, Internet); and increase employment and incomes. Health benefits emerge not only because clinics are able to maintain the vaccine cold chain, but also because families are exposed to less kerosene smoke from lanterns. Indirect benefits also arise from the improved service provided by rural public institutions (for example, health, education, water, and public administration) because of their increased access to electricity. Improvements in public service delivery are expected through improved electricity connections, especially of rural institutions such as schools, clinics, and hospitals used by poor and vulnerable households, thus contributing to improving the socioeconomic welfare of the country.

(b) At the institutional level, the Program will assist the MEM to put in place an implementation strategy of the subsidy policy (targeted, effective, equitable, and limited subsidies) that is needed to accelerate rural electrification and ensure that poorer households (including female-headed households) are able to benefit from rural electrification schemes. The Program will also facilitate the removal of barriers related to (a) the financial sector (external equity, risk-sharing mechanism); (b) developers' ignorance of bankability criteria; (c) compliance burden (hard-to-get preconstruction permits); and (d) absence of a master plan to define areas to which the grid will not be extended within the upcoming decade. The sector institutions, including the MEM, EWURA, the REA, and TANESCO, are expected to benefit from the capacity strengthening activities under Results Area 3, which will improve efficiency, transparency, and accountability of the sector; improve the institutions'

performance; and enhance their image and credibility with shareholders and electricity customers alike, gaining support for sustained operations.

49. For this economic analysis, benefits deriving from Results Area 1 and SPP-related activities under Results Area 2 are being taken into account.[37] Under the grid electrification program, the costs of electrified consumers are being compared to those of non-electrified households. The analysis assumes that 70 percent of the customers to be electrified under the NREP will be connected through prepaid meters, which are currently being charged a T1 tariff. The remaining customers are charged the lifeline tariff (category D1). Even if the REA estimates that 30 percent of the connections to be made under the NREP will be for businesses, most of these will be small businesses and still be eligible for a T2 tariff due to their low consumption. Only 5 percent are estimated to be charged the profitable T2 tariff. The costs comprise the total on-grid program costs of US$1.315 billion (excluding VAT, total costs are US$1.078 billion), and 2 percent annually for operations and maintenance.

Table 4.3. Electricity Savings per Customer Category under the Program (Grid Extension)

	D1	T1	T2	T3
Number of customer	125,000.00	350,000.00	25,000.00	N/A
Percentage of customer	25.00%	70.00%	5.00%	N/A
Consumption	98.04	136.00	20,492.73	N/A
Monthly Electricity expenditures per customer (in US$)	4.49	21.57	1,882.28	N/A
Monthly diesel expenditures per customer(in US$)	30.07	41.71	6,284.44	N/A
Monthly savings per customer (in US$)	25.58	20.13	4,402.16	N/A

50. For Results Area 2 (off-grid), the benefits are derived from the avoided cost of emergency power plant and IPP generation valued at US$0.25 per kWh. Through the SPP CL, a total of 17 MW of additional capacity will be generated. The CL of a total of US$32 million will focus on providing refinancing for the SPPs so that they can obtain local commercial debt financing of sufficiently long tenor to make their projects economically viable.

Results of the Economic Analysis

51. The economic analysis for the project follows the standard benefit-cost framework. The stream of benefits and costs resulting from the project was identified and data was gathered for their measurement. An economic analysis of the project was undertaken for Results Area 1 and SPP-related activities under Results Area 2. The economic analysis covers the 20-year program

[37] The second credit line window for renewable energy companies could not be included in the analysis since the products and technologies and therefore the concrete benefits are difficult to estimate at this point.

with cash flow discounted at 10 percent. Incremental costs include investment costs and operations and maintenance costs. The results are as follows:

Table 4.4. Economic Results of Program and Results Areas

	Results Area 1	Results Area 2	Total Program
EIRR (%)	12.00%	56.52%	12.98%
NPV (US$, millions)	147.54	76.88	224.42

52. **Sensitivity analysis.** The program is robust to changes in relevant parameters. With 15 and 20 percent cost increases, the program still yields a positive NPV and an EIRR exceeding 10 percent. In addition, with a 1 or 2 year delay the overall program remains economically viable. **Error! Reference source not found.**.5 below provides more details on potential impacts of changing parameters under the program.

Table 4.5. Sensitivity Analysis

Sensitivity			
EIRR			
	Results Area 1	**Results Area 2**	**Total Program**
Base case	12.00%	56.52%	12.98%
Project Costs = +15	9.95%	48.63%	10.83%
Project Costs = +20	9.35%	46.45%	10.20%
Only 50% connection targeted connections	11.59%	56.52%	12.59%
Only 50% of targeted generation	12.00%	24.49%	12.26%
1 Year delay	10.72%	39.99%	*
2 Years delay	9.36%	31.92%	*
NPV (in US$)			
	Results Area 1	**Results Area 2**	**Total Program**
Base case	147,536,592	76,880,447	224,417,039
Project Costs = +15	(4,015,591)	73,117,988	69,102,397
Project Costs = +20	(54,532,986)	71,863,835	17,330,850
Only 50% connection targeted connections	116,283,526	76,880,447	193,163,974
Only 50% of targeted generation	147,536,592	22,837,823	170,374,415
1 Year delay	57,448,211	67,951,230	*
2 Years delay	(54,883,929)	59,833,759	*

*Note: * Calculated only by results area, as delays are likely to occur in specific results areas.*

Gender Analysis

53. As part of the program preparation, gender analysis was conducted using the 2012 National Household Budget Survey. The rates of access to electricity of both male- and female-headed households in Tanzania were established as the sex-disaggregated indicators of the PforR, and an analysis was carried out with the following two objectives:

- Determine the current rates of access of male- and female-headed households (that is, the baseline values of the indicators); and

- Investigate the existence of a link between the gender of the head of the household and access to electricity by assessing the differences in access to electricity between male- and female-headed households.

54. Regarding connection to the electrical grid, there are no statistically significant differences between male- and female-headed households in the rural areas of the country. This finding seems to predominantly rest on the low connection rates overall, with the potential for statistically significant differences to arise as connection rates increase. In addition, analysis revealed that female-headed households are poorer than male-headed households with the percentage of female-headed households rising from 25 percent overall to 33 percent for the bottom income quantiles. Based on this, the program will approach the gender equality issue as aiming to ensure that gender differences do not emerge in rural areas when connecting new households.

55. With regard to access to solar energy, there are statistically significant gender-based differences only in the regions of Mtwara, Rukwa, Shinyanga, and Tanga (where the difference is in favor of female-headed households).

56. This is likely attributable to both the small fraction of households having access to solar PV systems, but also the fact that to date, most PV users have purchased their systems. Hence, only the households able to muster a significant payment can afford the purchase of such systems, which by its nature, is regressive. This front-end barrier is one of the reasons that the loan facility under this project is focusing on companies using PAYG technology, which reduces the need for a heavy down payment. The NREP will attempt to track the gender of the household head adopting PV systems, which may or may not be practicably feasible.

Annex 5: Summary Fiduciary Systems Assessment

Executive Summary

1. The objective of the FSA was to examine whether the Government systems provide reasonable assurance that the financing proceeds will be used for their intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability. The FM systems were assessed to gauge the extent to which the planning, budgeting, accounting, controls, funds flow, financial reporting, and auditing systems and practices provide reasonable assurance on the appropriate use of program funds and safeguarding of its assets. Equally, the Program procurement systems have also been assessed to establish the extent to which the planning, bidding, evaluation, contract award, and contract administration arrangements and practices provide a reasonable assurance in support of the achievement of the program results. This procurement assessment was carried out with the objective of reviewing the current procurement system used in the REA and its performance. In addition, the assessment considered how the Government governance systems manage the risks of F&C and how such risks will be mitigated. The assessment primarily covered the REA and MEM although certain aspects of the REA-TRAG relationship have also been reviewed. Respective teams visited the institutions expected to be involved in the implementation of the program to collect this data. The assessment considers a number of strategic Government and sector documents, including the BRN energy report; reports from the controller and auditor general (CAG); Tanzania PEFA reports for 2006, 2010, and 2013; the Annual Performance Evaluation Report of the Public Procurement Regulatory Authority (PPRA); the REA and MEM Procurement Assessment and Audit reports; and specific assessments done on the MEM and REA by various DPs.

2. The FSA covers institutional and implementation arrangements, fiduciary management capacity, and implementation performance. Overall, the legal and regulatory framework for this Program's fiduciary systems was found to be comprehensive and in line with international principles and standards for public procurement and FM and how existing systems handle the risks of F&C. This operation is not the first PforR operation in Tanzania, but it is the first one suggested for the energy sector in Tanzania. The PforR operations will be relying on the existing country systems and, therefore, proper assessment and identification of the fiduciary risks is of paramount importance.

3. FM risks for the Program have been assessed along different dimensions. Key risks include timely transfer of funds from the treasury to the REA, timely submission of reports, not very effective audit committees to carry out oversight functions, and understaffed internal audit departments. There are a number of mitigation measures proposed to address these shortcomings, including increasing the share of the energy and fuel levies deposited in the REF directly, strengthening the audit departments to monitor how the audit issues are being addressed, and developing and applying new audit guidelines. Both the MEM and REA have previous experience in implementing Bank-financed projects such as TEDAP and, while the PforR operation will be using the existing country systems, the experience of handling FM issues under the previous Bank-financed project will still remain useful. The FM performance for projects funded by IDA and implemented by the entities was rated Satisfactory. The FSA took note of the fact that the GoT has taken various measures to address PFM issues raised in the PEFA 2013 report and has continued to make progress on its PFM reforms.

4. Procurement risks were also identified and mitigation measures were suggested as part of the assessment. The procurement assessment focused, in particular, on (a) a review of the existing systems; (b) procurement profile of implementing entity (data relating to overall budget and expenditure profile, share of procurable expenditures, frequently procured goods and services, and availability of markets for frequently procured goods); (c) identification of areas in which the REA should improve procedures and performance; (d) availability of procurement and technical staff to manage the complete procurement cycle; (e) identification of bodies that exercise oversight on procurement activities at all levels and the frequency of their monitoring/oversight procurement processes and procedures; and (f) identification of risks and proposal of mitigation measures. The main areas of significant risk to the Program are: inadequate staffing of the PMU, Directorate of Technical Services, and IAU; staff have inadequate design and preparation of technical specifications and requirements, preparation of bidding documents and request for proposal for large packages, evaluation of bids/proposals for large packages and contract management; delays in releasing funds from the Government; delays in vetting contracts above TZS 1 billion by the AG; weak records filing and data management system; inappropriate contract management arrangement and inadequate contract management. Furthermore, there are inherent risks in PPA 2011, including receiving frivolous complaints during the cool-off period of 14 days. These risks will need to be addressed, monitored, and evaluated throughout the program.

5. **F&C.** The F&C risks have been identified and embedded as part of broader fiduciary risks and mitigation measures. F&C assessment also involved a review of the complaint handling mechanisms in the sector and how it can be strengthened to be used in the PforR. The GoT has committed to implementing the program within the Bank's Anticorruption Guidelines.

6. Overall, the FSA concludes that, despite some weakness that have been identified and for which mitigation measures have been proposed, the program fiduciary systems should provide reasonable assurance that the financing proceeds under the program will be used for intended purposes. However, given the identified risks and the new nature of the PforR instrument, the overall fiduciary risk is rated Substantial. The key reasons for the suggested rating are the (a) overall inadequate institutional capacity at the implementing agencies resulting from understaffing and lack of available training and experience in PforR operations; (b) overall weak fiduciary arrangements, including frail control environment, insufficient staffing, and poor contract management, record keeping, and management system; (c) concerns regarding the timely availability of resources to attain the DLIs, including Results Area 3, required to support program implementation; and (d) insufficient institutional and technical capacity to handle environmental and social issues, including weak inter-institutional and coordination among various agencies and inadequate formalized mechanism to address social and environmental issues.

Program Regulatory Environment and Institutional Arrangements

Program Regulatory and Legal Framework

Financial Management

7. The 1977 constitution of the United Republic of Tanzania underpins the legal framework for the PFM. Chapter 2 covers the executive branch of the Government and chapter 7 covers the roles of various bodies involved in the management of public finances, specifically the national assembly (legislature), the president (executive), and the CAG. Table 5.1 provides an overview of PFM-related laws that will relate to the Program.

Table 5.1. PFM-related Legislation in Tanzania

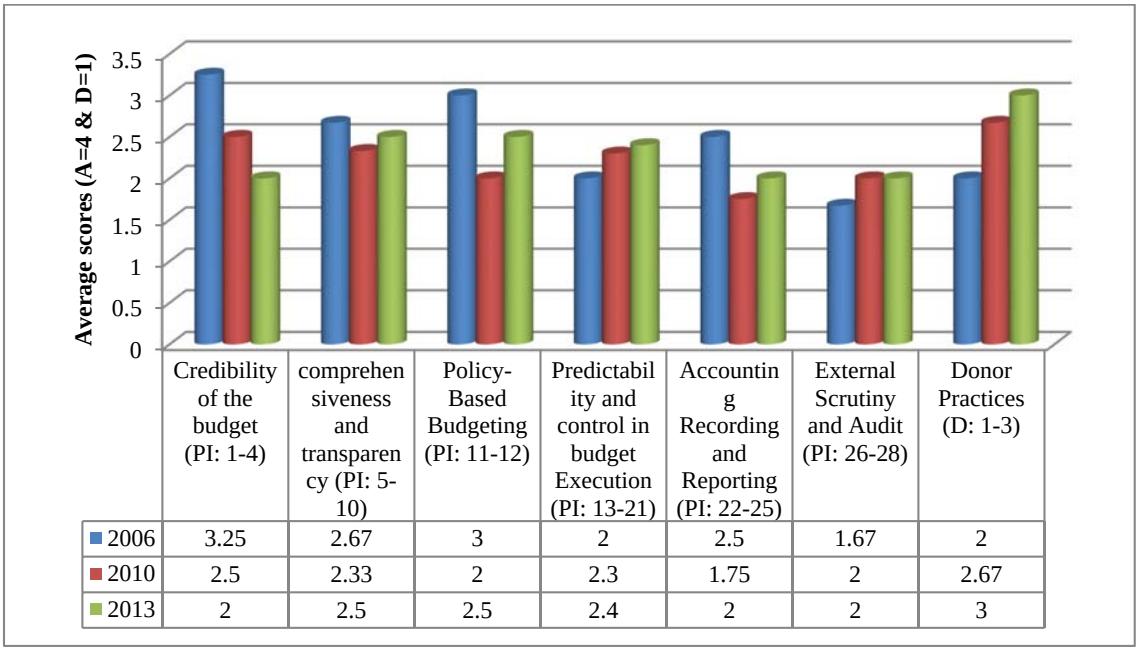
Area	Legal Aspect	Implementation and Enforcement
Budget preparation, execution, reporting, and accounting	• Public Finance Act 2001, amended 2004 and 2010 and its regulations • PPA 2011 and its regulations of 2013	The MEM and REA are governed by both Public Financial Act 2001 and its regulations and PPA 2011 and its regulations.
External audit	Public Audit Act 2008, amended 2011	The MEM and REA are audited by the NAO in line with the Public Audit Act 2008.
Legislative oversight	The constitution and the standing orders of the national assembly, including the Finance and Economic Affairs Committee and Parliamentary Accounts Committee (PAC).	The Finance and Economic Affairs Committee is responsible for the scrutiny of the GoT proposals on the estimates of expenditure for each year and follow-up on the execution of GoT programs and consider new programs. The PAC is responsible for the scrutiny of Government expenditure through annual financial accounts and audited reports presented to the national assembly.

Source: GoT 2013 PEFA Report.

8. **The GoT has undertaken a number of PFM reforms and is now in its fourth PFM Reform Program which commenced on July 1, 2012.** However, the PEFA[38] performance indicators for Tanzania for 2006, 2010, and 2013 show mixed results as shown in Figure 5.1.

[38] PEFA is a global partnership of bilateral and multilateral donors including the Bank formed to assess the condition of countries' public expenditure, procurement, and financial accountability systems and to develop a practical sequence of reform and capacity-building actions (http://www.pefa.org/).

Figure 5.1. Tanzania PEFA Scores



	Credibility of the budget (PI: 1-4)	comprehensiveness and transparency (PI: 5-10)	Policy-Based Budgeting (PI: 11-12)	Predictability and control in budget Execution (PI: 13-21)	Accounting Recording and Reporting (PI: 22-25)	External Scrutiny and Audit (PI: 26-28)	Donor Practices (D: 1-3)
2006	3.25	2.67	3	2	2.5	1.67	2
2010	2.5	2.33	2	2.3	1.75	2	2.67
2013	2	2.5	2.5	2.4	2	2	3

9. These findings show improvements in predictability and control in budget execution since 2006, although a lot more remains to be done in relation to the effectiveness of internal controls for non-salary expenditures (PI[39] 20). PEFA revealed that Tanzania has continued to make progress in PFM reforms in key areas such as planning and budget, accounting and reporting, external and internal auditing, Integrated Financial Management System (IFMS), and procurement through the Public Financial Management Reform Program funded by the GoT and DPs including the Bank. The GoT has continued to improve debt management, cash management, budget preparation, and execution and has strengthened the NAO and oversight bodies.

10. According to the PEFA report, apart from the ongoing PFM reforms, challenges remain with regard to inadequate internal controls particularly on non-salary expenditures, fiscal risk to the budget posed by public entities, unreliable cash forecasting, multiple budget reallocations, execution of the budget through a monthly cash rationing system, ineffective commitment control, and little effort by the executive to follow up on closure of audit recommendations included in CAG reports.

11. As a mitigation measure, the Bank through the DPO is supporting the GoT under the Open Government Partnership initiative and through the Open Government and Public Financial Management (OGPFM) DPO. The OGPFM is a three-year DPO that seeks to support the Government in establishing open data to increase access and use of service delivery information as well as to improve budget credibility and execution through better cash management, public investment management, and procurement.

12. Other mitigation measures undertaken by the GoT to improve its PFM include strengthening the internal audit function at the central Government and its agencies, by making

[39] PI stands for performance indicator.

the internal audit function more effective with regard to (a) reporting to various stakeholders outside the executives and appointment of an assistant internal auditor general responsible for the central ministries and LGAs, appointment of another four assistant internal auditors general responsible for payroll and budget, risk management and controls, quality assurance, and technical audits; (b) strengthening internal audit capacity building for resources, training in modern skills, and recruitment of additional staff; and (c) strengthening audit committees through the development of audit committee guidelines to be used by all public sector organizations. The audit committee guidelines became effective on July 1, 2014.

13. The overall PFM country risk is assessed as Moderate.

Procurement

14. **The legal and regulatory framework for this Program's procurement will be governed by the new PPA of 2011 (PPA 2011) and attendant regulations of 2013.** Procurements at the REA will follow the PPA No.7 of 2011 and the associated regulations of December 2013. The legal framework is based on the United Nations Commission on International Trade Law model. The legal framework is quite robust and covers all aspects of public procurement at all levels of Government and is internationally acceptable. Under PPA 2011, the procurement function is decentralized to Procuring Entities (Pes) while the PPRAs provide oversight functions. The public procurement institutional setup comprises policy and monitoring functions, as well as implementation of procurement law. Five organs have been established to carry out policy and monitoring functions. These organs are (a) the Public Procurement Policy Division established under the MoFP with the responsibility to develop and monitor procurement policy; (b) the PPRA which has been established to regulate and monitor procurement activities in the PEs; (c) the Public Procurement Appeal Authority (PPAA) with the mandate of hearing and determining appeals and complaints from the bidders; (d) the Procurement and Supplies Professionals and Technicians Board that has been established to regulate, develop procurement cadre, and monitor conducts of procurement and supplies professionals in the country; and (e) the Government Procurement Service Agency (GPSA), which has been established to coordinate and manage procurement of commonly used items and services. The PEs are responsible for undertaking procurement in accordance with the law. To improve further compliance, efficiency, transparency, fair competition, and value for money and controls in public procurement, the Government is moving toward modernizing its procurement function by introducing e-Procurement. The establishment of the e-Procurement system has not been completed in the country despite the fact that the feasibility study on the implementation of e-Procurement in Tanzania was carried out in April 2011. However, through the Regional Communications Infrastructure Program (RCIP 3) financed by the Bank, the Government intends to establish a Unified National e-Procurement System starting with a pilot in two PEs, namely the Medical Store Department and GPSA. At the time of this assessment, procurement of the system was at tendering stage.

15. PPA 2011 has strengthened some mandates of the PPRA, including power to cancel procurement proceedings after conducting an investigation and being reasonably satisfied that there is a breach of the act and its regulations. The act has introduced a 14-day cool-off period during which an intention to award the contract is communicated to all participating bidders, giving them an opportunity to submit complaint(s) against the proposed award if any. Furthermore, the

procurement complaint review process has been changed to a two-tier system involving the head of the PEs and PPAA with the PPRA excluded in the review of complaints ladder, thus substantially reducing overall time for handling complaints. The regulations made under PPA 2011 have reduced the tendering period from 45 to 30 days for international competitive tendering; from 30 to 21 days for national competitive tendering; from 14 to 8 days for international shopping; and from 7 to 4 days for national shopping. PPA 2011 has a provision, which requires that all contracts above TZS 1 billion (about US$500,000) should be vetted by the AG before signing such contracts, otherwise such a contract would be declared void. There are risks of delays in the process of vetting the contracts due to limited capacity in the AG's office to vet all contracts above the threshold, taking into account that there are more than 475 PEs registered by the PPRA to date. Given the threshold for vetting, some of the procurements processed through competitive quotations are subject to vetting by the AG. Otherwise, the general institutional setup and arrangements, including the overall basic principles of the public procurement system, have remained the same as under the repealed PPA 2004.

16. PPA 2011 has enhanced the definition of F&C in broad terms by including definitions of coercive practices, collusive practices, and obstructive practices that were missing in PPA 2004. Furthermore, PPA 2011 vests powers to the PPRA to blacklist and debar a bidder who has been debarred by a foreign country, and/or an international organization such as the Bank, in cases related or unrelated to F&C for a period equal to the period of debarment by the respective international organization plus a further period of 10 years (for F&C cases) or 5 years (for non-F&C cases). The PPRA is mandated to debar and blacklist a tenderer from participating in public procurement or disposal proceedings if fraud or corrupt practices are established against the tenderer; the tenderer fails to abide with a bid securing declaration; the tenderer breaches a procurement contract; or the tenderer makes false representation about his qualifications during tender proceeding. The PEs are not allowed to procure from, contract with, or engage a tenderer who has been blacklisted from participating in public procurement proceedings. A blacklisted tenderer may appeal against the decision to the PPAA within 21 days from the date when he became aware or should have become aware of such a decision. The PPRA is required to inform the relevant professional bodies upon debarring and blacklisting a tenderer. However, tenderers who have been debarred and blacklisted by the PPRA are not automatically blacklisted by the Bank and therefore, they will be eligible to participate in the procurements of the projects funded by the Bank. In this regard, the REA will use the debarment list publication by the Bank in the event it wants to debar any tenderer.

17. PPA 2011 complies with the applicable obligations deriving from national and international requirements. The procurement policies under PPA 2011 are based on the need to make the best possible use of public funds while conducting all procurement with integrity and fairness. All public officers and members of tender boards (TBs) who are undertaking or approving procurement are required to be guided by the basic considerations of the public procurement policy, including the need for economy and efficiency in the use of public funds; giving all eligible bidders/consultants equal opportunities to compete in providing goods or executing works or providing services; encouraging national manufacturing, contracting, and service industries; and the importance of integrity, accountability, fairness and transparency in the procurement process.

18. For the implementation of PPA 2011, a set of regulations have been issued, including the Public Procurement Regulations 2013 and the Government Notice No. 446 of December 20, 2013.

These are supplemented by the LGAs' (Establishment and Proceeding of the TBs) Government Notice No. 330 of 2014 for procurements at the LGAs. In line with the issued regulations, various documents as working tools have been revised to be in line with PPA 2011 and have been issued including Standard Bidding Documents (Procurement of Works, Procurement of Goods, and Procurement of Non-consulting Services), Standard Request for Proposals, Guidelines on the Tenders Evaluation (works, goods, and non-consulting services), Guidelines on the Technical and Financial Proposals Evaluation and Report Preparation, Guidelines for Preparing Responsive Proposal, and Guidelines for Preparing Responsive Bids and Procedural Forms. All these documents are accessible on the PPRA's website free of charge (http://www.ppra.go.tz).

19. **Thresholds for use in procurement.** The procurement and selection methods, including the thresholds, are stipulated in the Seventh and Eleventh Schedules, respectively, of the regulations. The procurement and selection methods and thresholds are outlined in table 5.2.

Table 5.2. Tanzania Public Procurement Methods of Selection and Limit of Application (in TZS)

Goods, Works, and Non-consulting Services				Minimum Tendering Period
Method of Procurement	**Goods**	**Works**	**Non-consulting Services**	
International Competitive Tendering	No limit	No limit	No limit	30 days
National Competitive Tendering	Up to 1,000,000,000	Up to 5,000,000,000	Up to 1,000,000,000	21 days
Restricted Competitive Tendering[40]	No limit but must be justified	No limit but must be justified	No limit but must be justified	21 days - National Competitive Bidding (NCB) and 30 days - International Competitive Bidding (ICB)
Competitive Quotations (Shopping)	Up to 120,000,000	Up to 200,000,000	Up to 100,000,000	4 days - National shopping and 8 days - International shopping
Single Source Procurement[41]	No limit but must be justified	No limit but must be justified	No limit but must be justified	–
Minor Value Procurement	Up to 10,000,000	Up to 20,000,000	Up to 10,000,000	–
Micro Value Procurement	Up to 5,000,000	n.a.	n.a.	–

[40] Limited to number of bidders who have already prequalified; specialized nature or can be obtained from a limited number of contractors and suppliers; the estimated contract values are within the limit and there is an urgent need for goods, works, or services such that there would be insufficient time to engage in open competition.

[41] Applies where goods or services are available only from a particular supplier or service provider; there is an urgent need for the goods or services and engaging in tendering proceedings would be impractical; PE having procured good, equipment or technology, service or spare parts from a supplier following national or international competitive method and determines that additional suppliers are the same type as those procured under an existing contract are required.

Goods, Works, and Non-consulting Services				Minimum Tendering Period
Method of Procurement	**Goods**	**Works**	**Non-consulting Services**	
Selection and Employment of Consultants				
International Competitive Selection		No limit		–
National Competitive Selection		Up to TZS 1,500,000,000		–
Restricted Competitive Selection		No limit but must be justified		–
Consultant Qualification		Up to TZS 200,000,000		–
Single-Source Selection		No limit but must be justified		–
Individual Selection		Up to TZS 150,000,000		–
Minor Value Procurement		Up to TZS 10,000,000		–

20. **Review of Resolution of Complaints is a two-tier system as provided under PPA 2011 and its regulations.** The act and its regulations provide a two-tier system (levels) for handling procurement complaints, under the PE and PPAA. Under PPA 2011, the PPRA is no longer involved in reviewing complaints from bidders with the aim of limiting the PPRA's function to advisory and monitoring procurement activities as well as eliminating conflict of interest when it was handling both functions—advisory and complaints reviewing. However, for monitoring purposes, the aggrieved bidder is required to serve a copy of the complaint to the PPRA and the accounting officer (AO) is required to submit a copy of the decision to the PPRA within seven days from the date of its delivery. The move of removing the PPRA from the complaints handling process has considerably reduced the number of days used to handle complaints, from 105 days to 59 days. The AO is the first appeal level in handling procurement complaints. If the complaints are not handled within a specified time or the aggrieved party is not satisfied with the decisions of the head of the PE, the aggrieved bidder can submit a complaint to the PPAA as a second level. To make the review process more robust, the head of the PE is mandated to establish a review panel based on their expertise and experience on the subject matter of the tender. The PPAA is an independent authority established under the act and comprises members from the private sector. The PPAA has issued the Public Procurement Appeals Rules Government Notice No. 411 of 2014, which are in line with PPA 2011, including the fees payable for different submissions. The act provides provision of judicial review in case the second level fails to make a decision within the prescribed time limit. Figure 1.3 in Annex 1 of the Fiduciary Assessment illustrates the two-tier complaint system as provided by PPA 2011 and its regulations 2013.

21. Since its establishment, the PPAA has handled 253 complaints and appeal cases, of which 232 cases were determined and 21 case were withdrawn by the appellants. Table 5.3 demonstrates the statistics of appeal cases lodged, determined, dismissed on technicalities, and withdrawn. The trend indicates that the number of appeals or complaints is increasing yearly as many bidders become aware of the review system and confident with the system. The statistics show that 61 percent of the determined cases were ruled in favor of the aggrieved bidders, 2.4 percent of the cases were ruled in favor of the PEs, and 14.6 percent of the determined cases were dismissed on technical grounds. During a discussion with the PPAA, it was apparent that the number of cases which had been lodged to date were fewer compared to the number of tender opportunities being advertised and processed by the PEs each fiscal year. This does not imply that the bidders are not aggrieved in the procurement processes but rather that the aggrieved bidders do not complain to

maintain business relationships with the PEs and some are afraid of being sidelined in the future procurement opportunities. On the other hand, it was revealed that most of the bidders are not aware of the complaints review system. The PPAA confirmed that sensitization was a problem as the appeals authority has not been able to conduct enough awareness workshops for prospective bidders and stakeholders due to financial constraints.

Table 5.3. Appeals Lodged and Determined by the PPAA

Year	Lodged	Determined	Determined in Favor of Appellants	Determined in Favor of the PEs	Dismissed on Technicalities	Withdrawn
2004/05	1	1	0	1	0	0
2005/06	11	10	3	5	2	1
2006/07	10	10	3	3	4	0
2007/08	11	10	7	1	2	1
2008/09	27	25	16	6	3	2
2009/10	20	20	15	3	2	0
2010/11	32	31	23	5	3	1
2011/12	14	11	6	2	3	3
2012/13	30	28	13	9	6	2
2013/14	47	40	24	13	3	7
2014/15	50	46	32	8	6	4
Total	**253**	**232**	**142**	**56**	**34**	**21**

22. The assessment team found that only one case from the REA was lodged to the PPAA and it was determined in favor of the REA. The referred case is appeal case no. 67 of 2010 between M/s Grontmij versus the REA in relation to consulting services for REA capacity building through Tender No. REA/EoI-3 /2008/9 and the consultant's proposal was rejected for being late. It was observed that the REA does not maintain a log book for recording complaints or disputes, neither received nor investigated and determined by the AO. It was reported that there were no official complaints or disputes lodged by aggrieved bidders. The REA should maintain a logbook to register complaints lodged by the aggrieved bidders.

Fraud and Corruption

23. The Prevention and Combating of Corruption Bureau (PCCB) is the leading public agency that is mandated to address corruption in Tanzania. The bureau was established under the Prevention and Combating of Corruption Act. No. 11 of 2007 (PCCA 11/2007) and came into force on July 1, 2007. The PCCB has offices in all 24 regions and in all Government LGAs (134 LGAs by 2011/12 statistics) in the Tanzania mainland. The PCCB has a national workforce of about 1,700 staff, of which about half are involved in investigation.

24. The PCCB's capability to combat corruption has increased slightly in recent years with the number of new cases in courts increasing from 150 in 2011 to over 300 in 2013, with a marginal increase in the number of convictions. The conviction rate was 7 percent in 2011 and rose to 10 percent in 2013, which is the same level as achieved in 2010, which is still low compared to the total number of cases in courts. The PCCB has a presence in all districts and is. The agency prepares and submits annual reports on its performance to the president, with the most recent being for 2012/13.

Table 5.4. PCCB Performance Statistics, 2005–2013

Years	*Allegations Received	Cases Investigated	Completed Investigation Files	Administrative Actions Taken	New Cases into Courts	Total Cases Prosecuted	Conviction Cases	% Conviction to Total Prosecuted
2005	3,121	677	540	111	50	218	6	3
2006	6,320	1,528	1,781	209	71	251	18	7
2007	8,235	1,266	1,966	280	196	352	35	10
2008	6,137	928	1,038	74	147	416	37	9
2009	5,930	884	1,188	40	222	463	46	10
2010	5,685	870	924	29	224	587	56	10
2011	4,765	819	868	30	193	709	52	7
2012	5,084	1,178	881	27	288	723	47	7
2013	5,456	1,100	1,027	19	343	894	89	10
(Jan–June) 2014	2,765	391	415	6	166	837	87	10

Source: www.pccb.go.tz .

25. Corruption is perceived to be widespread in Tanzania. In general, according to the Afro Barometer Survey, 71 percent of sampled Tanzanians view corruption as increased in 2014. Tanzania's percentile rank in the Worldwide Governance Indicators for the control of corruption has declined significantly from 41.8 in 2008 to 22.5 in 2013. Over the past five years, the Mo Ibrahim index shows that Tanzania's governance performance has been declining at an average of -3.7 percent annually. A significant part of the decline was in the clustered indicator on safety and rule of law, which includes accountability and corruption. Tanzania's corruption perception index fell from 33 in 2012 to 31 in the 2014 Transparency International ranking. This ranks it at 26 out of 47 Sub-Saharan countries. At the country level, the risk of corruption is high.

Institutional Framework and Implementation Arrangements

Institutional Framework

26. The Rural Energy Act No. 8 of 2005 was enacted by the parliament of Tanzania to establish the REB, REF, and REA.

27. **REA.** The REA is an autonomous institution responsible for promotion and facilitation of investment and access to modern energy services in the rural areas of mainland Tanzania. The REA is a public agency under the MEM. The agency provides grants and subsidies to developers of rural energy projects and facilitates provision of TA, research and development, training, and other forms of capacity building to qualified developers in relation to planning and preparation of a project before an application for a grant. The REA is governed by the REB, which is entrusted to oversee the REF. The agency is responsible for the overall management of the REF, subject to directives and mandate from the REB.

28. **REB.** According to the law, the REB is the governing board of the REA and REF. It is responsible for oversight functions, including the appointment of a TRAG who shall be responsible for the administration of the REF.

29. **TRAG.** Section 23 (1) of the Rural Energy Act empowers the REB to appoint a TRAG. The TRAG is responsible for monitoring the implementation of REF-supported projects and disbursement of grant proceeds from the REF to the project developers and ensuring that preconditions set by the REB before the release of grant proceeds are met by project developers. The CRDB Public Limited Company was recently appointed as the TRAG after winning a tender initiated by the REA in line with the Rural Energy Act. The TRAG is selected every three years. Before the appointment of CRDB, the TIB was the agent representing the first cycle of the TRAG.

30. **REF.** The REF provides capital subsidies to rural energy projects. Funding from the REF is intended to be available to developers of energy projects implemented by private entities, public entities, cooperatives, and local community organizations. The sources of funds for the REF are Government revenues, contributions from international financial organizations, multilateral and bilateral agencies, and other DPs. Also, the REF receives funds from levies of up to 3 percent on the commercial generation of electricity to the national grid; from levies of up to 3 percent on the generation of electricity in specified isolated systems; fuel importation pre-inspection fees of up to 0.06 percent of the value of import; and fees from programs, publications, seminars, consultancy services, interest income, and other services provided by the agency.

31. The REF received TZS 192.5 billion, TZS 238.9 billion, 118.6 billion, and 95.4 billion in FY2014/15, FY2013/14, FY2012/13, and FY2011/12, respectively. The funding level has been fluctuating over the years due to the unpredictable nature of funding from both the Government and DPs. The petroleum levy increased significantly over the past two years due to increase in the number of imported vehicles and increase in consumption of petroleum products in the country.

32. According to the Rural Energy Act, the REA is required to prepare financial statements which disclose its operations and receipts and disbursements of the REF. The NAO audits the financial statements of the REA that include REF affairs annually. The NAO is allowed by the law to subcontract audit of public entities to private sector auditors.

Implementation Arrangements

33. The MEM is the lead ministry responsible for energy and minerals in the United Republic of Tanzania. The MEM will take a leading role in coordinating the project implementation and chairing the steering committee of the project that will include all the rural electrification project stakeholders.

34. The REA will be the main implementation agency of the project. The MEM will implement its own small TA activities. However, MEM activities will not be directly linked or be preconditions for implementation of REA activities. Hence, the risk of delays due to the involvement of more than one entity will be minimal. Both the REA and MEM will have responsibilities to report to the Bank on the use of the credit proceeds.

35. The director of Finance and Administration of the REA will manage and coordinate the accounting function of the project for REA operations. The MEM chief accountant will manage and coordinate the accounting function of the project for MEM operations.

Program Fiduciary Performance and Significant Fiduciary Risks

Financial Management Risk Consideration

Planning and Budgeting

36. **Overall FM objective.** The Program budget is realistic, is prepared with due regard to Government policy, and is implemented in an orderly and predictable manner.

37. **REA.** The approach to preparation of AWPB is participatory involving staff, department directors, the director general, and the REB. The preparation of the AWPB is based on the MTEF and REA Strategic Plan for 2012/2013–2016/2017. The REA annual budget is submitted to the MEM for consolidation into the ministry annual budget.

38. **MEM.** The ministry's planning and budgeting follows the existing MTEF. The budget process is participatory and begins at the lower level of authorities. The AWPB is prepared based on the policy guidelines issued by the MoFP on the fiscal policy of the Government under the MTEF. The MEM develops an internal budgeting calendar and timelines based on the cycle set by the MoFP. The MEM ensures that DPs' contributions are fully reflected in their annual budget. The Strategic Budget Allocation System is used for planning and budgeting. Management accounts are prepared on a quarterly basis, which compares physical performance and budget. Comments related to significant budget variations are acted upon regularly. Staff at the budget unit are adequate, qualified, and experienced to handle the budgetary processes.

39. Overall, the planning and budgeting arrangements for the REA and MEM are adequate and satisfactory for implementation of the new project.

Accounting, Accounting Staff, and Financial Reporting

40. **Overall FM objective.** Adequate project records are maintained and transactions are properly coded and classified to ensure that accurate, timely, and reliable financial data are produced for project reporting. Financial reports are produced and disseminated to project stakeholders for decision making.

REA Accounting Systems and Staffing Arrangements

41. The financial statements are prepared in accordance with International Public Sector Accounting Standards. The basis of accounting is accrual basis. The REA chart of accounts is properly elaborated with account codes and account descriptions, which are applied for assets, liabilities, revenue, and expenditure. The chart of accounts allows for proper classification of project expenditure by nature of expenses and revenue source. The chart of accounts is comprehensive and expandable to accommodate different user requirements. The accounting package used by the entity is Sage Accapack. Fixed assets are maintained in a Microsoft Excel spreadsheet. There is adequate system for safeguard over fixed assets. Therefore, no mitigation measures are required regarding the management of fixed assets.

42. The REA accounting unit has four staff, including the director of Finance and Administration. The staff have good qualifications, including bachelor's degrees, Certified Public

Accountants (Tanzania), and master's degrees in FM. REA staff have experience in handling a Bank-funded project, namely TEDAP. Accounting staff have received various trainings, including Bank FM and disbursement trainings.

43. Overall accounting arrangements for the REA, including staffing, are adequate to handle the program.

MEM Accounting Systems and Staffing Arrangements

44. The financial reporting processes at the MEM are subject to the Public Finance Act 2001, amended 2004 and 2010, and its regulations. The accounting system is essentially a modified cash accounting system with provision for commitment accounting. At the MEM, the national chart of accounts, which is based on the MTEF and Government financial statistics codes, is applied for revenue and expenditure classification. The chart of accounts allows for proper classification of expenditure by sector, programs, and nature of expenses. The chart of accounts is comprehensive and expandable to accommodate different user requirements.

45. MEM transactions are processed on the integrated FM system called EPICOR (Version 9.05) and in accordance with the Public Finance Act 2001 and GoT Accounting Circular No.1 of 1999/2000, which requires all GoT transactions to be processed under the EPICOR.

46. The Accounting Unit at the MEM has 37 staff, including the chief accountant. The accounting staff are adequate, qualified, and experienced in handling Bank-funded projects, including TEDAP and the Energy Sector Capacity Building Project. Some staff at the MEM have attended Bank FM and disbursement trainings. Overall, the staff are adequate, experienced, and qualified to handle the program.

Financial Reporting Arrangements

47. Both the REA and MEM transactions are processed through accounting software, Sage Accapack and EPICOR, respectively. Both entities prepare annual accounts on a historical basis and submit to the NAO within a period of three months after the end of the financial year. The REA and MEM separately will prepare project annual financial statements in accordance with the International Public Sector Accounting Standards. Each entity will submit the audited financial statements of the project to the Bank within six months after the financial year end. These financial statements will comprise the following:

(a) A **Statement of Cash Receipts and Payments,** which recognizes all cash receipts, cash payments, and cash balances of the project

(b) A **Statement of Financial Position/Balance Sheet** as at the end of the financial year showing all the assets and liabilities of the project

(c) **A Statement of Comparison of Budget to Actual Amounts** as at the end of the financial year showing actual amounts, original budget, final budget, and variance as appropriate

(d) **A separate note to financial statements** which shows opening fund balance, cash receipts, cash payments, and closing fund balance of the account, which will be maintained by the entity for purposes of implementation of the PROGRAM

(e) The **accounting policies adopted and explanatory notes.** The explanatory notes should be presented in a systematic manner showing a summary of fixed assets by category of assets and listing individual withdrawal applications.

(f) A **management assertion** that Bank funds have been expended in accordance with the intended purposes as specified in the relevant Bank legal agreement

Internal Controls (including Internal Audit)

48. **Overall FM element objective.** There are satisfactory arrangements to monitor, evaluate, and validate program results and to exercise control over and stewardship of program funds.

49. **REA Internal Control Environment.** Internal control systems of the REA identified satisfactory levels of segregation of duties and controls. The basis for internal control procedures in the REA are documented in the REA Finance and Accounting Manual 2008. The internal control systems documentation is supplemented by the Public Finance Act 2001 and Public Regulations 2001 (revised 2004) and they are adequate for use by this project to ensure funds are used for the purposes intended. The Accounting Manuals and Finance Act describe the accounting system, that is, the accounting records, computer files, chart of accounts, supporting documents, the accounting processes from the initiation of a transaction to its inclusion in the financial statements, authorization procedures for transactions, and the financial reporting process used to prepare the financial statements. A review of the internal control system revealed that there are adequate internal controls in place which can be relied upon to manage this project's funds. In addition, the PAC plays a significant oversight role through the review of REA audited accounts and management letter reports.

50. Internal audit at the REA uses a risk-based audit approach to carry out its work. The REA IAU prepares an annual audit work plan which is implemented on a quarterly basis. The mission noted that the audit committee of the REA met quarterly to review quarterly internal audit reports. However, the audit committee is considered ineffective because the current composition includes some members who are heads of units or directors of departments. To mitigate this risk, new audit committee guidelines have been issued to strengthen independency and effective functioning of the audit committees.

51. **MEM Internal Control Environment.** Internal control systems of the MEM identified satisfactory levels of segregation of duties and controls. The basis for internal control procedures of the MEM are documented in the Public Finance Act 2001 and Public Regulations 2001 (revised 2004 and 2010) and they are adequate for use by this project to ensure funds are utilized for intended purposes.

52. The Finance Act is the basis for the accounting system, that is, the accounting records, computer files, chart of accounts, supporting documents, the accounting processes from the initiation of a transaction to its inclusion in the financial statements, authorization procedures for transactions, and the financial reporting process used to prepare the financial statements. A review

of the internal control system revealed that there are adequate internal controls in place which can be relied upon to manage this project's funds. The PAC plays significant oversight role through the review of MEM audited accounts and management letter reports.

53. For the REA, there is a risk that the MEM internal audit committee is also considered ineffective because the current composition includes some members who are heads of units or directors of departments. To mitigate the risk, new audit committee guidelines have been issued to strengthen independency and effective functioning of the audit committees.

Internal Audit Staffing

54. **REA.** The IAU at the REA has two staff, including the chief internal auditor. The unit is responsible for regular internal audits of REF and REA operations. In addition, the unit provides oversight on the projects funded out of REF resources. However, based on the mission assessment, there is risk that the IAU is currently understaffed given the current level of operations, the internal audit annual work plan, and anticipated increase in volume of work upon Program effectiveness. In view of the above, there is a need to recruit one additional internal auditor to ensure smooth project implementation. Internal audit staff have attended Bank project FM and disbursement training, risk-based audit training, and performance audit training.

55. **MEM.** The IAU at the MEM has eight staff, including the chief internal auditor. Internal audit staff have attended Bank project FM and disbursement training, risk-based auditing, and performance audit trainings.

56. Overall, the staffing level at the REA and MEM is qualified and experienced to handle the new project. Internal audit staffing at the MEM is adequate. However, the internal audit staffing level at the REA is considered inadequate. Therefore, the REA should recruit one additional internal audit staff to ensure smooth project implementation.

Treasury Management and Funds Flow

57. **Overall FM objective.** Adequate and timely funds are available to finance program implementation.

58. The REA and MEM receive development and/or recurrent funds from the central Government. Funds received from the central GoT are withdrawn from the consolidated fund in line with paragraphs 135–136 of the constitution of the United Republic of Tanzania. Additionally, the REA receives money from other sources, including the DPs. Some DPs disburse funds directly to the REA while SIDA disburses to the MoFP, which in turn releases the same to the REA.

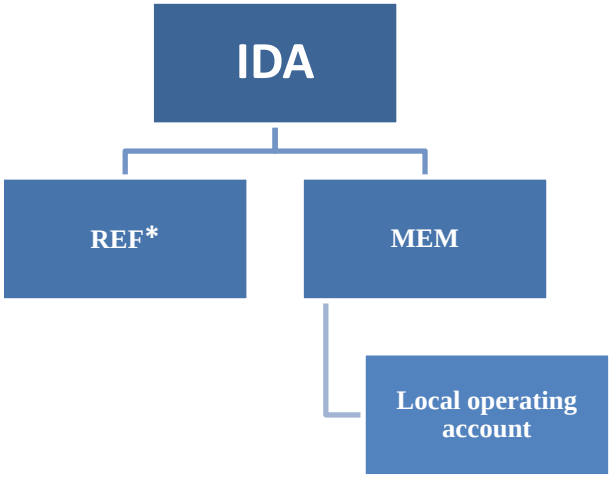
59. The assessment revealed instances of delays and unpredictability of release of funds from the treasury to the REA and MEM for both development and recurrent expenditure. The concern regarding the unpredictable nature of release by the MoFP needs to be addressed by the MoFP through timely and regular release of funds based on approved budget. In the case of the REA, as part of addressing the challenge, the petroleum levy will be directly deposited into the REF's bank account effective from FY2015/2016. The REF bank account will be managed by the REA.

60. **REA.** According to the Rural Energy Act, which established the REA and REF, all funds to support rural energy projects will be under the REF and managed by the REA. The REF has different sources of funding as described in figure 5.2, including the Government and DPs. All the funding sources will be consolidated into the REF. Project funds will flow from IDA into the REF account denominated in U.S. dollars. From there funds will be disbursed to beneficiaries in line with criteria described in the REF guidelines. Also, funds will be disbursed on the basis of approved AWPB. Funds for the project will be disbursed to meet eligible expenditures upon achievement of the DLIs. The details of the Bank of Tanzania account and their signatories should be submitted to the Bank between the signing of the credit and its effectiveness.

61. **MEM.** The program funds will flow from IDA into the MEM account denominated in U.S. dollars. Funds will be transferred to the local operating account. The details of the accounts and their signatories should be submitted to the Bank between the signing of the credit and its effectiveness.

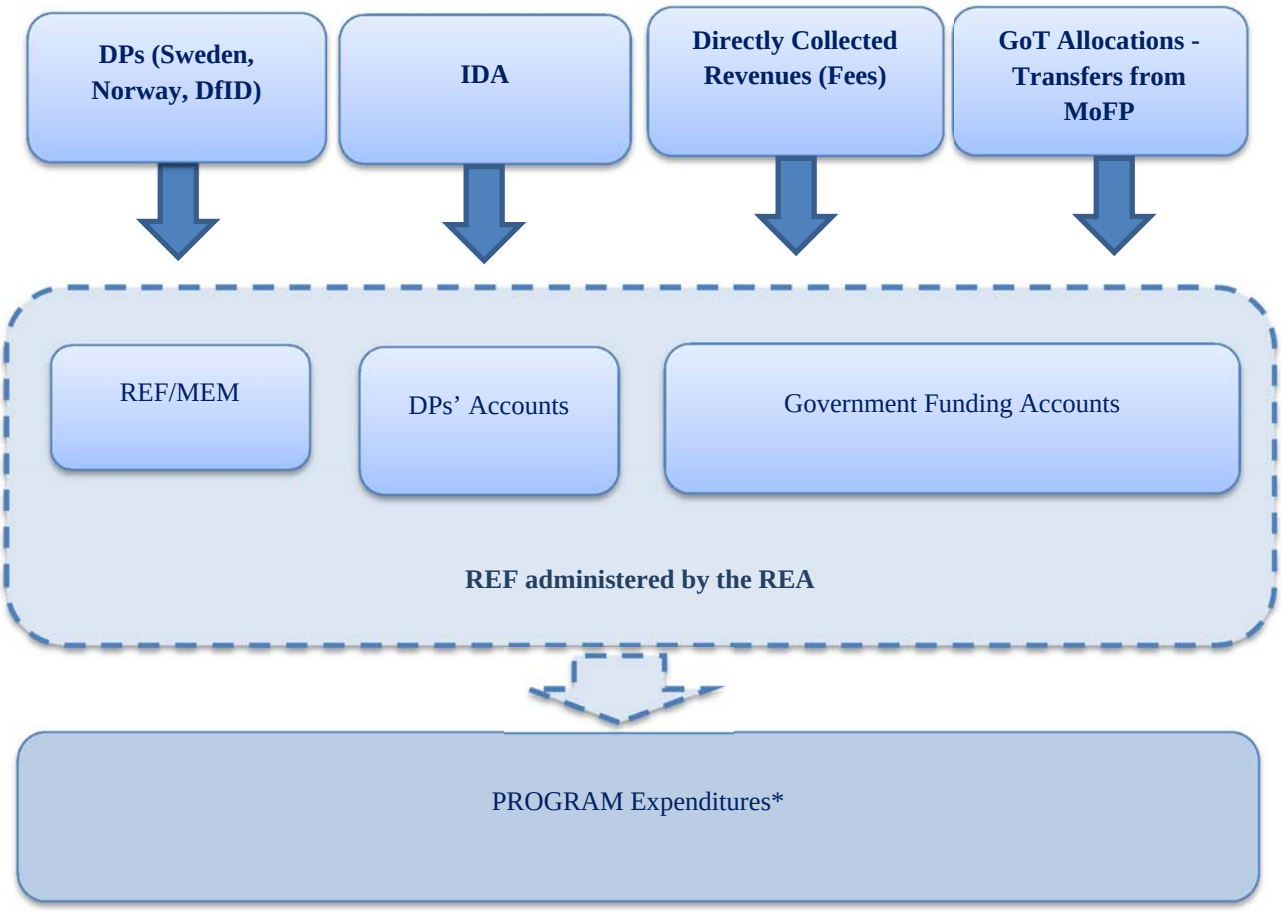
62. Overall, treasury management and funds flow arrangements are adequate for the program.

Figure 5.2. Funds Flow: REF (for funding the REA) and MEM



Note: * See figure 5.3.

Figure 5.3. Funds Flow Diagram for REA under the REF



External Audit

63. **Overall FM objective.** Adequate independent audit and verification arrangements are in place and take account of the country context and the nature and overall risk assessment of the program.

64. Article 136 of the constitution of the United Republic of Tanzania empowers the NAO to audit and report on the financial affairs of all Government programs including donor-funded projects. The law allows the NAO to subcontract audit assignments as needed. The private firms to be subcontracted should be among those that are acceptable to IDA. In case the audit is subcontracted to a firm of private auditors, IDA funding may be used to pay the cost of the audit.

65. The NAO has regularly carried out IDA-financed project audits in time and issued reports within six months of the year end as stipulated in the financing agreements. The audits include the current projects, that is, TEDAP, and the Backbone Transmission Project. These audits are of a financial nature, risk-based, and primarily comprise transaction-level testing and internal controls are examined and reported on. The audit reports are of acceptable quality. The current IDA-financed projects have received clean audit reports, every year, since the first year of project effectiveness.

66. Majority of issues raised by external auditors on the management letter reports have been addressed by the entities, that is, the REA and MEM, to a satisfactory level.

67. The project annual audits will be done in accordance with the International Standards on Auditing. The audit report and the management letter will be submitted to the Bank no later than six months after the end of the financial year. The Program is required to disclose the audited financial statements in a manner acceptable to the Bank. Following the Bank's formal receipt of the audit report from the project, the Bank will make them available to the public in accordance with the Bank policy on Access to Information.

68. Overall, there are adequate, independent audit and verification arrangements in place, given the country context and the nature and overall risk assessment of the new project.

Procurement Risk Considerations

69. **Procurement risk is rated High.** This assessment proposes a set of measures to be taken both before as well as during Program implementation to address the risk. Main areas of significant risk to the Program are the following: inadequate staffing of the PMU, Directorate of Technical Services, and IAU; inadequate staff capacity for the design and preparation of technical specifications and requirements, preparation of bidding documents and request for proposal for large packages, evaluation of bids/proposals for large packages, and contract management; delays in releasing funds from the Government; delays in vetting contracts above TZS 50,000,000 by the AG; weak records filing and data management system; and inappropriate contract management arrangement and weak contract management. Furthermore, there are inherent risks in PPA 2011, including receiving frivolous complaints during the cool-off period of 14 days. These risks will need to be addressed, monitored, and evaluated throughout the Program.

Procurement System

70. **REA procurement profile.** The REA has established organs to process procurement. The organs established by PPA 2011 are the TBs, AO, PMU, User Departments (UDs), Evaluation Committees (ECs), IAU, and Inspection and Acceptance Committee. The assessment found out that the REA had these organs in place and ad hoc committees are constituted as needs arise pursuant to procedures outlined in the law. In FY2013/14 and FY2014/15, the REA processed a total 140 and 46 contracts, respectively, in all procurement categories of works, goods, consulting services, and non-consulting services through open competitive bidding. Procurement of goods contract takes major share both with regard to number of contracts and value, especially supply and installation of distribution substation medium and voltage lines, transformers, and connection to customers. About 95 percent of contracts are energy related, either grid expansion or off-grid. The number of local purchase orders and call-off orders issued in FY2013/14 were 116 (US$279,700) and 46 (US$23,700), respectively. For FY2014/15, the number of local purchase orders were 129 (US$814,000).

Table 5.5. Annual Number of Contracts and Contract Values Handled by the REA

Fiscal Year	Number of Contracts					Procurement Expenditure (US$) x 10^6
	Goods	Works	Consulting Services	Non-consulting Services	Total	
FY2013/14	114	0	22	4	140	462.19
FY2014/15	12	2	20	2	46	48.22
Total	**126**	**2**	**42**	**6**	**186**	**510.41**

71. The procurement expenditure commitments for FY2013/14 and FY2014/15 were over and above the amount disbursed from the budgetary allocations. In FY2013/14, the overall budget was TZS 364,470,833,627 (US$216.5 million) while the amount disbursed was TZS 238,921,308,284 (US$149.3 million), which is 69 percent. Likewise, in FY2014/15, the overall budget was TZS 273,109,224,500 (US$170.7 million) while the amount released was TZS 192,529,299,791 (US$120.3 million). Consequently, on many occasions, the REA failed to meet its contractual obligations to pay contractors and consultants on time according to the terms and conditions governing the contracts due to insufficient funds.

72. **Performance of the REA on the PPRA's performance indicators.** The PPRA has been conducting procurement performance audits since FY2006/07, with the initial target of reaching 80 percent compliance by 2010/11. However, the compliance level by the end of the targeted period necessitated the PPRA to review and reduce the target compliance level to 72 percent by FY2013/14, in line with reducing performance indicators from 13 to 7 as well as allocating scores due to the importance of the procurement stage. Generally, there has been a significant increase in the compliance level, that is, the overall compliance level in FY2006/2007 for 20 PEs, FY2007/08 for 100 PEs, FY2008/09 for 99 PEs, FY2009/10 for 91 PEs, FY2010/11 for 174 PEs, FY2011/12 for 121 PEs, FY2012/13 for 120 PEs, and FY2013/14 for 68 PEs was 39 percent, 50 percent, 55 percent, 73 percent, 68 percent, 74 percent, 64.3 percent, and 65 percent, respectively. Equally, the performance of the REA has been increasing gradually and has surpassed the compliance level target of 72 percent. The FY2010/11 compliance level was 76 percent using 13 indicators; FY2012/13 was 70.5 percent and FY2013/14 was 80 percent using seven modified performance indicators. Some of the deficiencies noted by the PPRA during the audit of FY2013/14 were: (a) institutional setup (the IAU had not been fully established as there was no head of the unit and the AO was not issuing notices of intention to award the contracts to all bidders who participated in the tendering); (b) appropriate preparation and implementation of the annual procurement plan (APP) (templates issued by the PPRA were not properly used); (c) some tenders were incorrectly referenced; (d) some tenders were advertised before the General Procurement Notice (GPN) was published; (e) some of the tenders processed were not in the plan; (f) appropriateness of the tender process (14-day notice of intention to award was not issued, delays in processing tenders, and publication of contract awards was not done); (g) appropriateness of contract implementation (delays in paying vendors and insurances and professional liabilities were not submitted according to the terms and conditions of the contract), management of procurement records (minutes of tenders adjudication were kept in a separate file and inadequate space for keeping procurement records); and (h) implementation of the Procurement and Management Information System (did not submit contract completion reports and monthly, quarterly, and annual reports to the PPRA).

73. Apart from measuring the compliance level, the PPRA also used the Red Flags Checklist to detect symptoms of corruption in the procurements carried out by the PEs in the three phases of procurement—pre-bid phase, evaluation and award phase, and contract management phase. According to the PPRA's performance audit report for FY2013/14, the overall corruption likelihood for the REA was assessed to be 14 percent, which indicated there was low corruption likelihood. During this assessment (August 2015), the PPRA was carrying out contracts and performance audits at the REA. The PPRA normally shares audit reports for all the PEs and projects with scores of 20 percent or above on a red-flag scale, for possible investigation and further necessary action, with the PCCB.

74. **Procurement planning.** The PPA and its regulations require all the PEs to prepare APPs linked with the AWPB. The act emphasizes that procurement planning should commence at the design stage during the identification and preparation stages of the project cycle. To maximize economy and efficiency in its procurement, all PEs are required to aggregate their requirements within the departments of the institution. In compiling such plans, the PEs are required to establish appropriate methods of procurement and the timescale for each package to be calculated on the basis of the standard processing times prescribed in the regulations. It is also mandatory that the PEs advertise the APPs in the form of a GPN in the newspapers and submit a copy to the PPRA for publishing on its website and for monitoring purposes. At the REA, it was observed that the APPs are prepared based on the annual work plans of different departments and linked with the budget. However, the APPs are not updated to accommodate new packages and any change arising in the course of carrying out the procurement activities. The packages in the APPs were not processed according to the timelines indicated in the plans and there was no evidence that the APPs were updated to reflect actual implementation on the ground. Procurement plans are not used as an instrument to monitor progress of implementation of procurement activities but rather compliance with the law. During the assessment, it was noted that the REA had already published a GPN for FY2015/16 and the same was published in the PPRA's Journal and Tender Portal. It is required that the PEs publish GPNs and their revisions in the Tender Portal at least one month before any publication or notification of a tender or a request for proposals to prospective tenderers. The REA should update the procurement plans regularly to accommodate new requirements and ensure that packages in the plans are processed according to the scheduled dates. The REA should also use the procurement plan as an instrument for monitoring progress of implementation of procurement activities.

75. The assessment revealed that the budget amounts indicated in the APP are not realistic. This signifies inadequate feasibility study/design and cost estimate during the planning phase. The PPA requires the PEs during preparation of the APP to estimate requirements and compare with the likely availability of voted or donor funds so that priorities for procurement can be determined in accordance with available funds. Furthermore, the PPA and its regulations emphasize that the PEs prepare their estimates based on prevailing market prices and update them from time to time. Total contract prices for two tenders (20 lots each) out of three reviewed for extension of grids and connection to customers using the Turnkey Approach conducted through ICB were almost three times more than the budget amounts allocated in the APP. The budget allocated for Tender No. AE/008/2012-13/HQ/G/21—Supply and Installation of Distribution Substations (11/33 KV) Medium and Voltage Lines, Transformers, and Connection to Customers in Un-electrified Districts HQ and other Rural Areas—was TZS 194,000,000,000 (US$122.78 million), while contract awards were made to 15 lots at the total contract price of TZS 430,822,063,556

(US$272.67 million). The budget allocated for Tender No. AE/008/2013-14/HQ/G/15—Supply and Installation of Distribution Substation (11/33 KV), MV and LV Lines, Transformers, and Connections to Customers in Un-electrified Districts HQ and other Rural Areas—was TZS 75,000,000,000 (US$46.88 million), while awards were made to 20 lots at the total contract price of TZS 315,936,216,495 (US$197.46 million). The effects of committing unavailable funds are impairing the implementation of projects as the REA cannot pay contractors on time according to the terms and conditions governing the contracts, which leads to delays in executing the contracts. In an effort to ensure that cost estimates prepared by the REA in collaboration with TANESCO are realistic and reflect prevailing market prices, the REA is preparing a Rural Electrification Master Plan, which will cover a feasibility study, cost estimates of projects, and setting priorities. Because of capacity constraints, it is advised that the REA should engage consulting firms in all projects to carry out design, cost estimates preparation, and supervision of resulting contracts. The REA should ensure that the feasibility study, design, and cost estimate for each project are done thoroughly before advertising the tenders. To ensure that feasibility studies, designs, and preparation of cost estimates are done correctly, the REA should engage competent consulting firms.

76. **Procurement markets and practices.** The procurement market is normally influenced by the quantity and quality of economic operators, including suppliers, consultants, and service providers. Public procurement requires performance not only from the public sector but also from private sector participants. Most of the tender opportunities with regard to volume and number at the REA are related to energy—grid extension, off-grid projection, or consulting services. For FY2013/14, the total amount spent for energy procurement was TZS 739,503,440,161 (US$462.2 million), of which TZS 732,369,330,291 (US$457.73 million) was spent on goods for 44 contracts and TZS 7,314,109,870 (US$4.57 million) on consulting services for 18 contracts. In FY2014/15, the total amount spent was TZS 75,947,671,590 (US$47.5 million), of which TZS 70,060,192,603 (US$43.8 million) was spent on goods for 12 contracts, TZS 5,495,085,986 (US$3.4 million) on works for two contracts, TZS 314,100,000 (US$196,300) on consulting services for 16 contracts, and TZS 78,293,000 (US$48,900) on non-consulting services for two contracts. It is evident that electrical and renewable energy contractors and consultants are the main vendors who participate in the tenders being advertised by the REA. In Tanzania, the Engineers Registration Board (ERB) and Contractor Registration Board (CRB) regulates engineering works consultants and contractors, respectively. As matters of the law, all consulting firms and contractors, to be eligible to participate in the public tenders, are required to be registered by the respective statutory regulatory body. However, foreign firms are exempted for such registration during the tendering process, and where a foreign tenderer is selected as the lowest evaluated responsive tender, such a bidder is required to be registered with the appropriate professional statutory bodies before commencing execution of the contracts. Before applying for registration to the CRB or ERB, contractors and consulting firms are required to be registered by the Business Registrations and Licensing Agency to obtain the Certificate of Compliance, which should be submitted with other relevant documents. The processing time for the CRB is within seven days, and the certificate for temporary registration is issued after paying US$30,000 as a registration fee and US$2,000 as project application fee. As for the ERB, the processing time is within two to three weeks. The fees structure is as follows: for an engineering consulting firm, the application fee is 1,500, registration fee is US$10,000, practicing license fee is US$50, rubber stamp fee is US$100, and the annual subscription fee is US$5,000. For a temporary professional engineer and a temporary consulting engineer, the registration fee is US$1,045 and US$1,659, respectively. The PPRA normally

registers suppliers, consulting firms, contractors, and service providers who are doing business with the public sector for the purpose of eligibility for a preferential scheme as provided by the PPA and posts the same on its website.

77. **Procurement processes and procedures.** The PPA and its associated regulations require the PEs wishing to commence competitive tendering to provide all eligible bidders with timely and adequate notification of the PE's requirements and an equal opportunity to tender for the required goods, works, or services. The regulations spell out the contents of invitation to tender and it is mandatory that invitations to tender be made in writing. The publishing format of the advertisements is issued by the PPRA and it contains adequate information to the prospective bidders to take a decision about participating. It is mandatory that the solicitation documents be issued immediately after first publication of the tender notice to all bidders who respond to the tender notice. Under PPA 2011, it is mandatory for the PEs to prepare a tender notice for national and international tenders and submit the same to the PPRA for publication in the Journal and Tender Portal. In June 2012, the PPRA established and launched a Tender Alert Service to enable subscribers to receive early alerts on new procurement opportunities through text messages on their mobile phones; about 5,000 message alerts were sent to 1,135 subscribers of the service between June 2012 and June 2013. During the assessment, it was revealed that the REA normally advertises tender opportunities relating to energy through ICB, NCB, and National Restricted Bidding. From the contracts reviewed, it was attested that in FY2012/13 (TZS 430,822,063,556, approximately equivalent to US$272.67 million) and FY2013/14 (TZS 315,936,216,495, approximately equivalent to US$197.46 million), the REA advertised two large tender packages which had 20 lots each through ICB (supply and installation of underline transformers - LV lines and connections to customers). For the FY2012/13 advertised tender, a total of 77 bidders purchased bidding documents and 33 bidders submitted bids. As for the FY2013/14 advertised tender, a total of 77 bidders purchased bidding documents and 40 bidders submitted bids. Furthermore, it was observed that in FY2014/15, the REA advertised a similar tender through ICB (three lots), which started with prequalification, whereby 79 applicants submitted applications and 40 were prequalified—over 95 percent of the applicants who prequalified were foreign companies. Thirty-nine applicants were not prequalified because of inexperience in developing projects of a similar size and complexity as well as low turnover compared to the requirement stipulated in the prequalification document.

78. The assessment team noted that significant delays happen at the tendering process stage due to the number of queries or requests for clarifications received and addenda issued by the REA. On average, the REA receives 50 queries per tendering process and the majority are because of inadequate design and technical specifications. As a result, the REA issues, on average, three addenda for one tendering process. It was also noted that most of the clarifications issued amounted to addenda although they were issued as clarifications.

79. For consulting services, it was observed that the REA has limited capacity with regard to the selection process for selecting consultants. It was noted that the challenge has been the preparation of the ToR. As a matter of principle, the selection process cannot start if the ToRs are not ready. In this case, there are delays in this phase because of back and forth between the PMU and UDs. The REA does not use procedural forms issued by the PPRA, especially the Procurement Requisition Form, which initiates the procurement process by the UDs. In the absence of this form, it was difficult to establish when the procurement processes were initiated and to determine the

exact source of delays and in which phase. The limited experience in the selection of consultants has been acquired through the implementation of Bank-financed TEDAP and other projects financed by donors such as the EU, SIDA, and the Norwegian Agency for Development Cooperation. The UD and PMU should be trained on how to prepare comprehensive ToRs.

80. **Bidding documents used are those developed by the PPRA, including**: (a) standard prequalification documents; (b) standard bidding documents for the procurement of goods, works, and non-consulting services, as well as standard request for quotations; (c) request for proposal for selection and employment of consultants; and (d) guidelines for the evaluation of bids and proposals. The PPRA has revised all standard bidding documents, guidelines, and working tools to align them with the provision of PPA 2011 and its 2013 regulations. The standard bidding documents contain the evaluation criteria relating to the eligibility of the bidders and the qualification of the bidders. It is mandatory to disclose the evaluation criteria to be used in determining the successful tender in the solicitation documents. Regulations are clear on the evaluation criteria to be used in the evaluation of the bids and there is emphasis that the PEs' determination of a bidder's responsiveness should be based on the contents of the tender itself, without recourse to extrinsic evidence.

81. The REA is using these bidding documents issued by the PPRA. The standard bidding documents issued by the PPRA have been reviewed and found to be acceptable to the Bank, with some exception on NCB procedures. The most-used bidding documents for energy-related packages are Supply and Installation of Equipment and Plants, Procurement of Goods, and Standard Request for Proposals issued by the PPRA. However, the challenge has been to customize the bidding documents/request for proposals to suit the requirements of a particular tender. A review of the sample bidding documents and request for proposals revealed that the information provided in the Data Sheet and Special Conditions of Contract was not adequately customized, especially setting of qualification criteria (turnover, financial capability, and experience and technical capacity), and the ToR. Qualification criteria such as turnover and financial capability were underestimated, ending up in awarding contracts to companies, which do not have the capacity and capability to execute the awarded contracts. It is recommended that the UD and PMU are trained in setting qualification criteria, which match the magnitude and complexity of the resulting contracts. Furthermore, the quantitative criteria should be set using a realistic cost estimate. As for the specifications, the REA relies on its own staff, TANESCO, and consultants engaged in the design and supervision of the contracts. The assessment team noted that inadequate specifications is the main source of delay in the procurement process because of the number of clarifications being sought by the prospective bidders and addenda issue by the REA. In most cases, the tendering periods end up being extended to enable bidders to take into account the amendments issued.

82. Bid evaluations are carried out by the ECs constituted according to the PPA and its regulations. Normally, the ECs comprise a minimum of three members for works, goods, non-consulting services, and financial proposals and a minimum of five members for technical proposals. The ECs comprise members from the UDs and TANESCO's technical staff. In recent evaluations, the REA also included consultants in the evaluation teams. Generally, evaluations follow the evaluation/qualification criteria specified in the bidding documents and request for proposals. However, the following weaknesses were noted in the reviewed procurement transactions: post-qualification criteria are used in the preliminary stage; some of the bids are

rejected because of unjustifiable reasons (nonperformance in the previous/ongoing contracts, but there are evidences, such as notices that were served to contractors, that they breached the contracts. On the other hand, contractors are complaining that they are not paid on time, ultimately affecting their performance); post-qualifications/due diligences are not performed to the lowest evaluated bidders; and tables provided in the evaluation guidelines are not used properly. Despite the fact that the negotiations were done in accordance with the provision of the PPA and its regulations, the following irregularities were noted in the contracts reviewed: negotiations were conducted while notification of awards had been issued; some of the minutes of pre-contract negotiations (appended to the signed contract) were not signed by both parties; and sometimes, members of the TB were part of the negotiations team contrary to the PPA and its regulations. It is recommended that the evaluation of bids and pre-contract negotiations are done in line with the as-issued bidding documents and the PPA and its regulations.

83. **Publication of contracts.** Transparency is among the fundamental pillars of public procurement and disclosure of information is one of the elements of transparency. PPA 2011 and its regulations require the AO, within 3 days upon receipt of the notification of award decision from the TB, to issue a notice of intention to award the contract to all bidders who participated in the tender, giving them 14 days to submit a complaint (if any). Despite the fact that this provision was complied with, the contract awards were not submitted to the PPRA for publication in the Journal and Tender Portal pursuant to the PPA and its regulations. The law requires the PPRA to publish contract awards in its Journal and Tender Portal, the names of those who have been awarded the contracts, contract amount, date when the awards were made, contracts period, and final contract amount. For the PPRA to fulfill this requirement, the PEs are required to notify the PPRA on the awarded contracts. However, from the PPRA's audit reports, the compliance on the publication of contract awards is low. On the other hand, it was noted that sometimes unsuccessful bidders were notified the same date when letters of acceptance were issued. As a matter of procedure, unsuccessful bidders are required to be notified after the winning bidder has furnished performance security and signed the contract.

84. **Vetting of all contracts above TZS 50 million (about US$28,800) by the AG leads to delays in signing the contracts.** PPA 2011 and its associated regulations have provisions that require all contracts above TZS 1 billion to be vetted by the AG before signing by the parties. Contracts with values below TZS 1 billion are required to be vetted by a legal officer of a PE before it is signed by the parties. The AO is required within three working days after being notified by the TB of its award decision; the draft contract is submitted to the AG for vetting. The AG is required to vet the draft contract within 21 working days while the PE's legal officer is required to vet the draft contract within 14 days. During the assessment, it was revealed that all contracts submitted to the AG by the REA were reviewed and no objections were granted within 21 days. Despite the fact that the REA had not experienced delays in ratification of its contracts, this does not rule out that this is a potential area causing delays in the procurement process as the AG does not have the capacity to vet contracts from more than 475 PEs within the prescribed time. Most, if not all, of the REA's contracts related to energy fall under the review of the AG. The implication of this is that the REA cannot sign the contract without ratification of the AG; otherwise, the contract will be null and void. It is recommended that the attorney and PPRA review and uplift the threshold.

85. **Framework agreements for common use items and services (CUIS) under the GPSA.** Most of the consumables (goods) and non-consulting services are procured through CUIS under framework agreements introduced by the Government. The budget for this accounts for only 1 percent of the REA's budget spent on procurement. For the purpose of efficiency of the procurement process and reduction of procurement transaction costs within and across public bodies, the PEs are required to engage in closed or open framework agreements. The Government in February 2011 established the GPSA for overseeing the implementation of CUIS in the country. According to the PPRA's performance report for FY2012/13, there is a decline in the use of the system. Some of the challenges for implementing the system are lack of adequate knowledge to some suppliers and service providers to prepare bidding documents, which leads to submission of non-responsive bids; inadequate enforcement for service providers who fail to execute call-off orders at contractual prices, demanding a price increase within the validity of a signed contract; and the reluctance of some service providers to give their prices because they are not sensitized enough to understand the advantages of the system. According to the PPRA's performance report for FY2011/2012, the audits conducted revealed a number of issues regarding the application of the system, some of which defeats the purpose for which the system was established. Some of the challenges observed include selection of unqualified suppliers; prices offered being comparatively higher than the market prices; suppliers refusing to supply goods at the agreed prices; suppliers colluding to supply goods at higher prices; long distances between entities and offices of the approved suppliers; suppliers failing to supply goods listed in their contracts; and suppliers taking a long time to supply goods.

86. **Controls and integrity.** Procurement oversight at the REA is done by the REA's IAU, PPRA, and CAG. The REA's IAU prepares a quarterly audit report but does not cover procurement issues adequately and provides recommendations for improvement in adherence to rules and procedures. According to PPA 2011 and its regulations, the internal auditor is required to state in his/her report whether the act and its regulations have been complied with. The AO of the PEs, after receiving the report, is required to submit such a report to the PPRA within 14 days. Upon receiving the report, the PPRA may, if it considers necessary, require the AO to submit a detailed report on any procurement implemented in violation of the act and regulations for review and necessary action. The REA does not submit the quarterly audit report to the PPRA as required by the law, as the IAU is not aware of this provision. It is expected that if this provision is fully implemented, it will strengthen both the IAU's and PPRA's oversight role. It was noted that the unit is understaffed and has only two staff, a chief internal auditor and assistant internal auditor, who are conversant with the provisions of the PPA and its regulations. The PPRA has the responsibility of ensuring that there is application of fair, competitive, transparent, nondiscriminatory, and value-for-money procurement standards and practices in the public procurement system as well as monitoring procurement compliance. The REA has been audited three times by the PPRA since FY2006/07 when the PPRA commenced to carry out audit. As part of their oversight and control roles, the PEs are required to get the PPRA's approval on the rejection of all tenders and rejection of abnormally low tenders. The time specified for the PPRAs to grant approval for rejection of all tenders is within five days after receiving the request. However, there is no time specified for the PPRA's approval for rejecting abnormally low tenders.

87. The CAG has the responsibilities of undertaking external financial and performance audit of all Government entities, public authorities, and other bodies at least once a year. Audits by the PPRA are not carried out yearly. The procurement audits carried out by the PPRA measure the

compliance level and detect corruption using the seven performance indicators and the Red Flags Checklist. Results of procurement audits and the Value for Money Assessment are published in the local newspapers and on the PPRA's website. The AOs of nonperforming PEs are summoned by the PPRA's board of directors to discuss the findings and corrective measures to improve compliance in their entities. The performance audit by the CAG also covers expenditure of funds used for procurement by Government entities. The REA is audited by the CAG according to the requirement of the law.

Procurement Capacity

88. **Procurement capacity.** The REA's PMU has been established according to the requirement of the law. The unit is headed by the head who is also a secretary to the TB and is supported by three procurement staff. The unit is responsible for processing procurements funded by the Government and donors. Currently, volumes of procurement being handled by the PMU is estimated to be TZS 243 billion (FY2015/16). It is expected that the workload of the PMU will increase considerably when the Rural Electrification Program and other donor-funded projects are in full-fledged operation. A review of staffing level has revealed that there is a shortage of staff to match the procurement volumes, especially technical specialists, considering that the core business of the REA is centered in the energy sector. The PPA requires the PMU to consist of procurement and other technical specialists for effective implementation of procurement activities in the PEs. The main challenges in processing these packages have been preparation of adequate specifications, preparation of ToRs for consulting services, preparation of tender documents, and evaluation of tenders and proposals. According to the Review of Organizational Structure report prepared by Ernst and Young,[42] it is recommended that the PMU be upgraded to a division and manned as appropriate. It is also imperative that the PMU has a mixture of staff from procurement to technical experts. The assessment team tends to agree with the recommendation made so that the PMU can influence procurement decisions at the REA.

89. With regard to the knowledge of the newly enacted PPA 2011 and its regulations 2013, the assessment revealed that there is a knowledge gap. Although the AO, TB members, UD, and PMU have attended training, the findings as already pointed out from reviewed contracts necessitate more trainings—especially on the preparation of bidding documents, evaluation of bids/proposal, and contract management—to build capacity and increase efficiencies in the procurement process. Table 5.6 shows the number and qualification of PMU staff.

[42] Ernst and Young. 2012. *Provision of Consulting Services to Review Organization Structure and Develop Remuneration Policy*. Final report.

Table 5.6. Annual Number of Contracts and Contract Values Handled by the REA

Sl. No.	Name	Position		Experience in Procurement	Experience in Donor-funded Projects
1.	Theresia Nsanzugwanko	Head, PMU	MSc. Procurement and Supply Chain Management; Bachelor of Business Administration and CPSP	13	7
2.	Clement Kisinga	Procurement Officer	MSc. Procurement and Supply Chain Management; Bachelor of Business Administration and CPSP	12	5
3.	Mercy Mwihava	Procurement Officer	BSc. in Procurement and Supply Chain Management and CPSP	2	2
4.	Harriet Mwinyimvua	Supplies Assistant	Diploma in Procurement	4	4

90. The PPA directs that the PMUs must be staffed to an appropriate level with composition of both procurement and other technical specialists together with necessary supporting and administrative staff. PPA 2011 has made it clear that the head of the PMU must report directly to the AO of the PE and the AO should ensure that the PMU has a sub-vote and funds are allocated for carrying out its responsibilities. The REA's PMU has an annual volume of procurement of more than TZS 5 billion. According to the proposal, the manning level proposed is a head of the PMU, one procurement officer, two assistant procurement officers, one personal secretary, and one office attendant. However, the referred figures have not been revised to date and they do not reflect the actual situation on the ground. Most important is the positioning of the PMU in the REA's organization chart so that the unit can influence procurement decisions. Furthermore, the PMU should be taken as a strategic unit for the REA to achieve its operational objectives. It is recommended that the PMU be properly positioned in the REA's organization chart to enable the unit to influence procurement decisions and be staffed with a mixture of experts to be able to discharge its functions.

91. **Contract management.** Contract management for any procurement of goods, services, or works contracts is the responsibility of the PEs as mandated under the PPA. According to the provisions of the PPA and its regulations, the PEs are required to ensure that the contracts are implemented in accordance with terms and conditions governing those contracts, and to take or initiate steps to correct or discipline deviations from observan**c**e of contract conditions. PPA 2011 and its regulations have expounded the responsibilities of the PEs and procedures during contracts implementation, including technical or scientific test and issuance of good acceptance certificate. Furthermore, the law requires consultants to furnish performance securities and deduct liquidated damages in case of delays in performing the contracts. However, enforceability of the performance security and liquidated damage provisions are still not clear; in the Standard Request for Proposal issued by the PPRA, it is indicated that the PPRA will issue guidance.

92. At present, the supervision of contracts relating to energy at the REA at present involve several parties such as the TRAG (a commercial bank in association/joint venture with an engineering company which provides technical services—responsible for verification and disbursement); TANESCO's engineers (regional managers and headquarters' staff) as representatives of the beneficiary; and the REA (director of Technical Services as a project manager for some of the contracts, assisted by the REA engineers and individual consultants engaged by the REA after being overstretched by supervision works) and consulting firms engaged by the REA. For the arrangement, which involves the FREA (director of Technical Services as a project manager), TANESCO's engineers, and the TRAG, it was observed that responsibilities and authorities of parties involved were not clearly stated. By virtue of the Form of Contract (supply and installation of plants and equipment) governing those contracts, the powers of certifying, approving, and issuing instructions are vested to the project manager (director of Technical Services) and not otherwise. Under this arrangement, certification, approval, and payment processes are too cumbersome and lengthy. The initiator of any certification or approval is TANESCO's regional manager, who forwards it to TANESCO's headquarters for review before submitting to the REA for final approval. In the case of certification relating to payment to contractors after all these processes, the REA forwards it to the TRAG for verification and payment. There were no records in the contract files to establish how long it takes for the TRAG to effect payment, but there were indications that payments are normally delayed. According to the Rural Energy Act of 2005, the TRAG is responsible for disbursing grant payments from the REF and ensuring that any preconditions set by the REB for making a grant payment are met by the developer. Furthermore, the TRAG is responsible for the administration of grant payments, including financial disbursement, verification, and monitoring activities. The definition of a 'developer' according to the Act is a developer of, or an investor in, or an operator of a project that shall be in the form of a private or public entity, a cooperative, or a local community organization. The TRAG's involvement in the supervision of contracts is derived from the REF established by the act. Disbursements can only be made if conditions are fulfilled. Progress of contract and proper execution are part of the conditions. In the contracts between the REA and contractors/suppliers relating to energy, the contractors/suppliers are construed to be 'developers', but in the real sense, going by the definition of a developer, they are not. There is a need to look at this arrangement critically or modify the Form of Contracts being used to clearly state responsibilities and powers of each party involved in the contracts executions, to ensure smooth implementation of contracts and avoid contractual disputes because of unclear responsibilities and powers.

93. The contracts being supervised by the consulting firms follow the best practice whereby the project manager (consulting firm) is given powers to approve, certify, and issue instructions according to the terms and conditions governing the respective contract. However, when it comes to payment to the contractors, the REA has to authorize the TRAG to verify and effect payment. In this arrangement, all technical issues are sorted out between the consultant and the REA/TANESCO before being communicated to the contractors. It is still not clear what authority the parties have under this present arrangement. What happens, for example, if the consultant certifies the works but the TRAG does not? There is a need to establish clear lines of authority. It is important that international contractors are more involved in the execution of the REA's projects. It was confirmed that, henceforth, the REA will be engaging consultants in design and site supervision up to commissioning for all projects for which the REA is the owner. The REA's role would be the overall control of project performance.

94. Apart from the deficiencies noted in the contract implementation arrangements, generally, at the REA, there is a weak contract management system. There is limited capacity in knowledge and experience as well as human resources in contract management. The Directorate of Technical Services, which is responsible for contract management and technical matters, is understaffed despite outsourcing some of the supervisory duties to individual consultants. The PMU is not in the picture when it comes to contract management. There is no involvement of the PMU by the UDs during contracts implementation to the extent that the PMU staff are not aware of the progresses and status of the contracts relating to energy. Most of the contracts are not completed on time. For instance, 20 contracts resulted from Tender No. AE/008/2013-14/HQ/G/15—Supply and Installation of Distribution Substation (11/33 KV) MV and LV Lines, Transformers and Connection of Customers in Un-electrified Districts HQ and Other Rural Areas—using the Turnkey Approach (20 lots). By September 30, 2015, the average physical progress was 74 percent while the time elapsed was 100 percent. There was one incidence in which a minister ordered the REA to sign addenda with the contractors to reduce contract duration. Some of the contractors signed and some did not. The referred contracts were not finished according to the instructed addenda and from the progress report, they will not be completed even within the dates set originally. The REA confirmed that the dates had been extended but there no evidences that they have been extended, which signifies that they will be extended after the contracts expire. Cases of late payments to contractors and consultants are prevalent, which affect the performance of the contracts. The reason for delays in paying vendors is the late release of funds from the Government. Late payments were observed in the opening letter of credits (took up to six months), paying certificates (invoices) for installation works, and paying consultants. Due to a lengthy approving and certifying process, delays were observed in decision making with regard to contract changes/variations of which most of them originated from inadequate design and paying the contractors and consultants. Other weaknesses noted were the non-enforcement of liquidated damages and failure to issue notices in the event of a breach of contract. There is a need to build capacity in the PMU and UDs in contract management through training and engaging a consulting firm to assist the two departments in planning, designing, preparing specifications and bidding documents, evaluating bids, and managing contracts. The aforementioned TA will enable the two departments to be familiar with the Form of Contracts used in the energy sector.

95. **Records keeping.** The PPA and its regulations prescribe procurement records that need to be maintained and archived by the PEs in the procurement proceedings, including decisions taken and the reasons for it. The records range from planning to contract closure and the records need to be kept for five years after contract closure pursuant to the PPA and its regulations. Generally, records at the REA are scattered and incomplete with no proper filing and management system, despite the PPA and its regulations mandating the PMU to maintain and archive all records of the procurement process and the UDs to maintain and archive records of contract management. From the contracts reviewed, it was noted that the PMU is maintaining and archiving records of the tendering process only when the UDs are maintaining and archiving contract management records. As a result, it was difficult to trace complete records of a particular tender in one file. The REA's PMU is not in the picture when it comes to records relating to contract management. PMU staff were not aware of the status of contracts implementation with regard to progresses made, variation orders issued, and extension of timelines granted. According to the law, the PMU is responsible for managing all procurement activities, which is not the case at the REA. It is expected that the one-stop center for all procurement records should have been the PMU. The missing records in both the PMU's and UDs' files were important documents such as minutes of the TB approvals,

minutes of site meetings, progress reports, tests results, inspection reports, payments records, and addenda to the contracts. Generally, there is inadequate space for PMU staff and documents storage. It was observed that the maximum office space allocated for PMU staff is a room of about 35 m^2 shared by four staff, including storage for archived documents.

Fraud and Corruption Analysis

Fraud and Corruption Risks for PforR

96. The project operating environment as described in the Prospectus, and following discussions with the REA management, provides an indication of the areas of risk related to F&C.

(a) The REA will be assigning contracts for implementing the Rural Electrification Program to independent electrical contractors. There are two main risks in this relationship:

(i) The risk that staff employed by contractors will be involved in F&C activities in the interface with clients/final consumers. In particular, TANESCO, which is the main beneficiary of REA investments as it will own the infrastructure, will also be responsible for connecting consumers to the grid.

(ii) Due to budget constraints and delayed payments, the REA may not use a transparent process to pay contractors who have completed and submitted their certificates for payments, leading to favoritism and bribery to get paid before the others.

(b) The REA will be connecting all villages or communities that are within the reach of the national grid to the electric distribution lines. The targeted communities are known and this does not pose a risk. However, it is anticipated that some of the households in targeted communities will be provided with credit facilities to finance electricity connections guaranteed by the REA. There will thus be two groups of consumers under the program, those who will use their own funds and those who will receive credit to pay the stipulated connection fee. The selection process for getting a bank credit to finance the connection could pose a risk to the program.

(c) The REA will also be financing the SPPs to provide electricity to communities as part of off-grid solutions. The selection, financing, and operations of the SPPs will be through the commercial banks' own business criteria and using the REA's technical guidance for eligibility of renewable energy subprojects. The SPPs or commercial banks participating in this program may be involved in corruption to influence decisions in the identification of beneficiaries of the credit.

(d) The REA will also be involved in the procurement of goods, services, and works. These procurement activities will also pose a risk of F&C. These are well handled under the procurement section of this Integrated Fiduciary Assessment.

Complaints Handling Mechanism

97. As part of the proposed program, a review of the CHM was carried out that would serve as the basis for providing information on the risks of F&C as well as concerns on the quality of services provided to ultimate beneficiaries. The review covered the REA since this will be the implementing agency of the proposed project. By nature, the REA is a small organization that contracts out implementation of its work to other institutions. These institutions include the TRAG, which will be responsible for managing the REF as well as supervising the implementation of the contracts for extension of the electricity grid. The TRAG will also be responsible for providing credit to the SPP, supervising the establishment of these facilities, and ensuring that these projects eventually pay back the credit. The trust fund will also be financing capacity building activities following the approval of the REA. These capacity building activities under Results Area 3 will be carried out by both the REA and MEM. This operating environment insulates the REA from the ultimate beneficiaries who interface with the TRAG and commercial banks in the case of the SPPs and contractors and TANESCO in the case of consumers at the community level.

98. The REA on its part has a CHM whose current scope only covers the agency. This system is not fully developed, relying on paper records, and does not aggregate the complaints and grievances received for reporting purposes. The REA's CHM functions under the Ethics Committee, which is chaired by the director of Finance and Administration and a secretariat led by the head of Human Resources and Administration/legal officer. The Ethics Committee sits quarterly to discuss unethical incidences and issues minutes that are filed for records purposes. Where relevant, actions are taken against REA officials who have been involved in malpractices.

99. For this Program, the REA needs to extend its CHM to monitor complaints from contractors, the TRAG, and TANESCO. This first requires individual agreements between the REA and the other entities on reporting of complaints and grievances, including corruption incidences, and second, a platform where such information could be shared on time. Since the contractors, TANESCO, and the TRAG are independent entities subcontracted by the REA to undertake activities on its behalf, it is important that the REA includes wording on such contracts that requires these entities to report on corruption allegations and other complaints and grievances.[43] This will allow the REA to collect and report such incidences in its reports. It will also require these entities to report any incidences of F&C to the relevant authorities, namely the police and PCCB. To facilitate the reporting on F&C in collaborating institutions, the EC will incorporate the director of Technical Services who has technical oversight over these institutions.

100. The REA, on receiving reports of F&C, should systematically track the actions taken to address them. This should be part of operating procedures agreed between the REA and its collaborating institutions and contractors during the launch of the project. The REA will also be

[43] The negotiated ToR between the REA and the TRAG Section 3. (a) (ix) requires the TRAG to ensure a proper control system is in place to achieve accountability at all levels. The REA should use this provision for the CHM. CRDB's website includes a whistle-blowing provision, although it has not been fully functional, according to the audit management letter. Activating this functionality is critical for the project.

the apex organization to aggregate these complaints and share them with the Bank. This will be done twice annually to ensure there is sufficient time for follow-up actions taken to address the incidences. A simple table attached will provide guidance on the tracking of these complaints.

101. To ensure that all Program participating entities and beneficiaries are aware of the program outputs as well as the CHM in place, the REA needs to establish an awareness program led by the Ethics Committee. The purpose of this awareness program will be to ensure that all participants know their roles and responsibilities under the project, especially with regard to F&C, together with the CHM reporting procedures. The awareness program should be part of the kickoff activities of the program. Furthermore, the rural energy working group will coopt a member from the Prime Minister's Office - Regional Administration and Local Government (PMO-RALG) to enable collaboration between the REA and the LGAs in ensuring that the awareness campaign reaches out to beneficiary communities. The action plan for public awareness will be shared with the Bank.

Alignment with Anticorruption Guidelines for PforR Operations

102. **Sharing of debarment list of firms and individuals.** The GoT commits to use the Bank's debarment list to ensure that persons or entities debarred or suspended by the Bank are not awarded a contract under the program during the period of such debarment or suspension. The information on the list of debarred and suspended firms is available on Client Connections and on the Bank's website. Companies and individuals debarred by the Bank and consequently the PPRA will be posted and updated regularly on the REA (www.rea.go.tz) website and advertised publicly by the REA. The REA will take responsibility in ensuring that their website is updated regularly with information on the list of debarred firms. The REA's compliance with the debarment list will also be monitored through the program annual assessment.

103. In addition, the Government will include some disclosure measures in bidding documents for works, goods, and services to be financed under the program, including insisting that the firms and/or individuals declare that they have not been debarred or suspended and/or have any links with a debarred entity or individual.

104. **Sharing information on F&C allegations.** In line with the Bank's Anticorruption Guidelines, the Government (through the REA) will share with the Bank all information on F&C allegations, investigations, and actions taken on the program, including on procurement as needed. The Bank has been informed that under Tanzania's legal system, the primary agency for investigating corruption is the PCCB. The PCCB has confirmed that through its countrywide network, it monitors expenditures on development projects to verify that expenditures are incurred for the objectives intended. Where the PCCB finds funds have been diverted for unintended purposes, they launch an investigation to determine whether it is a fraud or corruption incidence warranting prosecution. Where the PCCB investigations reveal that a given case is primarily one of fraud rather than corruption, the PCCB refers it to the police for further investigation and prosecution. Since the proposed program will be implemented by contractors, the TRAG, and TANESCO, the structure of collecting and sharing information on F&C will out of necessity include these entities. In this context, F&C allegations made with respect to program funds will be referred by the associated entities, that is, contractors, the TRAG, TANESCO, and the MEM, to the closest district office of the police and PCCB. District PCCB offices report monthly to the regional offices on corruption cases and action taken. The PCCB headquarters gets monthly reports

from the regional offices on corruption and other relevant activities. The REA will liaise with the PCCB to compile and share information on corruption cases once every six months, which will also be shared with the Bank. The details of this reporting will include the types of allegations and the status of actions taken. A template for recording and sharing of the information with the Bank has been provided to the REA.

Fiduciary Risk and Mitigation Measures

Financial Management

105. Based on the assessment, the overall project FM risk is considered Moderate. Both the MEM and REA have previous experience in implementing Bank-financed projects such as TEDAP. The FM performance was rated Satisfactory for projects funded by IDA and implemented by the entities.

106. Table 5.7 identifies the key risks that the management may face during project implementation, leading to failure to achieve project objectives. It also provides a basis for determining how management should address these risks. Mitigation measures have been suggested in the table to minimize these risks.

Procurement

107. **Procurement risk is rated to be High.** This assessment proposes a set of measures to be taken, both before as well as during program implementation, to address the risk. Main areas of significant risk to the program are the following: inadequate staffing of the PMU, Directorate of Technical Services, and IAU; staff have inadequate design and preparation of technical specifications and requirements, preparation of bidding documents and request for proposal for large packages, evaluation of bids/proposals for large packages, and contract management; delays in releasing funds from the Government; delays in vetting contracts above TZS 1 billion by the AG; weak records filing and data management system and inappropriate contract management arrangement; and weak contract management. Furthermore, there are inherent risks in PPA 2011, including receiving frivolous complaints during the cool-off period of 14 days. These risks will need to be addressed, monitored, and evaluated throughout the program.

108. Following the assessment of procurement, Table 5.7 describes the measures underway or proposed by the Program to mitigate the risks.

Table 5.7. Integrated Fiduciary Risk and Mitigation Measures

Fiduciary Risk	Description	Mitigation Measures	Due Date	Responsibility
Program Level	Coordination due to the large number of entities involved Ensuring funds are used for purposes intended will be a challenge	Establish a PSC that will include representatives from all sector stakeholders, chaired by the MEM.	By project effectiveness	MEM, REA
	Weak fiduciary capacity in all fiduciary aspects highlighted below	Provide targeted capacity building to all fiduciary staff at all levels	Within 12 months of project implementation	
FM Risk				
Program Level	Risks arising out of the Bank's Country's Policy and Institutional Assessment ratings for Question 13 (Quality of Budgetary and FM) and Question 16 (Transparency, Accountability and Corruption in Public Sector) Although the GoT has a PFM program that is aimed at improving its systems, this has not affected the CPIA ratings.	The Government has strengthened PFM systems and has rolled out Public Financial Management Reform Program IV for a five-year period, effective from 2012, in close coordination with the DPs. Additional plans are under way to implement an OGPFM DPO supported by the Bank.	Ongoing	MoFP
Treasury Management and Funds Flow	There is potential risk of delay in release of funds and unpredictability of funding from the MoFP to project implementing entities.	Funds will be released from IDA to the MEM and REA accounts accordingly.	Upon project effectiveness	MoFP/World Bank
		Petroleum levy will be deposited directly into the REF account, which will ensure timely availability of funds.	From FY2015/16	MoFP/World Bank
		Funds will be released upon achievement of agreed specific DLIs.	Upon achievement of DLIs	World Bank

Fiduciary Risk	Description	Mitigation Measures	Due Date	Responsibility
	Ineffectiveness of audit committees to carry out oversight functions	New audit committee guidelines have been issued to strengthen independency and effective functioning of the audit committees.	Ongoing	Internal Audit and Governance office
Internal Controls (including Internal Audit)	The REA IAU is currently understaffed given the current level of operations, annual work plan, and anticipated increase in volume of work upon project effectiveness.	There is a need to recruit one additional internal auditor to ensure smooth project implementation.	Within six months	REA
Procurement Risks				
Technical, Procurement Capacity, and Internal Audit Function	Inadequate staffing of the PMU, Directorate of Technical Services, and IAU	Recruit/appoint qualified and experienced staff to fill the gap in the two units or outsource the functions	–	–
	PMU and Directorate of Technical Services staff have inadequate knowledge in design and preparation of technical specifications and requirements; preparation of bidding documents and request for proposal for large packages; evaluation of bids/proposals for large packages; and contract management.	Conduct tailored trainings on preparation of bidding documents and request for proposal for large packages; evaluation of bids/proposals for large packages; and contract management.	–	–
Records Keeping	Weak records management system	Establish a sound records management system at the REA	–	–
Quality of the projects which will be executed by the REA using the program fund	Poor quality of the projects, variation orders issued and effect of delaying the completion of projects on time, and unsound contract management	Annual value-for-money audits to be conducted in all projects by an independent institution, that is, the PPRA	–	–
Delays arising from vetting of contracts before signature	The AG has no capacity to vet all contracts above TZS 1 billion within the 21 days prescribed under the PPA.	There is a need for the AG and PPRA to review and raise the threshold.	–	–

Fiduciary Risk	Description	Mitigation Measures	Due Date	Responsibility
Contract Management Arrangement and Weak Contract Management	Inappropriate contract management arrangement and weak contract management	Establish appropriate contract management arrangement and conduct trainings tailored to address the weakness in contract management	–	–
Delays in receiving funds from the Government	Slow progress of implementation of contracts because of delays in effecting payments to contracts and the REA's liabilities of paying interest due to delays	Establish system for timely disbursement of money to the REA to meet its contractual obligations	–	–
F&C Risks				
Transparency	Beneficiaries do not have clear knowledge of their entitlements under the project or the end products.	Establish a communication program that reaches out to beneficiaries, including the SPPs and citizens, on what the benefits of the program will be, including the CHMs	–	–
Participation	–	Key reports on project performance should be shared with beneficiaries, including the SPPs and citizens, and allow for feedback and independent views.	–	–
Accountability	–	Establish a register of all complaints and systematically ensure that they are resolved and reported every six months.	–	–

Overall Fiduciary Risk Rating

109. Based on the above risk analysis, overall fiduciary risk rating is Substantial.

Implementation Support Plan

110. Implementation support will include the provision of capacity strengthening in procurement, FM and governance, and anticorruption. An annual fiduciary review will be conducted for the program. Adequate budget will need to be allocated for this review. This review will be supplemented by on-site visits done by the Bank's fiduciary staff at least once a year. Reliance will also be placed on the annual audit reports produced by the CAG. In addition, desk reviews will be done for audit, financial, procurement, and any other reports received during the financial year. In-depth reviews may also be commissioned by the Bank, whenever deemed necessary.

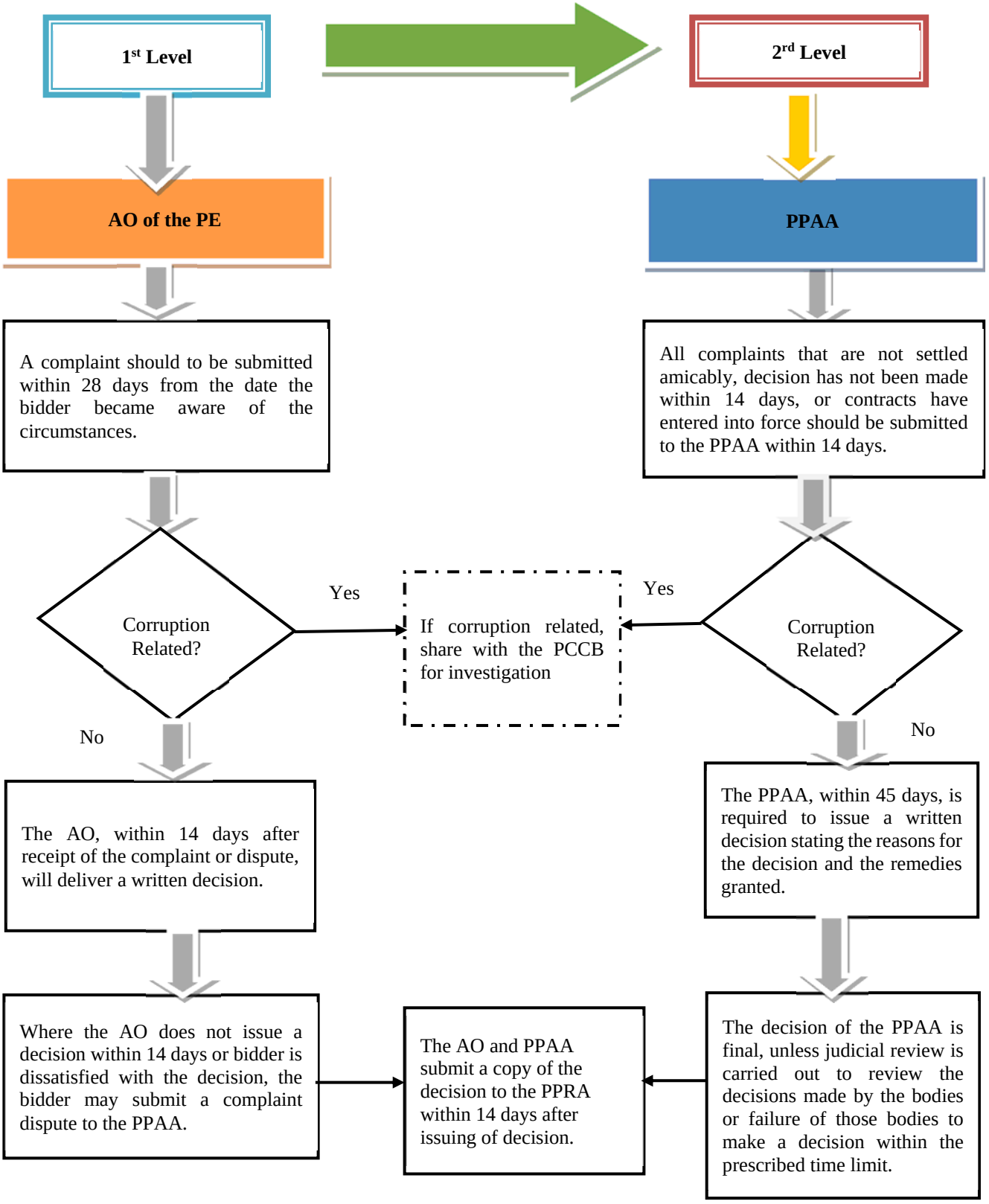
111. The following action plan will need to be implemented to ensure that the fiduciary aspects of the project implementation are well addressed.

Table 5.8. Procurement Measures in Program Action Plan

Fiduciary Action	Time Frame	Responsibility
Measures before Program Effectiveness		
None	None	None
Staffing of the PMU, Directorate of Technical Services, and IAU - Recruit/appoint qualified and experienced staff to fill the gap in the three units	Within 12 months of Program implementation	REA/MEM
Procurement training - Trainings on preparation of bidding documents and request for proposal for large packages; evaluation of bids/proposals for large packages; and contract management	During Program implementation	REA
Establish records keeping management system	During Program implementation	REA
The AG and PPRA to review and raise the vetting thresholds	Within 18 months of the Program implementation	AG/PPRA
Delays in receiving funds from the Government - Establish a system for timely disbursement of money to the REA to meet its contractual obligations	Throughout Program implementation	MoFP/MEM

Figure 5.4. Review of Procurement Complaints as per PPA 2011 and its Regulations 2013

(Two-tier System)



Annex 6: Summary Environmental and Social Systems Assessment

1. The Program for Results (PforR) operation – ***Tanzania Rural Electrification Expansion Program–*** is designed to support the Government of Tanzania's National Rural Electrification Program The PforR approach innovatively links the disbursement of funds directly to the delivery of defined results and builds on increased reliance on borrower safeguard and oversight systems. The PDOs 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. The Program will support the Government's rural electrification program and will be implemented by the REA and MEM. Specifically, the Program contains the following results areas:

- **Expanding rural access to electricity**: design and construction of MV (33kV and 11kV) and LV lines; installation of MV/LV distribution transformers; procurement and installation of service cables and meters; and the provision of materials for connection of new rural customers;
- **Increasing supply of renewable electricity in rural areas**: continuation of the REA's successful Off-Grid Electrification Program implemented by small power producers (SPPs) (solar, mini-hydro mostly in the range of 0.5 to 2.0 MW and biomass based on agricultural residues such as rice husks and bagasse) through support for the continuation and expansion of the Credit Line (CL). The CL includes a special "window" for vendors for the delivery of quality-verified renewable energy products; and
- **Strengthening Capacity of the Sector institutions to deliver the National Rural Electrification Program**.

2. In terms of environmental and social management, PforR employs a risk management approach in which process requirements are adapted to the Program context. For each proposed PforR operation, the Bank assesses—at the Program level—the borrower's authority and organizational capacity to achieve environmental and social objectives against the range of environmental and social impacts that may be associated with the Program. This Environmental and Social Management System Assessment (ESSA) examines Tanzania's existing legal, regulatory, and institutional framework for environmental and social management systems, defines measures to strengthen the system, and integrates those measures into the overall Program. The ESSA has been undertaken to ensure consistency with six Core Principles outlined in the World Bank's *Operational Policy 9.00 - Program-for-Results Financing*.[44] This report presents the findings of the ESSA exercise and its recommendations. The ESSA process includes extensive stakeholder consultations and disclosure of the draft ESSA report following the guidelines of the World Bank's Access to Information Policy. The ESSA consultation process and content are embedded in the Program consultation process.

3. The ESSA assessed the risks of the Program and concludes that the overall environmental risks are low. In accordance with OP 9.00, no activities likely to have significant adverse impacts on the natural or human environment that are sensitive, diverse, or unprecedented will be supported. Managing mini-hydro impacts requires analysis to determine the characteristics of the

[44] Although OP 9.00 was replaced by *Bank Policy: Program-for-Results Financing* on July 10, 2015, this ESSA has been prepared in accordance with the OP because the project's concept review and a considerable amount of preparation work were conducted prior to that date.

ecosystem and the stream hydrology and to assess the need for and decide on the appropriate minimum flow and operating rules. Biomass gasification systems pose explosion and fire risks as well as potential air, water, and soil pollution. Proper solar home system battery disposal requires an acceptable disposal procedure and location. Routine mitigation measures, application of good practice, and supervision and enforcement of workplace health and safety rules will be sufficient for other investments.

4. There is moderate risk related to land acquisition with respect to grid extension, the most significant of which REA's lack of budget and process to restore livelihoods affected by wayleave clearing. The land is acquired by means of voluntary contributions, a process that can be made consistent with Core Principle 4 through (a) well-defined criteria and procedures that will be provided in a land acquisition manual; and (b) attention to restoration of livelihoods affected by loss of assets. In addition, there is a Resettlement Management Framework (RMF) prepared for TEDAP and updated for the Program that should be the guiding principle for land acquisition that is other than voluntary, e.g., purchased by SPPs.

5. The key findings of the Environmental and Social Systems Assessment (ESSA) with respect to environmental and social impact assessment and management are that Tanzania has the legislative and regulatory basis and the institutions to ensure consistency with six Core Principles[45] outlined in the World Bank's Operational Policy 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 (ESMP) 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 REA and TANESCO (the latter supervises grid extension activities on REA's behalf), ESIA consultants who lack experience and skills, and unmet needs for training of Environmental Management Officers in the District Local Government Authorities.

6. 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. It has lacked proper documentation of the processes when land was provided voluntarily. In the course of the program preparation, consultations with the project-affected persons have been done in only a

[45] The six Core Principles are: a) Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts; b) Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program; c) Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards; d) Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards; e) Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups; f) Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

general manner. The ESSA includes recommended measures to bring the land acquisition up to national standards, as well as additional steps to meet Core Principle 4. The main thrust of the measures is for 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, which can be updated for the subject PforR.

7. The ESSA also found that Tanzania does not have any laws specifically aimed at protecting the rights of indigenous peoples[46]. However, Tanzania does recognize vulnerable 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 REA to develop policy and procedures to ensure that the possible presence of vulnerable 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.

8. The ESSA analysis identifies strengths, gaps and opportunities in Tanzania's environmental and social management system with respect to addressing the environmental and social risks associated with the Program. The analysis identified the following main areas for action in order to ensure that the Program interventions are aligned with the Core Principles 1, 2, 3, 4 and 5 of OP/BP 9.00 applicable to the Program: namely more consistent and reliable implementation of the national impact management system, with special attention to stakeholder consultation during preparation and field supervision during implementation; a more systematic, participatory and transparent procedure for acquisition of land an wayleaves; and procedures to ensure that the special needs of vulnerable groups are taken into account in planning and implementation of rural electrification activities. The gaps identified through the ESSA and subsequent actions to fill those gaps are expected to directly contribute to the Program's anticipated results by enhancing the environmental and social sustainability of the investments in rural electrification.

9. The ESSA identifies the key measures to be taken for improved environmental and social due diligence in the Program. These measures are linked closely with the DLIs for the PforR operation. The key measures are defined in Table 6.1 below:

[46] The Tanzanian Constitution emphasizes unity among its citizens and calls for an equal treatment of all ethnic groups by not giving special preference to individual ethnicities

Table 6.6: Measures to Strengthen System Performance for Environmental and Social Management

Objective	Strengths and Weaknesses	Measures
Elevate the effectiveness of the Tanzanian environmental and social management system to its full potential for the PforR program	**Strengths.** Legislation, regulations and NEMC procedures are adequate. REA's two-person environmental/social unit, established for TEDAP, has gained experience with off-grid projects. REA has the Bank-approved TEDAP ESMF, now updated to provide guidance for PROGRAM. Supervision reports and visits to transmission line projects and SPP projects have confirmed that impacts have been low and mitigation measures have been effective. **Weaknesses** *System implementation is uneven in some areas*, including: (1) ESIA preparation, review and approval, in which problems include sub-standard ESIAs and processing delays; and (2) insufficient field inspection, monitoring and enforcement, caused by the small size of REA's environmental and social unit, the lack of TANESCO HSSE staff in the regional and district offices that supervise REA's grid extension projects, and skills deficiencies among the District LGA Environmental Management Officers (EMO). *ESIA processing delays and costs pose difficulties for small power producers (SPP).* *Stakeholder engagement is not fully effective.* The official process of public review and comments can be onerous and public hearings are at NEMC's discretion. There is no requirement that ESMPs include a mechanism for handling grievances. Information to and consultation with stakeholders has not been consistent in grid extension activities.	*Strengthen capacity for ESIA preparation, review , and approval* through: (a) preparation of a Strategic Environmental and Social Impact Assessment for development of renewable energy in Tanzania; (b) establishing an ESIA consultant qualification system at REA; (c) continuing the training begun under TEDAP for ESIA consultants, implemented by REA and NEMC; (d)having dedicated staff for PROGRAM environmental assessment processing at NEMC; and (e) exploring other options that would streamline processing and reduce costs to SPPs. *Strengthen capacity for monitoring, supervision and enforcement* by (a) adding staff and equipment to REA's environmental and social unit; (b) placing environmental staff in TANESCO's zonal offices to provide to support district office supervision of REA's grid-extension projects; (c) continuing the EMO training program begun under TEDAP, conducted by NEMC; and REA preparing an environmental and social procedural manual that includes health and safety as well as environmental and social guidelines. *Strengthen REA's capacity for informing and consulting with all stakeholders including district and local government* through formulation and adoption of a Stakeholder Engagement Plan (SEP) following the detailed guidance in Annex 7 of the PROGRAM ESMF, and administer training in its application.
	Strengths: strong land laws. The Ministry of Lands, Housing and Human Settlement Development (MLHHSD)	The ESSA defines the needs for (a) improved and updated technical guidance for better implementation of the existing land laws, (b)

Improve implementation capacity for the application of the Tanzanian land laws in a transparent and participatory manner, in keeping with the principle of improving or at least restoring livelihoods	does follow a step-by-step process for valuation in all projects requiring land acquisition. Participation of Project Affect People (PAPs) is part of the process. At the local level, some LGAs also have land surveyors and valuation officers, who play a role in this process. Traditional and local level grievance mechanisms exist and are accessible to the PAPs. There is a RPF for TEDAP which has been updated for and will provide guidance for PROGRAM. **Weaknesses**: in practice, national requirements related to land acquisition as well as stakeholder engagement for acquiring land have not been systematically followed. Inter-sectoral coordination as well as coordination between REA and different tiers of government around environmental and social issues are weak, and budgets including those for compensation are often insufficient. There is a lack of clear mechanisms for livelihood restoration and of criteria for selection of the villages to be connected to the grid. The effectiveness of REA in overseeing land acquisition and in providing guidance at the implementation level is limited due to capacity constraints. Participatory Planning, implementation and monitoring for the acquisition of wayleave, and the processes involved are not always transparent and well documented.	greater transparency when land and livelihoods are involved, (c) special care in managing voluntary land contributions, including well-defined and transparent criteria and clear documentation of transactions (REA has some precedent in implementing TEDAP's off-grid component); (d) transparent and well-defined criteria for selection of villages to be connected (e) strong and readily accessible grievance redress mechanism, (f) provisions for community participation; and (g) development of a standard form to be signed with each district involved to ensure the provision of the budget for payments of the bills for the social infrastructure under that district. These needs will be met through preparation of the detailed REA environmental and social procedural manual as well as capacity building for REA. The adaptation of the manual by REA, detailing the above procedures, is an action under this ESSA. The updated TEDAP RPF, now known as the PROGRAM RMF, provides extensive guidance for implementing these measures. Acquisition of the land needed for off- grid generation (mini-hydro and solar) should follow the principles and procedures in the PROGRAM RMF. In addition, the ESSA recommends that REA monitor and report annually on its compliance with existing land and compensation laws in wayleave acquisition, and that the monitoring be subject to third party verification. .
	Strengths For the ESSA analysis of vulnerable groups focused on: children, persons with disabilities, youths (unemployed, females, youths with unreliable incomes), people living with long illnesses (e.g. HIV/AIDS, TB, etc.), women (female headed households, widows and those not able to support themselves), drug addicts, alcoholics, and disadvantaged communities. The approach of the Government is to ensure that all	REA should include in its policies and its procedural manual measures to ensure equitable treatment of any vulnerable groups that may be affected by its grid-extension activities. This should provide guidance for screening to detect the presence of vulnerable groups, and measures for their consultation and participation so that that project plans and designs take into consideration their needs, priorities, and preferences. The procedural manual should define mechanisms whereby vulnerable groups will be provided with relevant project information in local languages and in form and manner socially acceptable to

Strengthen procedures to promote equitable allocation of benefits and impacts of rural electrification	vulnerable groups are consulted and benefit from Government programs The ESIA process in Tanzania does take into account social issues in screening, impact assessment, and mitigation measures. There is no system in place that defines Indigenous Peoples in Tanzania. Part of NEMC's screening criteria for ESIAs is to assess whether impacts vary by social group or gender, and if resources are impacted that vulnerable groups depend upon. Additionally, there is currently an initiative within NEMC and supported by donors to better mainstream social issues such as gender and HIV/AIDS in the ESIA process. Tanzania also has policies specific to some vulnerable and disadvantaged groups, such the National Gender Policy and National Policy on HIV/AIDs, in order to prevent discrimination and promote equity. There is also strong guidance for community participatory planning by PMO-RALG through the "Opportunities and Obstacles to Development Handbook", which promotes inclusion of some of the vulnerable groups throughout the planning and implementation process. Such a process is being followed by the Tanzania Social Action Fund (TASAF) to support the poor in participating communities across the country. The experience in TEDAP with some vulnerable groups such as women headed households and disabled persons, showed the positive results of taking them into consideration in the processes of resettlement. These positive experiences, along with the TEDAP RPF updated for PROGRAM can inform REA as it develops policy and procedure for vulnerable groups. **Weaknesses.** Even though some of the vulnerable and disadvantaged groups are covered under above polices and guidance, there is no specific policy for vulnerable groups that might be affected	them. REA's policy should specify that any project planning to acquire land in an area where vulnerable groups are present will undertake free, prior and informed consultation leading to broad community support, and each project will establish a grievance redress mechanism to handle any complaints from project-affected people and allow them to voice their concerns and questions.

	by different projects and programs, including PROGRAM. There are no specific requirements for considering gender and vulnerability in resettlement and compensation processes beyond payment of compensation for lost land. Therefore, there is a risk that in the process of the development, vulnerable groups may be further marginalized, or would not share equitably in benefits. Weak feedback mechanisms for the affected communities to voice their concerns affect progress in the achievement of inclusive consultation, monitoring and outcomes.	

Applicability of Operational Policies 7.50 and 7.60

10. OP 7.50, Projects on International Waterways, is triggered because the program may support installation of mini hydroelectric generating plans on waterways in the Pangani, Lake Nyasa, Lake Tanganyika, and Lake Victoria (including the Nile River Basin) drainage basins. No impact is likely on either quantity or quality of water. The riparian states have been informed about the program and its technical and environmental specifications on April 27, 2016 and no comments have been received within the notification period of 30 days.

11. OP 7.60 is not triggered. No disputed lands are involved under the PforR.

Annex 7: Integrated Risk Assessment

Systematic Operations Risk-Rating Tool (SORT)	
Risk Category	**Rating (H, S, M, L)**
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Low
8. Stakeholders	Moderate
9. Other: Financial Viability	Substantial
OVERALL	**Substantial**

1. **Political and governance.** In light of the elections in October 2015, investment priorities defined in the Prospectus could be revised under the new Government. In addition, the new Government might consider transforming the REA into a rural distribution utility, allowing it to own assets, collect payments, and generate revenues. The PforR team will maintain close dialogue with the GoT and discuss with the MEM potential changes in the rural electrification prioritization and the evolution of the role of the REA with the new Government, with the objective to mitigate any potential risk to the proposed Program. The flexibility of the PforR instrument will allow for any adjustments necessary due to political and governance changes.

2. **Sector strategies and policies.** Delays in the implementation of gas and power infrastructure policies as well as delays in building institutional capacity for petroleum and gas negotiations with producers pose some risks. Parallel implementation of the Bank-financed Energy Sector Capacity Building Project, as well as exploring other options for technical support from other DPs should help mitigate these risks. Alignment with the BRN will provide an overall environment in which investments and reforms in the sectors are being monitored and followed through, in accordance with identified priorities, which should help reduce these risks.

3. **Technical design of the Program.** As outlined in the technical assessment, the program is technically sound. On-grid-related features are not unique nor does the technical design include new or untested technology. It is based on the experiences of the REA and TANESCO. The program will adopt the same concept and will be informed by lessons learned from previous projects. On the off-grid side, the low quality of the SPP investments being supported is a risk as many of the SPP developers working to prepare rural electrification projects for financing have limited experience with the rigor of project preparation for commercial finance. The REA is seeking to encourage collaboration between inexperienced and experienced developers to reduce SPP development risks. In addition, there is a lack of long-term maintenance contracts for solar systems. According to the current arrangements, after completion of installation, the supply and installation contractors will have a five-year contract to maintain the installed systems. It has also

been agreed with the REA that a requirement for contractors who receive funds from the CL will have to offer an option to renew/continue maintenance contracts after the initial five years. In cases where the installations will be made in public institutions, the PforR team will agree with the GoT that adequate resources will be allocated in the budgets of the public institutions to support maintenance.

4. **DLI risks.** The REA's targeted number of connections is high and will most likely not be achieved. Therefore, for DLI 1, fewer number of connections has been assumed. Yet, the DLI may not be achieved on time in case of funding uncertainties from the GoT and DPs or implementation delays. The PforR allows more flexibility in implementation and disbursement of funds. The DLI1 has been made scalable to provide the incentive to connect on time or ahead of schedule. In addition, the program will use capacity strengthening measures to increase the planning and financial capacity of the REA.

5. **Institutional capacity for implementation and sustainability.** Although the REA has extensive experience in implementing rural electrification projects and its technical capabilities as a rural electrification developer are deemed to be acceptable, the technical assessment identified a variety of capacity challenges that could potentially affect or delay the implementation of the program, including the REA's limited capacity in planning and preparing rural electrification projects. Given the expanded scope of the REA's responsibilities under the proposed PforR, the REA's capacity to prepare feasibility studies, handle procurement, and manage project contractors needs to be strengthened. The proposed PforR operation aims at strengthening these capacities to consolidate the REA's role as an effective rural electrification agency, capable of raising funds and effectively undertaking electrification planning and execution through employment of the best international practices. As part of this PforR operation, the REA will engage consulting firms to prepare the design, cost estimates, and supervision of contracts for electrification subprojects.

6. **Fiduciary.** With the implementation of ambitious GoT plans, the workload of the PMU at the REA is increasing considerably, which could result in implementation delays if not properly strengthened. While the recommended TA will ease the burden of the preparation of tender documents for larger grid extension turnkey projects, strengthening the REA PMU will be necessary, including hiring additional procurement specialists. This was included in the Program Action Plan.

7. **Environmental and social.** Some of the infrastructure under Results Area 1 and Results Area 2 could need land and would affect crops, livelihoods, and possibly even structures. The experience in similar projects (such as TEDAP) is that physical relocation of households and businesses has been avoided or minimal. Nonetheless, there are people who could lose part of their livelihoods such as fruit-bearing trees. There is a risk that those villages affected by wayleave are not compensated for loss of assets and livelihood. Necessary actions have been included in the Program Action Plan. A detailed assessment of the environmental and social risks is prepared in the ESSA. A summary of the ESSA is provided in annex 6.

8. **Stakeholders.** The key program stakeholders are the REA, the MEM, TANESCO, the DPs, SPPs, renewable energy equipment companies, and the main beneficiaries of the program, the rural communities. The GoT is fully committed to the program, providing the required Government contributions and levying allocations to the REF. The consultations carried out within the ESSA

preparation demonstrated strong support from rural communities for the program, enabling access to modern energy services. The GoT and DPs are fully committed to the program, providing more than 65 percent and 20 percent, respectively, of the financing needs of the NREP. The management of risks of potential delay in payments from TANESCO to the SPPs will be addressed under the program.

9. **Other - financial viability.** On the off-grid side, financial viability of SPP projects due to possible delayed payments from TANESCO is a continued risk. EWURA is preparing second-generation SPP rules to address this risk. The program will establish a rigorous system for monitoring TANESCO's payment obligations SPPs. On the on-grid side, financial viability for consumers is a potential risk. Even though most of the connection fees currently paid by the customers are much lower than the costs, a great number of customers still cannot afford the connection fees. Through Results Area 3, studies to reduce cost of connections and enhance access to modern energy in rural areas will be carried out.

Annex 8: Program Action Plan

Action Description	DLI*	Covenant*	Due Date	Responsible Party	Completion Measurement**
Preparation of a Rural Electrification Master Plan to strengthen the planning and coordination capacity of the sector institutions	☒	☐	24 months effectiveness	REA	Rural Electrification Master Plan completed
Apply standard technical specifications and bid evaluation criteria	☒	☐	Continuous	REA, TANESCO	Bidding documents
Deployment of REA and or TANESCO staff to the regional level	☐	☐	Continuous	REA	Annual report
Staffing of the PMU, Directorate of Technical Services, and IAU - recruit/appoint qualified and experienced staff to fill the gap in the two units or outsource the functions	☒	☐	12 months effectiveness	REA	Annual capacity building plan
Procurement training - trainings on preparation of bidding documents and request for proposal for large packages; evaluation of bids/proposals for large packages; and contract management	☒	☐	12 months effectiveness	REA	Annual capacity building plan
Establish records keeping management system	☐	☐	Continuous	REA	–
The AG and PPRA to review and propose uplifting the vetting thresholds	☐	☐		–	–
Establish system for timely disbursement of funds to the REA to meet its contractual obligations	☐	☐	12 months effectiveness	MoF	–
Strengthen capacity for ESIA preparation, review, and approval through:	☐	☐		REA	SESIA completed

(a) a strategic ESIA for development of renewable energy in Tanzania; (b) an ESIA consultant qualification system at the REA; (c) training for ESIA consultants, implemented by the REA and NEMC; and (d) dedicated staff for PROGRAM processing at the NEMC			June 30, 2019 12 months after effectiveness	REA	qualification system and training programs operating; dedicated staff in place
Strengthen capacity for monitoring, supervision, and enforcement by (a) adding staff and equipment to the REA's environmental and social unit; (b) placing environmental staff in TANESCO's zonal offices to support district office supervision of grid-extension projects; and (c) continuing the EMO training program which began under TEDAP and is conducted by the NEMC	☐	☐	12 months after effectiveness–	REA/NEMC/TANESCO	Annual capacity building plan
Strengthen the REA's capacity for informing and consulting with all stakeholders, including district and local Governments through formulation and adoption of a Stakeholder Engagement Plan, and administer training in its application	☐	☐	8 months after effectiveness–	REA	SEP in place; training initiated

Prepare a detailed REA procedural manual providing for (a) improved and updated technical guidance for better implementation of the existing land laws; (b) greater transparency when land and livelihoods are involved; (c) special care in managing voluntary land contributions, including well-defined and transparent criteria and clear documentation of transactions; (d) transparent and well-defined criteria for selection of villages to be connected; (e) strong and readily accessible grievance redress mechanism; (f) effective community participation; (g) development of a standard form to be signed with each district involved in the PforR to ensure the provision of the budget for payments of electric bills for schools, clinics, and other district public facilities; (h) implementation and enforcement of workplace health and safety rules; i) preparation of management instruments of acceptable quality to ensure that environmental and social impacts are avoided, minimized, or mitigated in design, construction, and operation of projects; and (j) measures to identify and ensure equitable treatment of any vulnerable groups that may be affected by its grid-	☐	☐	8 months after effectiveness	REA	Procedural manual adopted by REA

extension activities.[47]. Conduct training to build capacity for the use of the procedural manual.					
Monitoring and annual reporting by the REA on social and environmental performance including its compliance with existing land and compensation laws in wayleave acquisition, with verification by third party engaged by REA. Monitoring by REA and the third party monitor engaged by REA should be sensitive to outcomes experienced by vulnerable groups.[48]	☐	☐	12 months after effectiveness and annually thereafter	REA	Annual report by REA. Audit report by third-party auditor

[47] This should provide guidance for screening to detect the presence of vulnerable groups and measures for their consultation and participation so that that project plans and designs consider their needs, priorities, and preferences. The procedural manual should define mechanisms whereby vulnerable groups will be provided with relevant project information in local languages and in a form and manner socially acceptable to them. The REA's policy should specify that any project planning to acquire land in an area where vulnerable groups are present will undertake free, prior, and informed consultation leading to broad community support, and each project will establish a grievance redress mechanism to handle any complaints from project-affected people and allow them to voice their concerns and questions.

[48] In practice, this may require culturally appropriate methods of data collection. Data should be disaggregated so that outcomes for vulnerable groups can be discerned.

Project Management Consultant will be hired by REA	☐	☐	June 30, 2017	REA	-
PS MoFP will set up a Project Steering Committee to monitor TANESCO payments to SPPs. TANESCO will report to the Project Steering Committee, chaired by PS MoFP, and to the Association on a quarterly basis (not later than 30 days following the end of the quarter) about the status of payments to all SPPs during the reporting quarter.	☐	☐	3 months of effectiveness	TANESCO/MoFP	Recurring—quarterly reports and follow-up actions plus annual reports.

Annex 9: Implementation Support Plan

1. The proposed implementation plan is consistent with the PforR operational guidelines. Program implementation rests under the responsibility of the MEM and REA, with targeted and continuous implementation support and technical advice from the Bank and DPs.

2. The Bank's implementation support will broadly consist of the following:

- Capacity-building activities to strengthen the national and local levels' ability to implement the program, covering the technical, fiduciary, and social and environmental dimensions
- Provision of technical advice and implementation support geared to the attainment of the PDO
- Ongoing monitoring of implementation progress, including regularly reviewing key outcome and intermediate indicators and identification of bottlenecks
- Review and verification of DLI protocols, complemented by random technical audits
- Monitoring risks and identification of corresponding mitigation measures
- Impact evaluation activities
- Close coordination with other donors and DPs to leverage resources, ensure coordination of efforts, and avoid duplication

3. Further, implementation support will include the provision of capacity strengthening in procurement, FM, governance, and anticorruption. An annual fiduciary review will be conducted for the program, supported by a third party. Adequate budget will need to be allocated for this review. This review will be supplemented by on-site visits by the Bank's fiduciary staff at least twice a year. In addition, desk reviews will be done for audit, financial, procurement, and any other reports received during the financial year. In-depth reviews may also be commissioned by the Bank whenever deemed necessary.

Main Focus of Implementation Support

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First 12 months	• Institutional capacity enhancement at the national level to strengthen country systems • Technical advice to support program implementation	Technical, fiduciary, environment, and social	• Three implementation support visits by technical specialists focused on capacity building, TA, and monitoring • Two implementation support visits by fiduciary specialists focused on capacity building • One implementation support visit by environment and social specialists focused on capacity building and reviewing/strengthening effectiveness of redress mechanism	SIDA, DfID, and Government of Norway - joint implementation of capacity building
12–48 months	• Institutional capacity enhancement at the local levels to strengthen implementation capacity • Implementation monitoring • Technical advice to support program implementation	Technical (including M&E), fiduciary, environment, and social	• Two implementation support visits by technical and fiduciary specialists focused on fiduciary support and implementation support • One implementation support visit by social and environmental specialists focused on strengthening local capacity and implementation support	SIDA, DfID, and Government of Norway - joint implementation of capacity building
Midterm review	• Implementation progress review and identification of necessary midcourse adjustments	Technical (including M&E), fiduciary, environment, social, and operational	• One implementation support visit, including technical, fiduciary, social, environment, M&E, and operational specialists	SIDA, DfID, Government of Norway, and EU provide inputs on progress and lessons learned
48–72 months	• Implementation monitoring • Technical advice to support program implementation	Technical (including M&E), fiduciary, environment, and social	• Two implementation support visits by technical and fiduciary specialists focused on fiduciary support and implementation support • One implementation support visit by social and environmental specialists focused on strengthening local capacity and implementation support	SIDA, DfID, and Government of Norway - joint monitoring guidelines

Task Team Skills Mix Requirements for Implementation Support

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Project management (task team leader)	Ongoing	–	In Dar es Salaam
Project management (co-task team leader off-grid)	24	12	–
Technical specialists/team members	24	12	–
FM specialist	12	–	In Dar es Salaam
Procurement specialist	12	–	In Dar es Salaam
Environmental specialist	12	6	–
Social specialist	12	6	–
Administrative support	Ongoing	–	In Dar es Salaam

Role of Partners in Program Implementation

Name	Institution/Country	Role
SIDA	DP	Financier
DfID	DP	Financier
Government of Norway	DP	Financier
EU	DP	Financier

Annex 10: Scaling-Up Renewable Energy Program in Low-Income Countries

Table 10.1. Results Framework

Indicator	SREP/IDA Project (*Results Area 2*)	Transformational Scaled-Up Phase by 2022[49]
Renewable energy installed capacity constructed in rural areas as a result of SREP interventions (MW)	33 MW	780 MW [50]
Annual electricity output from renewable energy as a result of SREP interventions (MWh/year)	142,000 MWh/year	2,820 GWh/year[51]
Tons of greenhouse gas emissions savings[52] • Tons per year (tCO_2/year) • Tons over lifetime (tCO_2/lifetime)	112,000 tCO_2/year 2.22 tCO_2 over lifetime	2.24 tCO_2/year n.a.
Number of women and men benefiting from improved access to electricity as a result of SREP interventions	310,000	25 million[53]
Financing leveraged from SREP investment (US$, millions; cumulative)	Total - US$155 million, of which: • US$35 million IDA • US$5 million IFC-SREP (not part of PforR) • US$31 million private through SPP CL • US$28 million TIB through cost-sharing • US$56 million SIDA/DfID	n.a. Note: The projected share and scale of private sector financing is expected to increase over time, therefore reducing pressure on public sector financing.
SREP leverage ratio	1:8	n.a.
Other co-benefits		
• Improved business environment for SPP developers • Increased employment opportunities • Increased financing for privately led rural electrification • Expanded businesses for Renewable Energy Companies • Enhanced gender equality from improved energy services		

[49] Results reported in this column are own estimates based on a hypothetical scenario derived from Tanzania's National Electrification Program Prospectus (the Prospectus) for 2013–2022.
[50] Assumed 480 MW of small hydro and 300 MW of stand-alone solar PV.
[51] Annual electricity output (GWh per year) estimated based on 480 MW of installed capacity, of which 1,920 GWh produced by small hydro SPPs and 900 GWh from distributed stand-alone renewable and solar PV for remote households.
[52] CO_2 savings were estimated by applying a proxy-based method which was approved by the SREP subcommittee. The subcommittee proposes an emission equivalent factor based on diesel-generated electricity of 793.7 tCO_2e per GWh. The lifetime of investments was assumed as 5 years for stand-alone solar PV systems and 20 years for SPPs (small hydro).
[53] Assumed based on 10 million people served by mini-grid systems and 15 million people served by off-grid distributed solar and renewable technologies.

Introduction

Country and Sector Context

1. Tanzania had an estimated population of about 51.8 million in 2014, growing annually at a rate of 3 percent. It is projected that the population will increase to 74 million by 2030.[54] At present, about 73 percent of the population lives in rural areas, but during the next 15 years, Tanzania will go through a period of intense urbanization, gradually becoming an urban society with about half of its population living in cities by 2030. Tanzania's labor force is expected to increase from 20 million in 2014 to close to 45 million in 2030.

2. The GoT has outlined its medium-term objective of becoming a middle-income country through TDV 2025 (MKUKUTA II). This implies that the income per capita has to increase from US$640 to at least US$3,000. To expedite the achievement of the TDV, in 2013, the Government launched the BRN Initiative. The initiative focuses Government efforts on accelerating delivery of selected priority results in six areas of the economy—energy and natural gas; agriculture; water; education; transport; and mobilization of resources—with a major emphasis on leveraging private sector investment. In the priority area of energy and natural gas, a key focus is to improve reliability and access to power supply by increasing gas-based power generation and increasing access to electricity in rural areas. To realize these targets, the country requires adequate, reliable, affordable, and environmentally friendly electricity supply.

3. In the past several years, Tanzania's electricity access[55] rate has risen noticeably. The number of people with access to electricity has reportedly increased from 7 percent in 2011 to 36 in 2014[56]. The MEM in its budget presentation to the Parliament reported 40% of the national access rate in April 2016. 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.

4. Only 7 percent of the rural population in mainland Tanzania has access to electricity (about 73 percent of the Tanzanian population lives in rural areas).[57] Given the importance of electricity access for reducing extreme poverty for both urban and rural populations and fostering

[54] World Bank 2015. *Tanzania Economic Update*.

[55] 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."

[56] http://www.tra.go.tz/documents/BUDGET%20SPEECH%20MINISTER%20OF%20FINANCE%20FINAL%20FINAL.pdf

[57] Access rates vary depending on the reference source. The REA estimates 36 percent access in 2015 while the BRN Annual Report for 2013/14 estimates 30 percent. The distinction between 'access' and 'connection' remains quite vague in the common use in Tanzania, as in many other countries. The REA's present interpretation of the term 'access' is as follows: "Access is defined as the total population nearby the locality benefiting from electricity, irrespective of the population being connected to electricity." The Bank's latest assessment places 'access' in Tanzania at 15.3 percent in 20 12.

opportunities for productive economic activities (including agricultural), scaling up access to modern forms of energy is an important component of the Government's long-term economic growth plan and is one of its highest priorities in the context of Tanzania's power sector.

5. The realization of such ambitious electrification targets requires significant investments in generation, transmission, and distribution.

Problem Statement

6. Tanzania's access to electricity, although increasing, remains much below the level of universal or near-universal access needed to propel Tanzania into the group of middle-income countries. According to the draft NEP 2015, 24 percent of the Tanzanian population is currently connected to electricity overall, but the electrification rate in rural areas, where about 70 percent of Tanzania's 50 million people live, is much lower. The Government aims to increase access levels to 30 percent by 2015, 50 percent by 2025, and more than 75 percent by 2035.

7. Tanzania's national electrification is guided by the National Electrification Program Prospectus (the Prospectus), aimed at supporting the NEP by proposing a strategy for 2013–2022, which promises to advance electrification in a cost-efficient way. The Prospectus indicates the types of investment to be financed and identifies the institutional, regulatory, and capacity strengthening measures needed to achieve those ambitious electrification targets. As of September 2015, the Prospectus remains the main guideline for rural electrification efforts.

8. The MEM leads the development of the energy sector and takes all necessary measures to organize the industry and create conditions to make the sector sustainable and efficient. The MEM is responsible for developing and reviewing Government policies related to the electricity supply and distribution industry, including electrification of rural areas. Through the REA, subordinated to the MEM, the ministry prepares and updates Rural Electrification Plans and takes measures to promote rural electrification in accordance with the Rural Energy Act.

9. The 2005 Rural Energy Act established the REA with the objective of "facilitating the provision of modern energy services in rural areas of mainland Tanzania." The REA operates under the oversight of the REB.[58] It finances rural electrification projects using resources from the REF. Both the GoT and DPs allocate resources to the REF. The REA supports private sector small-scale rural power generation projects (both grid connected and off-grid) and grid extension in the rural areas and provides TA, training, and capacity building to private developers for project planning, preparation, and financing. The REF resources are used to pay for network construction contracts, subsidize grid connection costs, and provide capital grants to private developers (for example, to partially offset equipment and construction costs), with the aim of making electricity connections more affordable and attracting private sector investors to deliver modern energy services to rural customers. The REA serves as a contact point for donors, private developers, nongovernmental organizations, community-based organizations, and other stakeholders who intend to realize or support electrification projects. The REA also recognized the inherent different social aspects, impact, and opportunities associated with the provision of energy services. It has

[58] The REB comprises eight delegates from different government agencies, the private sector, and civil society and one representative from the DPs, currently represented by the AfDB.

developed a systematic gender-mainstreaming program consisting of an institutional assessment and gender action plan. The REA program objective is to ensure that gender is mainstreamed both in the project identification and preparation processes and aligns with the REA's gender commitments in its operations. The Bank's Africa Renewable Energy and Access Program's Africa Gender and Energy Program has supported the REA in the development of gender-mainstreaming activities.

10. The REA supports off-grid electrification through two avenues. The first of these is through the promotion of and support to private SPPs who produce and sell electricity to local communities (through mini grids), to the national grid under contract to TANESCO, or to both. The REA's second approach to off-grid electrification is through the promotion of the installation of quality-certified renewable energy equipment, including solar home lanterns and systems in rural households through private sector actors.

11. SREP funding to the Program will support the REA's off-grid electrification program under Results Area 2. The entire project is being implemented as a PforR in support of Tanzania's NREP.

Tanzania's Strategic Climate Fund-SREP Investment Plan

12. The SREP Investment Plan for Tanzania was approved by the SREP Subcommittee in September 2013 with an allocation of up to US$50 million. The objective of the Tanzania Investment Plan is to scale up renewable energies to transform the country's energy sector, mainly the electricity subsector, from one increasingly dependent on fossil fuels to one that uses a more balanced supply of diverse energy sources. Achieving this goal will help Tanzania move along a low-carbon development pathway while increasing energy security, generating new economic opportunities, and widening access to modern energy services. This will be achieved through an integrated approach that recognizes that improving energy market conditions and sector financing and creating the conditions to gain investor confidence at all levels are indispensable to achieving transformational change.

13. The following two projects were included in the Tanzania Investment Plan:

- **Geothermal Power Development Project (US$25 million SREP funding).** This project aims to (a) catalyze the development, mainly by the private sector, of low-cost and reliable geothermal power by removing uncertainties of the resource to contribute significantly to Tanzania's electric power and (b) establish an enabling environment for large-scale geothermal development through the legal and regulatory framework, capacity building, and risk mitigation.

- **Renewable Energy for Rural Electrification Project (US$25 million SREP funding).** This project aims to (a) build an efficient and responsive development infrastructure for renewable-energy-based rural electrification and (b) demonstrate its effectiveness by supporting a time slice of private sector investments in off-grid electricity enterprises.

Table 10.2. SREP Indicative Financing Plan Tanzania IP (US$, millions)

SREP Project	SREP	GoT	World Bank Group	AfDB	Private Sector	Comm. Banks	Other DPs	Total
Geothermal Power Development Project	25.00	1.50	–	45.00	142.50	317.50	5.30	536.80
Renewable Energy for Rural Electrification Project	25.00	2.40	50.00	–	30.48	28.03	46.54	182.45
Total	**50.00**	**3.90**	**50.00**	**45.00**	**172.98**	**345.53**	**51.84**	**719.25**

14. The second of the two projects included in the Tanzania SREP Investment Plan, the Renewable Energy for Rural Electrification Project, forms the basis for the work on off-grid electrification under Results Area 2 of the Program, described below. Part of the SREP allocation (US$5 million) is being used by IFC to operate a Transaction Advisory Service Facility, as anticipated in the SREP Investment Plan.

Project Description

15. The proposed SREP-funded Program, and specifically Results Area 2 of the project, will support the continuation of the REA's successful Off-Grid Electrification program that was initiated with Bank support under TEDAP. No funding from the SREP will be used for Results Area 1 (rural electrification by grid extension); Results Area 3 (capacity building); or support to diesel-based generation in hybrid configurations.[59]

16. The effort supported under this part of the REA's program will be a continuation and expansion of the CL for supporting investments in rural renewable generation. The CL will continue to focus on providing refinancing for SPP developers so that they can obtain local commercial debt financing of sufficient length to complete their projects in a financially viable environment. A new, second window on this CL will support short-term renewable energy (including solar) loans to renewable energy companies to expand their operations in non-electrified rural Tanzania. Refer to Annex 1 for detailed information about the aforementioned CL.

17. **CL support to renewable energy providers in rural areas (US$33 million IDA; US$9 million SREP grant).** The CL will assist both SPP developers and renewable energy companies selling quality-verified renewable energy products to obtain credit by opening two financing windows under a CL through the TIB. The first window is targeted at SPP developers and their need to obtain project financing with relatively long payback periods attuned to the capital intensive nature of renewable energy investments. The TEDAP CL structure has proven successful

[59] As presently conceived, the SPP program is targeting only renewable energy generation. However, even if diesel-hybrid configurations emerge as stand-alone mini-grid options, no SREP funding will be used to support them.

at enabling the SPPs to obtain longer-term financing from PFIs, and this structure will only be slightly modified to improve cost-effectiveness and leverage of private resources. It was agreed that this revised refinancing structure will be used to deploy the CL for SPPs in the upcoming PROGRAM.

18. To stimulate the growth of vendors of renewable energy (including solar PV) products, the project will support this second window of the CL. Under this window, the Bank will provide US$10 million (US$9 million from the SREP, US$1 million from IDA) through the REA for the Short-Term Renewable Energy (including solar) Loan window (RELW) to enable either TIB or PFI's operating through TIB, to extend short-term loans (< 5 year tenor) to Renewable Energy Companies to expand their business selling quality-certified renewable energy products to consumers in rural areas. Depending on the needs of the companies, the financial products to be offered may include both working capital (~1–2 years) for short-term import and supply chain finance and term loans for longer-term (less than 5 years) needs for providing customer finance. With this US$10 million RELW, the TIB and any PFIs will be able to extend loans between US$12.5 million and US$20 million to qualified companies, depending on the loan leverage rate. Initially, it is expected that these loans would be comprised of 80% funding from the RELW and 20% funding from the TIB or PFI. The loans may be used for any number of preapproved activities designed to grow the beneficiary companies' businesses. For example, attention will be given to supporting companies that use PAYG technology, which minimizes the need for up-front payments by customers, making solar and similar renewable energy products more broadly affordable to a larger share of rural consumers.

19. **Transformation.** The proposed SREP-funded Program will build upon initial successes made during the TEDAP to further mobilize private sector financing in rural electrification. Using IDA and Global Environment Facility resources, TEDAP assisted the REA to begin the process of mobilizing the private sector to invest in the development, construction, and operation of the SPPs building on localized resource endowments, such as small hydro or biomass waste sites. These projects have benefited the national utility, TANESCO, by providing electricity to remote feeder lines at prices that are cheaper than the avoided costs of delivering electricity to these remote areas. They have also benefited local communities as more than 2,000 consumers have been provided power by SPP generators supported under the project. However, a continuation of these activities in a purely business-as-usual manner will not be sufficient to help transform the market from one that opportunistically taps low-cost renewable supplies to one that builds upon and taps low-cost renewable energy opportunities at scale.

20. For the small hydro sector, the estimated confirmed potential currently stands at 480 MW, of which barely 20 MW has been tapped. Estimates from the ESMAP-sponsored resource evaluation have indicated that about 394 MW of this potential is available in the most promising 70 sites out of a total of 455 sites considered promising for small hydro development.[60] Many sites still lack reliable data. Global solar estimates for Tanzania are strong as the central portion of the country demonstrates global-quality solar resources that are sufficient to generate nearly all of the electricity needed for Tanzania. However, the most recent Power Sector Master Plan places the

[60] ESMAP (Energy Sector Management Assistance Program). 2015. *Small Hydro Resource Mapping for Tanzania: Small Hydro Mapping Report*. Renewable Resource Mapping: Small Hydro—Tanzania (P145271). Washington, DC: World Bank.

achievable capacity at over 800 MWp of solar because of grid balancing and integration concerns. Biomass resources are plentiful at 15 million tons per year, but estimating net generation capacity from these waste products is always challenging. ESMAP's resource evaluation program is also estimating the wind resource potential of the country, which—contrary to previous thinking—appears to be quite promising in the area surrounding the national transmission backbone.[61]

21. Under TEDAP, IDA resources provided the funding for the CL. Under the proposed SREP-funded Program, IDA resources will again provide resources for the SPP CL, which is being revised to improve its efficiency and potential for leveraging. Because of the delayed payment risk faced by all SPPs selling power to TANESCO, this project will insist that TANESCO sends a quarterly update of their payment record to SPPs to ensure they all SPP accounts are kept current. The Project Steering Committee will intervene and insist that TANESCO make all SPP accounts current if they find that TANESCO has fallen into arrears in their payment records. Several SPPs have stated that the delayed payment record of TANESCO is the reason that they are presently not expanding their facilities to generate more renewable energy for sale to the grid. The development of this extra monitoring and reporting activity is key to increasing transparency and improving TANESCO's payment record to SPPs. This is considered crucial to reassuring the market that this sector can move forward.

22. The second shortcoming of the TEDAP that the SREP is designed to overcome is through the establishment of the RELW. Under TEDAP, the SSMP model that was supposed to expand service to rural areas through solar lantern and solar home system vendors was shown to be a nonworking option. However, the solar and renewable energy providers already in the market have expressed a willingness to expand deeper into rural areas if they are given access to financing (in this case, the missing piece is considered local debt support). Again, with only a working model from Ethiopia, the SREP money has enabled the REA and project team to design a financial mechanism that will allow private sector renewable energy companies to begin to tap the multimillion household market for PV systems and other renewable energy services in rural Tanzania. Without this SREP funding, such an activity would likely not be undertaken.

23. **Rationale for SREP financing.** The SREP-funded Program supports the highest priorities of the GoT in the energy sector, namely increasing access of rural Tanzanians to electricity and promoting private sector-led renewable energy generation in rural areas. As noted above, SREP support will enable Tanzania's REA program to overcome two specific barriers identified in the earlier TEDAP. Without SREP support, it is unlikely that the RELW could be made part of this project. The potential for renewable energy for rural electrification in Tanzania is enormous, but without the SREP, it is unlikely that any support would be forthcoming for these privately initiated activities. The REA program is continuing to target off-grid and mini-grid-based rural electrification, but without special SREP support, such activities would not be given the high priority which they have been accorded because of this support.

[61] The most recent resource mapping data for Tanzania can be found at http://irena.masdar.ac.ae/.

Assessment of Strategic Climate Fund-SREP Investment Criteria

Increase in Installed Capacity from Renewable Energy Sources

24. Since the identification of potential investments will follow a 'bottom-up' approach, whereby the precise composition of the portfolio of investments will be driven by market demand, the precise details of total installed capacity and which technologies will receive financing are not known at this stage. Based on the following assumptions, the SREP-funded project will facilitate the construction of about 33 MW of renewable energy installed capacity, of which 32 MW will be from the SPPs and 1 MW from small-scale renewable energy and solar PV systems. For the SPP, it was conservatively assumed that the US$32 million available under the CL (for the SPPs) will support the construction of 32 MW renewable energy capacity (largely small hydro), mostly from the SPPs benefiting from the CL but also from other SPPs who are participating under the program but are not expected to draw upon the CL. This assumption is based on experience under the TEDAP CL, whereby smaller SPP projects (less than 2 MW) required roughly US$1.4 million per MW and larger SPPs (between 2 and 10 MW) required about US$1.1 million per MW of installed capacity. For renewable energy systems, including solar PV, it was assumed that US$9 million available under the RELW will result in another 1 MW of renewable energy capacity installed based on the assumptions made while designing the CL. Overall, the proposed SREP-funded project will contribute 33 MW of renewable energy installed capacity for rural electrification in Tanzania.

Increased Access to Energy through Renewable Energy Sources

25. It is estimated that the SREP-funded project will provide access to electricity to 310,000 people. The SPPs and resulting mini grids will connect about 32,000 households, assuming an average of 1,000 household connections per MW installed. Therefore, these mini grids are expected to provide access to electricity to 160,000 people (assuming five people per household). Additionally, renewable energy sales in rural areas are expected to achieve another 30,000 tier 2 household connections under the Multitier Framework, extending access to electricity to about 150,000 people.

Low Emission Development

26. The proposed SREP-funded project presents an opportunity to support Tanzania's efforts for low-carbon development by contributing to the expansion of rural electrification using renewable energy resources. The investments directly supported by the project are estimated to result in over 2.2 tCO_2 avoided over the lifetime of these investments. As the sector's growth runs to scale and more familiarity with the SPPs and the use of renewable energy are gained, these avoided emissions will grow dramatically with the economy's growth. Using the proxy-based method that was approved by the SREP Subcommittee, CO_2 savings were estimated and an emission equivalent factor based on diesel-generated electricity of 793.7 tCO_2 per GWh was proposed. Applying the proxy-based method to estimate CO_2 savings, the proposed project will help avoid 112,000 tCO_2 on an annual basis and 2.2 m tCO_2 over the lifetime of the project. The

lifetime of investments was assumed to be 20 years for SPPs (based on small hydro technologies) and 5 years for stand-alone renewable energy and solar PV systems.

Affordability and Competitiveness of Renewable Sources

27. As SPP developers bring more projects into completion and commissioning, they will gain experience and begin tapping the large renewable potential of Tanzania. Part of the REA's TA program is designed to maximize the gains from experienced, successful developers, thereby minimizing dead-end preparations and time wasted, which also lead to higher costs. As the sector grows, development costs will fall based on increased experience and growth of the local industry. Some projects that may not be cost-effective now will become so with increased growth of the sector. However, rather than building on subsidized tariffs, this growth is intended to build on a solid, sustainable tariff base.

28. One of the advantages of scaling-up the existing SPP program is that most of the projects in the pipeline used traditional renewable energy, such as small hydro (less than 10 MW) or biomass used in boilers. As a result, these tend to be the least-cost options for rural, renewable electricity supplies and the program is opportunistic or 'bottom-up' in nature. Under EWURA's first-generation SPP rules, tariffs offered by TANESCO were determined by the avoided costs of supplying at a given grid location. As a result, SPP developers targeted the existing TANESCO diesel-fired, isolated mini grids. Under EWURA's new second-generation SPP pricing regulations, preapproved tariffs are based on an agreed benchmark cost of generation by technology type rather than by the previously used avoided cost. This change in approach will mean that TANESCO must take responsibility for balancing out the costs of generation throughout its complete portfolio. However, it also means that only the SPPs able to demonstrate that their costs are lower than the technology-specific tariffs will be able to obtain the SPPAs. In addition, all 'variable' renewables (that is, wind and solar) can only be offered a PPA if they are selected as a least-cost option through competitive bidding. Both of these changes will serve to minimize the overall costs of generation to TANESCO and ensure that the most economically attractive projects are developed.

29. In those cases where the national grid does not reach and the population will be supplied through stand-alone mini grids, suppliers are entitled to charge a cost-recovery tariff under EWURA regulations. For operators of mini grids of less than 100 kW capacity, generators do not need a license and must only file for tariff review if a fraction of the local population raises objections to the prices. For PV systems, there are no regulations of price, so the market for PV lanterns and systems remains entirely unregulated and competitive. This option of stand-alone mini grids will depend entirely on these grids having a cost of supply that is cheaper than a pure diesel or grid connection alternative.

Productive Use of Energy

30. The electricity generated from SREP-funded investments will stimulate income-generation activities through productive uses of energy and job creation in rural areas. SPP developers have begun to identify productive users (for example, mines, agricultural processors, and water bottlers) in their service areas and some of these SPP developers are looking at these larger consumers as potential anchor off-takers. Additionally, TA activities supported by the REF will target increased use of electricity for productive uses and improved financial viability of rural energy systems under

Results Area 3. An area of support that is expected from IFC's involvement in the program will help developers identify anchor customers beyond just supplying to TANESCO, which will help bring more SPP projects to profitability.

Economic, Social and Environmental Development Impact

31. Tanzania's NEP, which was updated in 2015, stressed that lack of access to affordable and reliable electricity presents a major constraint in achieving the desired socioeconomic transformation in Tanzania. The proposed SREP-funded project will support the Government's vision to significantly advance electrification rates as illustrated in Tanzania's National Electrification Program guided by the Prospectus. The project will contribute to the expansion of electricity infrastructure in rural areas by leveraging private sector resources in mini-grid and off-grid renewable energy investments. The promotion of and support to SPPs servicing local communities will not only accelerate the growth of the small-scale, privately developed and financed rural renewable energy sector but also contribute to social and economic development in rural areas. The project will also generate new employment opportunities for SPP developers and rural employers, both during construction and operation of renewable energy investments. The project will also generate broader benefits arising from the improved service provided by rural public institutions (for example, health, education, water, and public administration) due to their increased access to electricity. Improvements in public service delivery expected through improved electricity connections, especially of rural institutions such as schools, clinics, and hospitals used by poor and vulnerable households, will contribute to improving the socioeconomic welfare of the country. SPP developers are also rural employers creating jobs in rural areas, both during construction and operation.

Economics and Financial Viability

32. SPP projects that will be supported under Results Area 2 of the project cannot be fully identified before project implementation, noting that SPP projects are demand driven and will be presented for evaluation throughout the project implementation period. The economic analysis is presented in the main project document for a minimum set of subprojects. The expected economic rate of return is estimated at 56.52 percent with an NPV of US$76.88 million. These benefits are robust in the face of different assumptions regarding timing and benefit flows, especially for this SPP component, because of the relative cost-effectiveness of the CL and the leveraging of private resources that it enables.

Leveraging Additional Resources

33. The use of SREP funding will crowd-in funding from other sources, including IDA, the private sector, TIB, and SIDA/DfID. SREP resources will leverage funding from IDA (US$35 million) and the private sector (about US$31 million) for SPP activities, as well as an additional US$28 million from the TIB's own investment resources for the RELW. Funding will be mobilized from SIDA/DfID in support of SPPs both for TA activities and results-based financing. The financing leveraging ratio is estimated at 1:8.

Gender

34. The proposed SREP-funded project will track benefits and impacts by gender. The most important of these is to help the REA meet its target of providing electricity in equal proportions to male and female households in rural areas. To date, household surveys show that in rural areas, there is no difference between the proportion of male- and female-headed households connected to the grid (24 percent of households in rural areas are female headed and 24 percent of electricity connections are provided to female-headed households). This situation contrasts with that in urban areas where there is a significantly higher proportion of male-headed households connected to the grid than female-headed ones. It is the intent of this project to monitor progress in this regard and to support work to ensure that such discrimination—however unintentional it may be—does not emerge in rural areas. This will be done through careful monitoring of applications for grid connections in rural areas and tracking of the fraction of male- and female-headed households connected to the grid, to SPP grids, and to solar PV and other renewable equipment. In addition, the REA will include in its own procedures to hold separate consultations with women and to ensure that female-headed households are connected to electricity in proportions reflecting their prevalence in the community at large. In addition, the subsidy policy will be reviewed to ensure that connection fees are equitably designed and applied to minimize or even provide financing for up-front connection costs, which should enable poorer households to connect to the grid.

Co-Benefits of Renewable Energy Scale-Up

35. In addition to the environmental benefits (CO_2 savings) outlined earlier in this section, the proposed project is expected to have a series of co-benefits, including the following.

- **Improved business environment for SPPs developers.** The Payment Delivery Mechanism will be established to reduce the risk of late payments by TANESCO to the SPPs, therefore improving the financial viability of SPP investments in rural electrification. The proposed project will ensure that SPPs in operation and the ones expected to sign SPPAs with TANESCO are paid on time, either by TANESCO or through the payment security arrangements.

- **Increased employment opportunities.** The project will generate employment opportunities for professionals and local skilled workers in relation to the construction and operation of the mini-grid investments, as well as to support the expansion of solar PV and renewable energy equipment vendors to non-electrified areas in rural Tanzania.

- **Increased financing for privately led rural electrification.** The CL will increase the availability of financing for rural electrification by increasing the exposure of local private banks to rural and renewable SPPs. The CL will allow the SPPs to secure local commercial financing at better terms, therefore leveraging additional financing into the sector.

- **Expanded businesses for Renewable Energy and Solar PV vendors.** The new second window under the existing CL will provide the financial foundation for

renewable energy and solar PV vendors to expand their operations in non-electrified areas in rural Tanzania.

- **Enhanced gender equality from improved energy services.** The project will follow a gender-sensitive approach, which will allow benefits and impacts from the project to be realized equally by both men and women. Evidence shows that benefits (for example, employment, business, and education opportunities) are often only realized if gender-sensitive approaches are integrated in project design and implementation. To prevent gender discrimination in the program activities, attention is also being paid to determine the current rates of access of male- and female-headed households and the existence of relevant differences between the gender of the head of the household and the rate of access.

36. Additionally, the successful implementation of this project component will help (a) diversify Tanzania's electricity generation portfolio; (b) create rural employment; (c) improve the quality of life in rural areas, including through greater educational opportunities and health care; (d) reduce pressures on public funding by leveraging in private sector resources, both financial and managerial; and (e) reduce the cost of rural electricity supplies.

Monitoring and Evaluation

37. As the SREP-funded Results Area 3 forms part of the larger PROGRAM, the REA—as the implementing agency—is responsible for M&E of the results and progress toward achieving all indicators. The REA will use an agreed verification methodology as outlined in the body of the Program Appraisal Document (section III. B). The PforR monitoring will be led and managed by the REA's M&E unit, which will rely on its contract with the TRAG (CRDB) to prepare a quarterly update on all REA KPIs. The formal reports will be issued on quarterly and annual bases, but these will be supplemented by regular and more frequent field reports.

38. Specific attention is being paid to monitoring the REA's reporting on compliance with existing land laws, compensation systems, and regulations related to voluntary contributions of villages affected by wayleave. The independent third-party verification agency will verify the REA's compliance with this indicator.

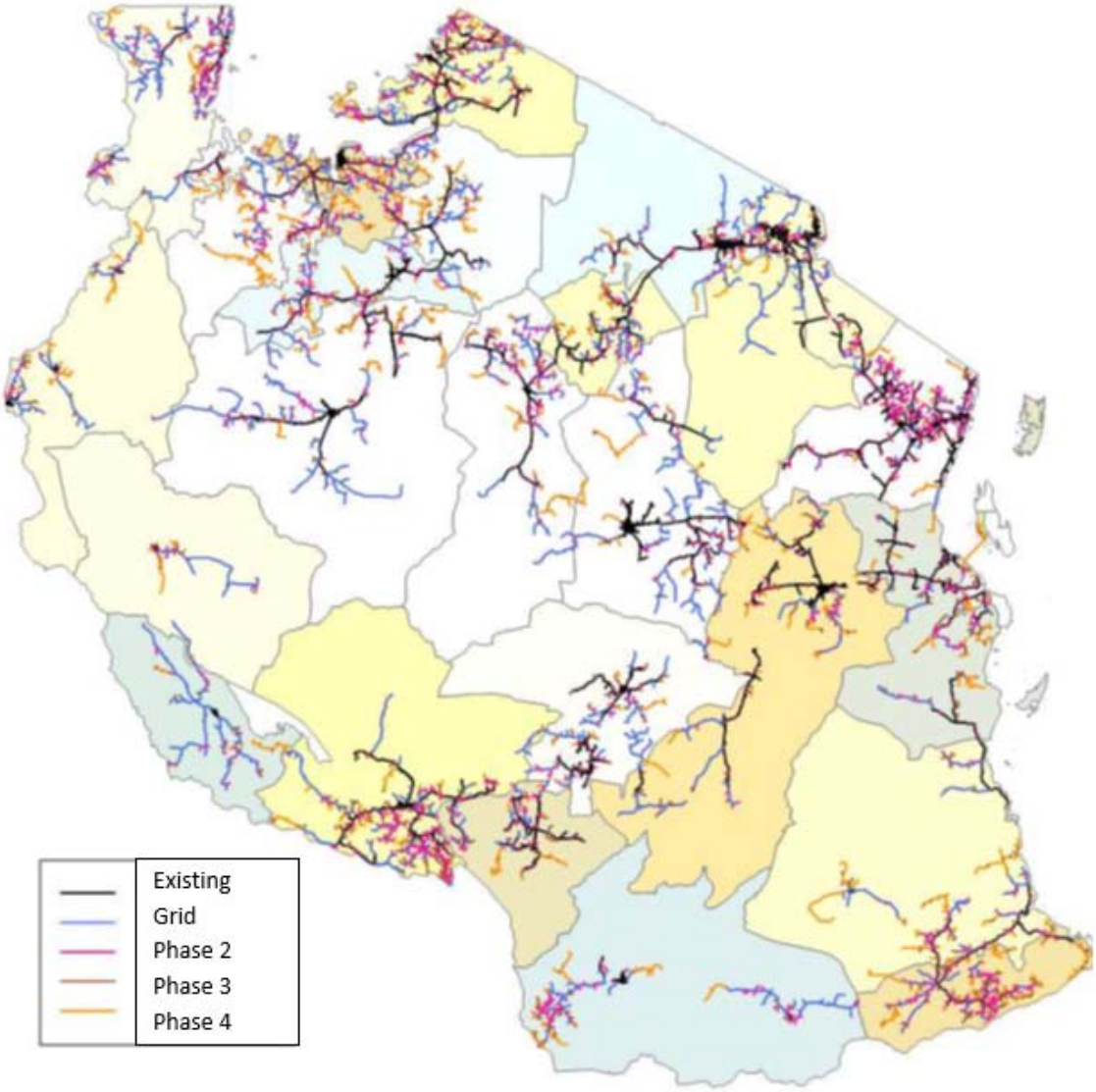
Implementation Readiness

39. **Energy sector strategies.** The PROGRAM is designed to support the implementation of the National Electrification Program Prospectus and is strategically relevant and fully aligned with the Tanzania New National Development Vision adopted in 1999 to guide the country's long-term economic and social development efforts (TDV 2025, MKUKUTA II, or TDV 2025). Moreover, the PROGRAM PforR is consistent with the Tanzania LTPP 2011/12–2025/26, the road map for implementing the targets outlined in TDV 2025. The TDV identified improved access to modern energy services as one of the preconditions for transforming rural Tanzania.

40. **Institutional arrangements.** The REA will implement the program during a six-year period under the oversight and coordination of the MEM. A steering committee will be established by the GoT, consisting of the MEM, Government agencies (EWURA, REA), the electric utility

(TANESCO), and representatives from the DPs, private sector, and civil society, to ensure the coordinated implementation of the program. The permanent secretary of the MoFP will chair the steering committee. While the REA will take the implementation responsibility for the program, a small portion of the TA will be directly implemented by the MEM. In addition, as the funds for this project will be channeled through the REF, they will be used in combination with the contributions from the GoT and other DPs. The REA will assume overall responsibility for the project's daily implementation and activity coordination. They plan to contract out all design, construction, and supervision work.

Annex 11: Map of Existing MV Lines and Phased Electricity Network Expansion under National Rural Electrification Program



Source: United Republic of Tanzania. 2014. *National Rural Electrification Program Prospectus*. Dar es Salaam: Innovation Energie de Developpement with support from NORAD.