Report Number : ICRR0021094

## 1. Project Data

**Country**
Tanzania

**Practice Area(Lead)**
Macroeconomics, Trade and Investment

**Programmatic DPL**

**Planned Operations:** 2

**Approved Operations:** 2

**Operation ID**
P143645

**Operation Name**
TZ First Power and Gas Sector DPO

**L/C/TF Number(s)**
IDA-52150

**Closing Date (Original)**
30-Jun-2014

**Total Financing (USD)**
100,000,000.00

**Bank Approval Date**
26-Mar-2013

**Closing Date (Actual)**
30-Jun-2014

| | IBRD/IDA (USD) | Co-financing (USD) |
|---|---|---|
| Original Commitment | 100,000,000.00 | 0.00 |
| Revised Commitment | 100,000,000.00 | 0.00 |
| Actual | 98,217,064.00 | 0.00 |

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**Group**
IEGEC (Unit 1)

**Operation ID**
P145254

**Operation Name**
TZ-Second Power and Gas Sector DPO ( P145254 )

| L/C/TF Number(s) | Closing Date (Original) | Total Financing (USD) |
|---|---|---|
| IDA-52150,IDA-53970 | 30-Jun-2015 | 100,000,000.00 |
| **Bank Approval Date** | **Closing Date (Actual)** | |
| 21-Mar-2014 | 30-Jun-2015 | |

| | IBRD/IDA (USD) | Co-financing (USD) |
|---|---|---|
| Original Commitment | 100,000,000.00 | 0.00 |
| Revised Commitment | 100,000,000.00 | 0.00 |
| Actual | 100,430,168.00 | 0.00 |

## 2. Program Objectives and Policy Areas

### a. Objectives

According to the Program Documents, the program development objective (PDO) of the First (DPO-1) and of the Second (DPO-2), as well as of a planned but subsequently cancelled Third (DPO-3), Tanzania Power and Gas Sector Development Policy Operation (DPO) was to: "(a) strengthen the country's ability to bridge the financial gap in the power sector; (b) reduce the cost of power supply and promote private sector participation in the power sector; and, (c) strengthen the policy and institutional framework for the management of the country's natural gas resources".

### b. Pillars/Policy Areas

The program had three policy areas, directly aligned to the PDO:
Strengthening the Country’s Ability to Bridge the Financial Gap in the Power Sector aimed to restore the financial sustainability of the power sector by boosting the Tanzania Electric Supply Company’s (TANESCO’s) revenues to cover operating costs (excluding debt servicing by the Government) and by stopping and reversing the buildup of the company's arrears.

Reducing the Cost of Power Supply and Promoting Private Sector Participation in the Power Sector aimed to reduce the costs and the risks associated with the country's power supply by reducing the system's technical and non-technical losses, replacing costly and polluting oil-fired with natural gas-based power plants, and ending the system’s dependence on emergency power producers (EPPs), and to promote private investment in the power industry to boost the country's power supply.

Strengthening the Policy and Institutional Framework for the Management of the Country’s Natural Gas Resources aimed to expand the contribution of natural gas to the power supply mix by strengthening the policy and institutional framework for the development of the upstream natural gas industry.

### c. Comments on Program Cost, Financing, and Dates

Program Cost: The program cost was estimated at appraisal at SDR64.9 million (US$100.0 million equivalent) for the first operation (DPO-1) and SDR65.2 million (US$100.0 million equivalent) for the second (DPO-2).

Financing: The program was financed by IDA credits of SDR64.9 million (US$98.2 million) for DPO-1 and SDR 65.2 million (US$100.4 million) for DPO-2. Both credits were fully disbursed, each in a single tranche.

Dates: DPO-1 was approved on March 26, 2013, became effective three months after on June 12, 2013, and closed as scheduled a year later on June 30, 2014. DPO-2 was approved on March 21, 2014, became effective three months after on June 9, 2014, and closed as scheduled a year later on June 30, 2015. (Because of the Government's inability to fulfill the prior actions for the third operation, the planned DPO-3 was deemed lapsed on March 20, 2016, after the Bank did not present the operation to the Board within the mandatory twenty-four months following the approval of the predecessor operation, DPO-2).

## 3. Relevance of Objectives & Design

### a. Relevance of Objectives

The PDO was relevant to economic and financial conditions in the country at the time of appraisal. Tanzania faced a power supply crisis in 2013-14. With hydropower representing 52 percent of 1,092 megawatts (MW) of installed capacity in 2010, the poor rainfall in 2010-11 cut power supply drastically, resulting in daily load shedding of up to 12 hours in many parts of the country. Short-term contracts between TANESCO and EPPs for 317 MW of generation capacity eased the supply shortage but doubled costs from an average US$0.08 per kilowatt hour (kWh) in 2010 to US$0.16 in 2012. Prohibited by Government from passing costs to consumers, TANESCO faced financial shortfalls of US$40 million a month beginning in mid-2012. By end-2014, the financial gap in the energy sector was estimated at between US$760 million and US$1 billion (some 2.9 – 3.8 percent of GDP). The DPO objectives were relevant to these conditions as they represented both a short-term response to the energy crisis and related fiscal risks (through tariff reforms, transparent transfers to TANESCO, and government-guaranteed commercial borrowing by TANESCO) and a medium- to long-term strategy to develop the power and gas sector and operate it more efficiently, transparently and sustainably (by relying less on emergency supply, shifting to more efficient gas-fired plants, encouraging private sector participation in power generation, and attracting investment in gas exploration and production). The long-term objective to develop the power and gas sector was crucial to the national economy considering that only 16 percent of the total population and 1.1 percent of the lowest quintile in rural areas had access to electricity in 2010-11.

The objectives were aligned with Government strategy at appraisal. They coincided with the priorities set out in the "Electricity Supply Industry Reform Strategy and Roadmap for 2014-25" of 2014 and the "National Energy

Policy" of 2015. However, they remained partially relevant to *de facto* Government policy at program closure. Bridging the financial gap remained pertinent, as did the goal of reducing power supply costs. However, political support promotion of private sector participation in the power sector and strengthening the policy framework for the natural gas industry appeared to have eroded after 2014. Subsequently, Tanzania's Second Five-Year Development Plan of FY2016/17 – FY2021/22 placed less emphasis on these aims.

The PDO remained closely aligned with the strategic focus of the Bank Group's Country Assistance Strategy (CAS) for Tanzania for FY2012-FY2015, which committed the Bank to support activities that advanced four country objectives --- to promote inclusive and sustainable private sector-led growth, to build infrastructure and deliver services, to strengthen human capital and the social safety net, and to promote accountability and governance.

### Rating
Substantial

## b. Relevance of Design

The Results Framework followed a logical chain from policy areas, to program outcomes, and to the PDO. The PDO was clearly stated. The three policy areas exactly matched the three objectives of the program. For the first objective, raising electricity tariffs, improving collections from utility customers, and rationalizing fiscal transfers to TANESCO could be expected to financially strengthen the power sector and bridge the financial gap. For the second objective, introducing a performance contract with TANESCO, instilling transparency with the publication of performance reports, financial audits and procurement audits, and launching a capacity building initiative in the electric company could be expected to reduce costs and risks in power supply and open the way for private sector participation in the power sector. For the third objective, crafting a public policy on natural gas, verifying the amount of the country's natural gas reserves, and clearing arrears with gas developers could enable expansion of the country's gap supply and strengthen the institutional and policy framework to better manage the country's gas resources.

Although the causal chain was logical, most of the prior actions selected were too weak to secure the intended results. The prior actions consisted principally of the enactment of new laws, the adoption of new policies, and the creation of new organizations. But the program did not mandate a timeline for the implementation of the laws, the execution of the policies, or activation of the organizations, leaving a gap between reform and reform implementation. The gap could expose the legislation and the policies to reversal.

Tanzania's macroeconomic situation was broadly satisfactory at the time of the program's preparation and approval. According to the Staff Report following the International Monetary Fund's (IMF's) May 2014 Article IV Consultation, economic growth remained strong at an expected 7 percent in 2015, and inflation, at 6 percent, was gradually converging to the Authorities' 5 percent medium term objective. Based on the debt sustainability analysis, Tanzania was at low risk of debt distress. However, the external current account deficit remained among the largest in the Africa Region, at 14 percent of GDP. Revenue shortfalls and overruns in domestically-financed spending led the fiscal deficit to rise to 6.8 percent of GDP. The Government undertook spending cuts in an effort to meet their 5 percent of GDP target under their Standby Arrangement. The staff reports that all performance criteria under the Standby Arrangement were met, except a sizable breach of the performance criterion on net domestic financing, which the Authorities were correcting. The IMF referred to the sizeable finds of offshore natural gas that, if confirmed as commercially viable, could bring in large revenues during the next decade.

**Rating**
Modest

## 4. Achievement of Objectives (Efficacy)

### Objective 1

**Objective**
To strengthen Tanzania's ability to bridge the financial gap in the power sector.

**Rationale**
TANESCO reduced its operating deficit from US$240 million in 2013 to US$90 million in end June-2016 and into a surplus of US$80 million in end-June 2017, thus exceeding the outcome target to reduce the operating deficit to US$50 million in 2016. This was made possible by three sets of measures. First, bill collection improved by 30 percent between FY2011 and FY2012 (prior action to DPO-1). Second, TANESCO implemented two tariff increases in January 2012 and January 2014, from Tanzanian Shilling (T Sh) 136 per kWh in FY2011 to T Sh 238 per kWh in FY2017 (prior action, DPO-2). Third, technical and non-technical losses were reduced from 21 percent in 2012 to 18.3 percent in end-June 2016 and 16.4 percent in end-June 2017, exceeding the outcome target of 18 percent in 2016. Consequently, the Government decreased fiscal transfers to TANESCO from US$117 million in FY2012 to US$3 million in FY2016 and zero in FY2017. However, a tariff increase mandated by the Energy and Water Utilities Regulatory Authority (EWURA) was suspended by the Minister of Energy and Mines in December 2016, thereby calling into question the sustainability of the financial improvements achieved.

Moreover, the outcome target to reduce TANESCO’s arrears from T Sh 707 billion in 2012 to T Sh 300 billion in 2016 was not met. On the contrary, accounts payable rose sharply to T Sh 1,187 billion at end-June 2016 and again to T Sh 1,331 billion at end-June 2017. Although the Government had reduced its own arrears to TANESCO (prior action, DPO-1), it cut the fiscal resources that were to finance the accelerated electricity access plan (250,000 new connections per year with a targeted customer base of 1.5 million by 2015). TANESCO was, therefore, obliged to finance the necessary investments itself, relying on internal cash and accumulation of arrears. In addition, exchange rate depreciations of 8 percent in FY2015 and 24 percent in FY2016 raised the local currency value of TANESCO’s payables, most of which were denominated in U.S. dollars.

In summary, although TANESCO succeeded in turning its operating deficit into a surplus by 2017, the sustainability of the improvement is questionable due to the blocking of tariff increases authorized by the Regulator and to the large accumulation of further arrears.

**Rating**
Modest

## Objective 2

**Objective**
To reduce the cost of power supply and promote private sector participation in the power sector in Tanzania.

**Rationale**
The average unit cost of power sales fell from US$0.18 per kWh in 2012 to US$0.12 per kWh in 2016, thereby exceeding the outcome target of US$0.15 per kWh. The cost fell further to US$0.09 per kWh at end-June 2017. The conclusion of a performance contract between the Ministry of Energy and Minerals (MEM) and TANESCO, with key performance targets to enhance efficiency, and the requirement that TANESCO publish its performance and audit reports (both prior actions, DPO-1), were likely instrumental in achieving this result. However, a number of other factors also played an important role – new gas fired generation capacity permitted a shift from oil to natural gas in the generation mix; international fuel oil prices fell sharply during the period in question; there were good hydrological conditions in both 2015 and 2017; and power demand growth was 7.6 percent in 2016, lower than the expected 10 percent.

The outcome target to raise the amount of gas-fired power generation capacity commissioned after 2011 from 105 MW in 2012 to 400 MW in 2016 was not achieved. Gas-fired power generation capacity stood at 255 MW in end-June 2017, after a new 150 MW plant was commissioned in 2016. The good hydrological conditions and slower than expected demand growth referred to above eased the pressure to commission new gas-fired capacity. Moreover, the completion of the National Natural Gas Project (NNGIP) pipeline was delayed, crimping the availability of gas for the new plants and stalling fuel switching in existing plants. Some 425 MW of additional gas-fired generation capacity were in the pipeline at program closure, with a 240 MW plant expected to be commissioned by August 2018, and a 185 MW plant by early 2019.

Although a public-private partnership (PPP) capacity building program was initiated (prior action, DPO-2), the outcome target of launching at least one competitive bid for an independent power producer (IPP) generating plant was not achieved. Again, this reflected international and national circumstances, leading to lower than anticipated motivation to secure new capacity.

Private sector interest has also been undermined by policy reversals and uncertainties. A parliamentary inquiry into the sale of the IPTL private power plant in 2014 and the inquiry into mining contracts in 2017 led to the removal or suspension of key MEM officials and of the EWURA Director General (after EWURA had started the process to renew IPTL's operating license). Following the inquiry, the Petroleum Act of 2015 was amended in 2017 in a way that negatively affects the stability of existing

Production Sharing Agreements and risks clouding the prospects for future private investment in the power sector. Damaging signals to the private sector also stem from the slow and reluctant implementation of the 2014 "Electricity Supply Industry Reform Strategy and Roadmap, 2014-25" and the 2015 "National Energy Policy" (publication of both documents and the establishment of a Unit within MEM to oversee implementation were, respectively, DPO-1 and DPO-2 prior actions). None of the reforms envisaged in these documents for completion by mid-2019 – including the unbundling of generation from transmission and distribution; direct trading between generators and bulk off-takers; the designation of an independent market operator – were underway at program closure, and it is uncertain when or whether they would be implemented in the near future.

In summary, TANESCO succeeded in reducing the cost of power supply, but the extent to which this can be attributed to actions supported by the program is limited. The outcome targets to increase gas-fired generation capacity and to raise private sector participation in the power generation were not met.

**Rating**
Modest

## Objective 3

**Objective**
To strengthen the policy and institutional framework for the management of Tanzania's natural gas resources.

**Rationale**
The Government allowed an independent verification of the volume of natural gas reserves. It also cleared its arrears to gas developers, paying them US$106.9 million by December 2012. Both were DPO-1 prior actions. However, the outcome target to raise the amount of onshore proven gas reserves from 1.0 trillion cubic feet (Tcf) in 2012 to 250 Tcf in 2016 was not met. Proven reserves stood at only 1.187 Tcf in December 2016. The second outcome target in this area – to raise the volume of gas production from 78 million standard cubic feet per day (mmscfd) in 2012 to 250 mmscfd in 2016 – was not achieved either. Gas production was 102 mmscfd in 2015 and 132 mmscfd in 2016. Both investment in exploration and production were adversely affected by slow domestic demand growth, the decline in global energy prices, and limited progress in the implementation of reforms in the upstream policy and regulatory framework.

These results are despite compliance with all four related DPO-2 prior actions: (a) the adoption of a Natural Gas and Petroleum Policy in 2014; (b) the inclusion of natural gas in the mandate of the Cabinet Committee on Economic Affairs and the creation of an inter-ministerial task force on natural gas; (c) publication of the key performance indicators, audited financial statements, and procurement audits of the Tanzania Petroleum Development Corporation (TPDC); and (d) launching of the Tanzania Natural Resource Charter Initiative. In addition, Parliament passed the Petroleum Act, the Oil and Gas Revenue Management Act, and the Tanzania Extractive Industries Management Act, all in 2015, which collectively established a unified legal framework for investment in the upstream natural gas industry. However, implementation of the new framework and related strategies fell well short of expectations.

**Rating**
Modest

## 5. Outcome

The objectives were substantially relevant to the country context, and well aligned the World Bank Group's country assistance strategy. But, while directed at addressing the energy supply crisis and emerging fiscal risks of 2013-14 and beginning to strategically develop the power and gas sector, program design required prior actions --- the enactment of new laws, the issuance of policy documents, the creation of new organizations --- that did not demand immediate implementation and were therefore too weak to secure the intended results. The degree of achievement of all three program objectives --- strengthening Tanzania's ability to bridge the financial gap in the power sector, reducing the cost of power supply and promoting private sector participation in the power sector, and strengthening the policy and institutional framework in the management of natural gas resources --- was modest. These constitute significant shortcomings and outcome is assessed as moderately unsatisfactory.

a. **Outcome Rating**
Moderately Unsatisfactory

## 6. Rationale for Risk to Development Outcome Rating

There are high political risks. The new Government, which assumed office four months after program closure in November 2015, appears to have changed course on several power sector reforms. It has: de-emphasized private sector energy infrastructure, shown reluctance to implement laws, policies and strategies supported by the program, and weakened EWURA's ability to make independent regulatory decisions (by not implementing the December 2016 tariff order and suspending EWURA's Director General). The stability of existing power sharing agreements has been undermined by amendments to the 2015 Petroleum Act. There is some evidence that the Authorities may be inclining to the view that private sector investment in the power sector may not be worth pursuing given the controversy and poor implementation associated with previous PPP contracts (ICR, paragraphs 84 and 85, page 35).

Demand and supply in Tanzania's power sector remain in tight balance. Any drought or power plant failure, which may occur before additional gas-fired generation capacity is commissioned, poses supply problems and may derail TANESCO's financial recovery. The new gas fired plants are also at risk to inadequate gas supplies from poor pipeline access, following the delay with the completion of the NNGIP pipeline.

Implementation of the 2016 Power System Master Plan (PSMP) and the Government's ambitious access targets (to connect 50 percent of the population by 2020 and 75 percent by 2030, up from 33 percent in 2016) implies a major public investment in power connections that will likely strain TANESCO's finances. The company is at the limit of its financing capacity and has restricted access to commercial borrowing, indicating that both liquidity and the company's ability to pay its arrears will remain under intense pressure.

Although the country's growth and inflation outlook are relatively stable, other macroeconomic risks are serious. Fiscal constraints limit the Government's ability to fund TANESCO's investment program; market pressure on the exchange rate may increase TANESCO's arrears, which are mostly dollar denominated; and, Tanzania's natural gas development and investment plans remain vulnerable to fluctuations in global energy prices.

### a. Risk to Development Outcome Rating

High

## 7. Assessment of Bank Performance

### a. Quality-at-Entry

The program had several strong points at entry:

- It was firmly aligned with the objectives of the Bank Energy Sector Capacity Building Project (ESCBP) and the International Monetary Fund (IMF) program for 2012-14.
- The crisis-response elements of the DPO, which included tariff reforms, fiscal transfers, and the performance agreement with TANESCO, were informed by analytical work, including the Power System Master Plan (2012), a financial assessment of TANESCO (2012-15), the BRN Energy Lab Report (2013), and the Government of Tanzania and Energy Development Partner Group Joint Energy Sector Review (2013).
- The Bank collaborated closely with other external partners in a concerted effort to help the Government respond to the electricity supply crisis of 2013-14. The IMF contributed an SDR 149.0 million Standby Credit Facility in 2012-14 which focused on structural benchmarks for TANESCO's financial recovery, monitored fiscal transfers to the electric company, and tracked domestic borrowing for the energy sector. The African Development Bank (AfDB) provided an SDR 100.0 million budget support in 2015-17 for the power sector reform program.

There were, however, a number of weaknesses:

- The assumption that stakeholder buy-in of elements of the medium- to long-term reform program would be achieved during program implementation turned out to be unfounded. The Bank also assumed that Government reform commitments --- policies, plans, roadmaps --- would be followed up with reform implementation measures and action.
- The Bank did not secure the political commitment of the Government to the participation of the private sector in power projects firmly enough. The triggers to the cancelled DPO-3 required that the Government launch at least one private competitive bid for a gas-fired power generation project. Kinyerezi I and Kinyerezi II, which were in the pipeline at the time of program appraisal and would have been ideal candidates for private tendering. And yet, the Government decided to pursue both as public projects at the time of program implementation, leaving the objective of promoting private participation in new power generation projects largely unmet.
- The Bank included reforms in the natural gas sector in the program without sufficient dialogue with sector stakeholders (ICR, paragraph 33, page 14). The Bank engaged in a broader and deeper sector dialogue with stakeholders only after the preparation of the DPO series, and through a "scoping mission" participated in by six other development partners.
- Although the Bank correctly identified the technical risks that would eventually materialize --- improved hydrological conditions, falling international energy prices, and slower than expected demand for power --- and the Program Document admitted that these risks could not be fully mitigated, the Bank did not provide for alternative courses of action for when these risks materialized.
- The Bank missed the opportunity to consider governance risks in the risk assessment of the program. The political economy of power sector reform was poorly reflected in program design, specifically with regard to: Government commitment to reforms beyond the crisis period; stakeholder consensus on the structural reforms, the exact nature of which were to be determined during program implementation; and, risks associated with a reform program that spanned election cycles, in particular, a change in government, and with it, the level of commitment to the reform program.

### Quality-at-Entry Rating

Moderately Unsatisfactory

## b. Quality of supervision

Bank supervision was strong in the following aspects:

- The program objectives and the Bank and other development partners′ country strategies remained firmly aligned during program implementation.
- The Bank provided close implementation support, through an experienced core team as part of regular supervision missions, and through additional support missions.
- The Bank mobilized technical support to improve program implementation. It raised trust fund resources to help maintain the reform dialogue during the transition in government and several changes in sector leadership. The Bank provided parallel technical assistance for capacity building under the ESCBP.
- The decision to cancel the third operation in the programmatic series followed an in-depth dialogue with the Government in September, November, and December 2016. It also reflected a flexible adjustment

to the changing national economic and political context.

However, Bank supervision was moderately deficient with regard to the following:

- The major change in the Government's policy on access plans and connection charges in early 2013, and their impact on TANESCO's finances, were not adequately reflected in the design of DPO-2.
- The Bank did not adjust course but could have done so as arrears continued to mount in FY2014/15 despite TANESCO's positive income figures.
- The Bank could have done more to disseminate to the sector stakeholders the global best practices in designing, structuring and executing private sector participation in the power sector.

### Quality of Supervision Rating

Moderately Satisfactory

### Overall Bank Performance Rating

Moderately Unsatisfactory

## 8. Assessment of Borrower Performance

### a. Government Performance

Government performance had the following strengths:

- Commitment to the crisis-response elements of the program was firm, as was leadership with the fiscal response.
- The Government established a policy framework for upstream natural gas development, maintained the positive momentum after approval of DPO-2, and adopted legislation that reformed natural gas sector performance.

However, there were significant weaknesses:

- Commitment to the medium and long-term power sector reform --- private sector participation in power generation, an independent regulatory function --- waned during implementation and declined markedly after program closure.
- The acceleration of access to electricity and insufficient Government funding of related investment program was a major contributor to the continued buildup of TANESCO's arrears. Under DPO-2, the Government and TANESCO had committed to finance any remaining financing gap in the power sector after tariff reforms from commercial borrowing and from Government subsidies. However, after allowing two small commercial loans of T Sh 60 billion, the Government restricted TANESCO's access to commercial borrowing after FY2014/15 (ICR, paragraph 58, page 27).

- The Government's energy sector reform efforts and engagement with the Bank lost momentum after changing international and domestic conditions removed the urgency for reform and a new administration, with different views specially about private sector participation, assumed office.

### Government Performance Rating

Moderately Unsatisfactory

### b. Implementing Agency Performance

The Ministry of Finance and Planning (MOF) was the implementing agency of the program.

- The MOF, in coordination with the MEM, TANESCO and EWURA took ownership in selecting and implementing the prior actions, the commitment reflected in the timely approval of DPO-1 and DPO-2.
- Performance and service improvements under the leadership of the MEM contributed to the social acceptance of tariff reforms (ICR, paragraph 91, page 38).
- TANESCO improved bill collections and cut system losses, but was burdened with the Government's mandate to accelerate the access plan and with the Government's diminished financial support for the company's investment program.
- EWURA approved the tariff increases as planned, but suffered from a lack of institutional independence as the program concluded.

### Implementing Agency Performance Rating

Moderately Satisfactory

### Overall Borrower Performance Rating

Moderately Unsatisfactory

## 9. M&E Design, Implementation, & Utilization

### a. M&E Design

The results indicators, including targets, were adequately linked to the PDO. For the crisis response elements of the program, the focus on outcomes was adequate and appropriate. However, for the medium to long-term elements, the emphasis on outcomes blurred the line of sight between prior actions and the results indicators (the link between the natural gas policy framework and the volumes of proven gas reserves and gas produced). Output indicators would have been more appropriate for these prior actions.

The results indictors were measurable, and did not require data collection efforts beyond the performance and financial reporting by MEM and TANESCO, ensuring that: (a) M&E relied on the capacity of country systems; (b) M&E could continue beyond the program period; and (c) the ICR had access to reliable information.

The M&E organizational set-up was adequate. The MOF was responsible for overseeing M&E and drew on the assistance of MEM, TANESCO and EWURA.

### b. M&E Implementation

The Bank and the Government continuously monitored progress against the performance and financial indicators of the power sector, including the DPO results indicators. M&E was implemented adequately and data on all indicators was readily available at the time of the ICR. However, the financial monitoring of TANESCO was less timely than expected.

The two Bank supervision reports of April 2014 and August 2015 did not give a thorough account of the delays with DPO-3, reflecting the fact that the M&E's choice of outcome (rather than output) indicators was inadequate for monitoring the progress with medium to long-term reforms.

The switch by TANESCO from a January-to-December to July-to-June financial year, starting in Fiscal Year 2015/16, created a 18-month transition year in FY2015/16.

### c. M&E Utilization

The financial indicators informed Government decisions, including on tariff reforms. The program results indicators were usable in other applications: in the budget support framework used by the Government; in the IMF program; and in the Bank's annual Public Expenditure Review. The close integration of M&E efforts across various platforms benefitted the program's M&E implementation. The Bank used the finding that only three of the nine triggers to DPO-3 were met to delay with the consideration of DPO-3 until after the general elections of October 2015. The M&E results featured in the discussions with the Government on a follow-up operation.

### M&E Quality Rating

Substantial

## 10. Other Issues

### a. Environmental and Social Effects

Environmental Effects: No safeguard policies were formally triggered. Following the requirements of Bank Operational Policy OP 8.60 (paragraph 9: Poverty and Social Impacts, and paragraph 10: Environmental, Forests, and Other Natural Resource Aspects) which govern DPOs, the Program Document (pages 30-33) made the following determination of the environmental effects of the program: (a) the sound environmental management of newly-discovered natural resources represents an emerging challenge and requires significant additional capacity to handle environmental work; (b) to confront these challenges, the ESCBP has a package of capacity building activities to help the National Environmental Management Council provide effective and efficient oversight of the oil and gas sector; (c) the DPO is complemented by support provided under the ECSBP to ensure that the environmental aspects of the program are adequately addressed; (d) in particular, the gas scoping mission of 2012 set an action plan to ensure that gas companies developed and maintained energy response plans applicable to all their operations; and, (e) the preparation of a Strategic Environmental and Social Impact Assessment (SESIA) of the gas sector is underway and should help with environmental management in the sector..

The ICR (page 33) reports that the implementation of the program reversed the previous increase in specific greenhouse gas (GHC) emission from the power sector. The use of hydropower and natural gas reduced GHC emissions from 408 grams of carbon dioxide per kilowatt hour (g CO2/kWh) in 2013 to an average 360 g CO2/kWh in 2014-17.

<u>Social Effects</u>: The Program Document (pages 28-30) argued that the reforms supported by the DPO would contribute to poverty reduction and shared prosperity in the long run: (a) a stronger policy and institutional framework and improved governance and financial capacity in the power sector would increase power supply and enhance the access households and firms, including small and informal enterprises, to electricity; (b) a more sustainable energy cost structure would decrease the need for fiscal transfers to the energy sector and thereby release budgetary funds for more social spending; (c) a sound institutional framework for the development of the natural gas sector would help optimize the economic and social benefits from natural resource development; (d) the average 39 percent increase in electricity tariffs would not have an adverse impact on low-income households (their effective tariff rate would decline, according to estimates using the 2011/12 Household Budget Survey data); and, (e) the higher electricity tariffs would raise electricity costs for small firms, but at the same time improve the same firms’ access to electricity.

The ICR (pages 31-32) reports that the impact of the electricity tariff reforms on poverty was mitigated through cross-subsidies. At T Sh 40 per kWh, the absolute tariff increase on small household consumers (those with an average monthly consumption below 75 kWh) was the second lowest among all consumer groups. Moreover, strong household income growth and lower inflation over the program period kept the tariff increases affordable. Overall, household spending on electricity in Tanzania --- some 1.9-5.8 percent of income among the poor and 3.0-3.3 percent among all households --- remained below the average among 20 Sub-Saharan countries, partly reflecting lower access. The ICR also reports (page 33) that reduced budgetary transfers to the power sector --- transfers declined from US$117 million in FY2012 and US139 million in FY 2013 to US$3 million in 2016 and none in 2017 --- eased the pressure on fiscal consolidation and provided the Government the fiscal space for spending on other priorities, including on social development.

## b. Fiduciary Compliance

The Program Document (page 34) stated that the series would follow Bank procedures for DPOs. The DPO proceeds would finance the Consolidated Fund, which is subject to audit by the Controller Auditor General (CAG). The Bank would have access to the CAG audit reports. The ICR does not report any compliance issues.

### c. Unintended impacts (Positive or Negative)

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### d. Other

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## 11. Ratings

| Ratings | ICR | IEG | Reason for Disagreements/Comment |
|---|---|---|---|
| Outcome | Moderately Unsatisfactory | Moderately Unsatisfactory | --- |
| Risk to Development Outcome | High | High | --- |
| Bank Performance | Moderately Satisfactory | Moderately Unsatisfactory | The Bank incorrectly assumed that stakeholder buy-in of the reform program would be achieved at implementation, did not secure strong political commitment to the private tendering of power projects, and did not sufficiently engage stakeholders in a broad dialogue on gas sector reforms (see Section 7.a). |
| Borrower Performance | Moderately Unsatisfactory | Moderately Unsatisfactory | --- |
| Quality of ICR | | Substantial | --- |

**Note**
When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

## 12. Lessons

The first three lessons are drawn from the ICR (paragraphs 94-96, pages 39-40), with some adaptation; the fourth is drawn by IEG.

Power sector reform programs that advance the electricity access agenda, among other objectives, need to incorporate the access effort in program design more explicitly. The DPO recognized the Government's objective to expand access to electricity but failed to explicitly model the initiative in the program’s results framework. Consequently, the DPO did not anticipate the increase in TANESCO’s arrears despite over-achieving its income targets as the electricity company tripled its new connections in three years.

Engaging the Tanzanian government on a policy framework for the development of the natural gas industry was worth the effort, notwithstanding the poor tally on the program results indicators. The steep decline in global oil and gas prices in 2014-16 slowed down the gas sector reform momentum in Tanzania during the program period. However, the Government succeeded in developing the legal framework for the upstream gas industry, setting the development agenda for the entirety of the country’s energy supply chain that would be vital to the country’s future economic prospects.

Initiatives to expand the participation of the private sector in energy supply need to be informed by political economy analysis. A small number of controversial and poorly executed PPP contracts cast a long shadow on the outlook for PPPs in Tanzania’s power sector. A new Bank document, "Rethinking Power Sector Reform", lays out an agenda for more closely integrating political economy considerations in power sector reform programs.

A strong link between prior actions and reform implementation increases the chance of DPOs achieving their objectives. The program missed mandating a timeline for the execution of policy and institutional reform plans adopted by the Government in fulfillment of the prior actions, leaving elements of the reform program exposed to reversal and stalling as new developments muted the urgency of the reforms, a new government assumed office, and political preferences shifted.

## 13. Assessment Recommended?

No

## 14. Comments on Quality of ICR

The assessment of the program results is evidence-based. The ICR provides a useful summary of the operations' performance relative to the results indicators (Table 8, page 22), which it sets in the context of the results framework for the program (Table 9, pages 23-24). It offers a well-argued narrative, supported by quantitative data (Figures 1-7, pages 25-32), of why it rates the achievement of the three program objectives as Modest (paragraphs 54-68, pages 24-31).

The analysis of the program outcomes is candid. The ICR provides a balanced view of the strengths and weaknesses of the program design (paragraphs 44-48, pages 19-20), the M&E design (paragraph 36, pages 16-17), the Bank's performance (paragraphs 88-89, pages 36-38), and the borrower's performance (paragraph 91, page 38). In citing progress with the performance indicators, the ICR lists other factors --- both national and global economic factors, and political, and environmental developments --- that likely affected the program results, offering a more nuanced view of the attribution of the program outcomes (Table 7, page 15, and Table

9, pages 23-24). .

The document offers a comprehensive record of the program. The ICR adequately documents the context of the program --- the drought-driven Tanzanian power supply crisis of 2013-14, the burgeoning financing gap in the power sector as reflected in the operating deficits posted by the electricity company TANESCO, and the underlying lack of access by Tanzanians to electricity (paragraphs 3-9, pages 1-4). The ICR also documents the original and changes to the original prior actions required of DPO-1 and DPO-2 (Table 4, pages 8-10), as well as of the triggers to the planned DPO-3 and their status at program closing (Table 6, pages 12-13).

## a. Quality of ICR Rating

Substantial