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QUARTERLY PROGRESS REPORT FOR THE PERIOD OCTOBER 1 TO DECEMBER 31, 2015

USAID Power Africa Transactions and Reforms Program (PATRP)
Contract: AID-623-C-14-00003

January 25, 2015

This report was produced for review by the United States Agency for International Development. It was prepared by Tetra Tech ES, Inc.

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Prepared for: United States Agency for International Development

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The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
ALSF	African Legal Support Facility
AUC	African Union Commission
BTG	Beyond the Grid
BWG	Budget Working Group - Power Africa
CBN	Central Bank of Nigeria
CO	Contracting Officer
COP	Chief of Party
COR	Contracting Officer's Representative
DCA	USAID's Development Credit Authority
DCOP	Deputy Chief of Party
DFID	UK Department for International Development
DQA	Data quality assessment
E&S	Environmental and social
EAPP	East Africa Power Pool
ECG	Electricity Company of Ghana
EDD	Electricité de Djibouti
EEP	Ethiopian Electric Power Corporation
EIA	Environmental impact assessment
EKT	Ethiopia Kenya Tanzania Transmission line
EPC	Engineering, procurement and construction
ERC	Energy Regulatory Commission (Kenya)
EU	European Union
EWURA	Tanzania Energy and Water Utilities Regulatory Authority
EXIM	Export-Import Bank of the United States
ESCOM	Electricity Supply Corporation of Malawi Limited
GDC	Kenya Geothermal Development Company
GIS	Geographic information system
GMSP	Grid Management Support Program
GCSA	Government consent and support agreement
GHG	Greenhouse gas
HFO	Heavy fuel oil
HPP	Hydropower plant
IA	Implementation or interconnection agreement
IEE	Initial environmental examination
IFC	International Finance Corporation
IPP	Independent power producer
IRB	Independent Regulatory Board
JDA	Joint development agreement
KenGen	Kenya Electricity Generating Company
KETRACO	Kenya Electricity Transmission Company Limited
KPLC	Kenya Power and Lighting Company (now Kenya Power)
kV	Kilovolt
LEC	Liberia Electricity Corporation

M&E	Monitoring and evaluation
MCC	Millennium Challenge Corporation
MERN	Ministry of Energy in Charge of Natural Resources (Djibouti)
MIGA	Multilateral Investment Guarantee Agency
MOF	Ministry of Finance (Ghana)
MOP	Ministry of Power (Ghana)
MOPET	Ministry of Petroleum (Ghana)
MoU	Memorandum of understanding
MW	Megawatt
NBET	Nigeria Bulk Electricity Trading (PLC)
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEPAD	New Partnership for Africa's Development
NERC	Nigerian Electricity Regulatory Commission
ODDEG	Agency for Geothermal Energy Development - Djibouti
OMVG	Organisation pour la Mise en Valeur du fleuve Gambie (Gambia River Basin Development Organisation)
OPIC	Overseas Private Investment Corporation
PATA	Power Africa and Trade Africa
PATRP	Power Africa Transactions and Reforms Program
PATT	Power Africa Tracker Tool
PCOA	Put & call options agreement
PESRM	PATRP Environmental and Social Review Methodology
PIRS	Performance indicator reference sheets
PMP	Performance monitoring plan
PPA	Power purchase agreement
PPF	Project preparation facility
PSP	Private sector partner
PV	Photovoltaic
QTAT	Qualified Transactions Assistance Tool
REA	Rural Energy Agency (Tanzania)
Senelec	Société Nationale d'Électricité du Sénégal (National Electricity Corporation of Senegal)
SPPA	Small power purchase agreement
SREP	Scaling up Renewable Energy Project (Liberia)
SSRE	Small-scale renewable energy
TA	Transaction advisor
T&D	Transmission & distribution
TANESCO	Tanzania Electric Supply Company Limited
TCN	Transmission Company of Nigeria
TEM	Transitional Electricity Market - Nigeria
TOR	Terms of reference
TREEP	Tanzania Rural Electrification Expansion Program
TSA	Transmission service agreement
TSO	Transmission system operator
USADF	United States African Development Foundation
USAID	United States Agency of International Development
USEA	United States Energy Association

USG	United States Government
USTDA	United States Trade and Development Agency
VRA	Volta River Authority
WAPP	West Africa Power Pool
WIAP	Women in African Power Network
ZKT	Zambia-Kenya-Tanzania (transmission line)

INTRODUCTION

This report's format meets the requirements of Section F.6 (Reports), Paragraph E (Monthly and Quarterly Progress Reports) of the PATRP Contract, AID-623-C-14-00003. Further, it replaces the monthly report for the last month of the quarter.

PATRP is organized into four major components, called objectives, each with unique characteristics and each requiring a different mix of skills and resources:

- Objective 1: Institutional Support to the Office of the Coordinator
- Objective 2: Late-Stage Transaction Support
- Objective 3: Support for Small-Scale Projects, Mini-Grids, and Rural Electrification
- Objective 4: Regulatory and Institutional Strengthening and Policy
 - A. Electricity Transmission & Distribution (T&D)/Regional Trade, and Institutional Strengthening of Power Pools
 - B. Policy and Regulatory Reform
 - C. Natural Gas
 - D. Mobilizing Finance and Building Institutional Capacity.

The objectives and tasks described in this report are based on the Work Plan of April 2015. All activities are being carried out under work orders, which are agreed with the USAID COR and contain a scope of work, staffing plan and budget. The table below contains an updated list of work orders.

Work Order	Work Order Title	USAID Region / Country Mission	Status
000-ZA-00	Support to PATA Coordinators Office (Pretoria)	ZA - Pretoria - Coordinator's Office	Active
001-US-01	Communications Support - Washington	US - Washington - PATA DC	Active
002-EA-01	Geothermal Road Show	EA - East Africa, Nairobi - USAID/East Africa	Completed
003-US-02	Private Sector Relationship Management	US - Washington - PATA DC	Active
004-ZA-01	Africa Country Diagnostic	ZA - Pretoria - Coordinator's Office	Completed
005-EA-02	Workshop and Assessment in Djibouti	EA - East Africa, Nairobi - USAID/East Africa	Completed
006-EA-03	Geothermal Strategy	EA - East Africa, Nairobi - USAID/East Africa	Active
007-EA-04	Scoping Mission to East Africa Power Pool on Placement of Transaction Advisor	EA - East Africa, Addis Ababa - USAID/East Africa	Completed
008-WA-01	Scoping Mission to West Africa on Placement of Regional Transaction Advisor	WA - West Africa, Accra - USAID/West Africa	Completed
009-GH-05	Ghana Private Sector Partner (PSP) Study Tour	GH - Accra - USAID/Ghana	Completed

Work Order	Work Order Title	USAID Region / Country Mission	Status
010-EA-05	Eastern Africa Regional Geothermal Advisor	EA - East Africa, Addis Ababa - USAID/East Africa	Active
011-KE-06	Kenya Dandora Waste-to-Energy Pre-Feasibility Study	KE - Nairobi - USAID/Kenya	Completed
012-LI-01	Senior Local Energy Advisor Liberia (acting Transaction Advisor)	LI - Monrovia - USAID/Liberia	Active
013-LI-02	Loss Reduction Program for Liberian Electricity Corporation	LI - Monrovia - USAID/Liberia	Active
014-WA-02	West Africa Regional Transaction Advisor	WA - West Africa, Accra - USAID/West Africa	Active
015-EA-06	East Africa Regional Transaction Advisor	EA - East Africa, Addis Ababa - USAID/East Africa	Active
016-ZA-02	BWG and PATRP Planning Sessions	ZA - Pretoria - Coordinator's Office	Completed
017-US-03	Policy Support	US - Washington - PATA DC	Active
018-ZA-03	Support to Africa Power Vision – NEPAD - Phase I	ZA - Pretoria - Coordinator's Office	Completed
019-GH-02	Gas Sector Transaction Advisor (Gas to Power) – Ghana	GH - Accra - USAID/Ghana	Inactive
020-ZA-04	Advancing Gender Equality in Power Africa	ZA - Pretoria - Coordinator's Office	Active
021-NI-03	Nigeria Local Technical Advisors	NI - Abuja - USAID/Nigeria	Active
022-GH-06	Assistance to MOPET	GH - Accra - USAID/Ghana	Active
023-GH-07	Assistance to MOP	GH - Accra - USAID/Ghana	Active
024-ZA-05	GIS-Based Africa Generation & Transmission Mapping	ZA - Pretoria - Coordinator's Office	Proposed
025-ET-01	Country Transaction Advisor Ethiopia	ET - Addis Ababa - USAID/Ethiopia	Active
026-GH-01	Country Transaction Advisor Ghana	GH - Accra - USAID/Ghana	Active
027-KE-02	Country Transaction Advisor Kenya	KE - Nairobi - USAID/Kenya	Active
028-NI-02	Technical Advisor to Transmission Company of Nigeria (TCN)	NI - Abuja - USAID/Nigeria	Active
029-KE-01	Senior Local Energy Advisor – Kenya	KE - Nairobi - USAID/Kenya	Active
030-TZ-02	Technical Advisor to Rural Energy Agency of Tanzania (REA)	TZ - Dar es Salaam - USAID/Tanzania	Active
031-NI-01	Country Transaction Advisor Nigeria	NI - Abuja - USAID/Nigeria	Active
032-EA-07	Transaction Advisor Djibouti	EA - East Africa, Nairobi - USAID/East Africa	Active
033-EA-07	Advisory to East Africa Power Pool Phase 2	EA - East Africa, Addis Ababa - USAID/East Africa	Completed
034-US-00	Support to PATA Coordinator's Office (Washington)	US - Washington - PATA DC (Coordinator's Office)	Active
035-NI-04	Nigeria TA to NBET and TCN	NI - Abuja - USAID/Nigeria	Active
036-US-04	Attendance at Power Africa Summit Washington	US - Washington - PATA DC	Completed

Work Order	Work Order Title	USAID Region / Country Mission	Status
037-US-05	Technical Assistance to Beyond the Grid	US - Washington - PATA DC	Active
038-ET-02	Ethiopia Scoping Mission (GMSP)	ET - Addis Ababa - USAID/Ethiopia	Completed
039-KE-07	JDA for the Geothermal Development Company	KE - Nairobi - USAID/Kenya	Active
040-EA-08	Assistance to East Africa Power Pool (EAPP) and Independent Regulatory Board (IRB)	EA - East Africa, Addis Ababa - USAID/East Africa	Active
041-WA-03	Grid Management Support Program (GMSP) for Senegal	WA - West Africa, Accra - USAID/West Africa	Proposed
042-ET-03	Ethiopia Corbetti Geothermal	ET - Addis Ababa - USAID/Ethiopia	Active
043-ET-04	Grid Management Support Program (GMSP) for Ethiopia	ET - Addis Ababa - USAID/Ethiopia	Active
044-KE-08	Kenya Grid Management Study Code II	KE - Nairobi - USAID/Kenya	Active
045-WA-04	West Africa Forum for Clean Energy Financing – 2	WA - West Africa, Accra - USAID/West Africa	Active
046-TZ-01	Transaction Advisor at TANESCO - Phases I & II	TZ - Dar es Salaam - USAID/Tanzania	Active
047-TZ-03	TANESCO Transmission System Organization	TZ - Dar es Salaam - USAID/Tanzania	Active
048-ZA-06	Transaction Advisor NEPAD	ZA - Pretoria - Coordinator's Office	Active
049-ET-05	Renewable Energy Transaction Advisor for Ethiopia	ET - Addis Ababa - USAID/Ethiopia	Proposed
050-CI-01	Transaction Advisor for AfDB	CI - Ivory Coast - USAID/Côte d'Ivoire	Proposed
051-KE-09	Kenya Renewable Tariff Assessment	EA - East Africa, Nairobi - USAID/East Africa	Active
052-LI-03	Feasibility of HFO Plants – Arcelor Mittal	LI - Monrovia - USAID/Liberia	Active

PART 1 - PROJECT ACTIVITIES AND RESULTS

This section provides a high-level discussion of activities, deliverables and results according to PATRP's objectives.

Objective 1: Support to the Coordinator's Office

- **Monitoring and Evaluation.** At the request of the USAID Mission, the DCOP travelled to Nigeria during the last week of October to verify key indicators, to include Megawatts (MW), for generation companies that were privatized. A trip report and recommendations were approved by the Coordinator's Office and these were updated in the Power Africa Tracker Tool (PATT). Further, the M&E team participated in the USAID data quality assessment (DQA) on Power Africa indicators. As a result of the DQA, some indicators will be adjusted moving forward. Part 4 of this report sets forth PATRP's results against its performance indicators from October 1, 2015 to December 31, 2015. These results are also captured in the Power Africa Information System.
- **Power Africa Tracker Tool (PATT).** The principal focus for the quarter was the development of the public and internal versions of the PATT app. The app underwent refinements and testing; the Power Africa Coordinator's Office was given access to the development version and provided positive feedback. In parallel, PATRP submitted the PATT Process & Security Protocol to USAID's General Counsel for approval of the PATT fields that would be made public. The protocol also documents the processes of adding new and updating existing transactions: how they are vetted and classified, and how existing transactions are updated, upgraded, or downgraded. The user groups and access levels also are defined in this document. The PATT fields to be made public were approved by the General Counsel at the end of the quarter. In addition, disclaimer language for the app and a public description were developed and approved by USAID. The public and internal versions of the app are scheduled to be unveiled in January 2016 and will be available on iTunes. Android versions are also being developed and will be available in early February 2016.

In addition, refinements and improvements to the overall PATT system as well as training continued throughout the month. Specific activities included:

- Updates continued to be made to the PATT, including inputting new transactions received from the field, as well as updates on transaction milestones, inferred connections and access points, and participants involved in transactions. PATRP updated and loaded over 66 new transactions from Angola, Benin, Cameroon, Ethiopia, Kenya, Lesotho, Madagascar, Mozambique, Senegal, Swaziland, Tanzania and Zambia. The majority of these transactions are housed under the "proposed" transaction section.
- PATT staff and senior PATRP staff met to review a "punch list" of outstanding issues relating to the Tool's contents and architecture. A timetable and the resources needed for additional activities were agreed.
- Several brainstorming sessions were held with USAID on integrating the Customer Relationship Management Platform and PATT systems.
- An M&E summary status indicator was implemented for each transaction under PATT.

- PATT staff assisted the Power Africa Washington team with forecasting reports showing projected numbers for Power Africa.
 - Discussions were held with USAID's policy team on the design and use of the Enabling Environment Tracker. Mock-up reports were designed for the Tracker and circulated to the PATRP policy team for review.
 - Training on the PATT was provided to staff from the Coordinator's Offices in Pretoria and Nigeria as well as for PATRP's Ghana team.
 - New fields were added to PATT to track additional metrics: transmission capacity (MW), transmission line length (km), transformation capacity (MVA), and GHG emissions reduced.
 - A survey was launched to solicit feedback from PATT users; the results were discussed with the Coordinator's Office to improve the Tracker's use.
 - Discussions between USAID and the development team continued on the integration of PATT and the Power Africa website.
 - The country summary categories entered into PATT with underlying data were refined.
 - Several calls were made to transaction advisors to review and confirm the accuracy of their transaction details. Based on these discussions, the PATT was updated.
- **Gender Integration Strategy.** The gender advisor continued to provide support in organizing a Women in African Power Network (WIAP) launch event in Paris on the sidelines of COP 21. The advisor identified and reached out to women in Africa's energy sector to promote WIAP and invite them to join the network. PATRP maintains a database of WIAP members and relevant details on them; 240 names are currently in the database. The gender advisor also managed the WIAP LinkedIn group, which has 74 members to date. Information relevant to women in the energy sector, including topical reports and news articles, is shared on this platform. The advisor also began compiling a roster of female experts in the sector as potential speakers at major energy conferences in 2016. In this direction, the advisor met with the African Energy Indaba Managing Director and USAID to discuss collaboration for the Women in Energy Conference.

The gender advisor developed a webinar for PATRP transaction advisors to build their capacity on integrating gender into country activities. The webinar is scheduled for late January. Further, and in accordance with PATRP's Strategy for Gender Integration, the advisor began reviewing all work orders in order to integrate gender where relevant and possible.

- **Power Africa Private Sector Partners.** Due diligence continued on prospective partners. Thirteen new due diligence memos were produced this quarter.
- **PSP Customer Relationship Management Platform.** PATRP also continued to provide technical resources to advance this platform, to include:
 - Grouping charts on the landing page and adding a title to the chart group
 - Creating table headers and adding a title above the commitments table
 - Adding incident numbers to the task module
 - Adding click functionality to security incidents
 - Adding report status for report processing
 - Adding pipeline report charts to the budget
 - Adding asynch functionality to reports
 - Added spinner control to report waits

- Creating custom reports with the Power Africa and USAID logos
- Implementing server-side functionality for custom reports
- Creating and implementing date range control
- Adding date range functionality to the reporting infrastructure.

The abovementioned technical assistance is scheduled to be completed in January 2016.

At USAID's request, the private sector relationship management role performed by Tetra Tech staff was handed over to USAID relationship managers.

- **Communications.** The communications manager's contract ended in mid-October. During his last two weeks on the project, he performed the following activities:
 - Coordinated planning and logistics for the PATRP communications training held on October 7
 - Drafted country graphics for new Power Africa countries
 - Finalized updates to the Ethiopia fact sheet.

- **Environmental and Social Due Diligence Process.** PATRP's environmental specialist undertook the following activities:
 - Continued preparing environmental and social review methodology (PESRM) checklists for PATRP transactions.
 - Finalized the revision of the PESRM checklist template.
 - Prepared environmental guidelines for Beyond the Grid (BTG) transactions addressing environmental impact assessments (EIA) and early screening requirements.
 - Began gathering environmental and social policies/procedures of USG agencies in accordance with the IEE (Condition 4 of IEE).
 - Met with USAID's Regional Environmental Officer to discuss environmental and social actions and next steps. As a result, a draft of the environmental work plan was produced detailing work done to date and next steps.
 - Updated a Google map to reflect the locations of the majority of PATRP transactions.
 - Worked on the environmental training framework and materials. Final presentations were completed and dates for delivering environmental and social (E&S) training to Power Africa staff was established for January 2016.
 - Researched and provided environmental input on a possible Lesotho transaction.
 - Followed up with transaction advisors on progress with initial E&S recommendations.
 - Loaded environmental guidelines, policies and standards of IFC, OPIC, EXIM, USADF, and AfDB onto PATRP's SharePoint.
 - Reviewed most recent transaction updates to PATT and updated the E&S checklist tracker, and sent them to USAID.
 - Addressed USAID comments on the prior set of draft PESRM checklists.

- **Staffing.** Progress was made on the following staffing positions:
 - Received approval from the COR for the Power Africa Fellowship activity, which initially was expected to be launched this quarter. However, the launch date has now slipped to 2016.

- The new M&E specialist joined the team on October 1. He will work directly with the DCOP and the PATRP Project Management Team.
- Received approval to add a deputy senior transaction advisor position. The candidate identified ultimately declined to join the team and the search for another suitable candidate was initiated.
- Received approval to add a transaction advisor assistant position for Ethiopia. The person selected is scheduled to start on January 25, 2016.
- Proposed a list of candidates to USAID/Liberia for a new transaction advisor. However, the recruitment was deferred at the request of the USAID Mission, which prefers to request transaction and technical assistance as specific needs arise.
- Received instructions to identify a lead transaction advisor/team leader for PATRP's Nigeria work streams. The search for a suitable candidate began and continued during the quarter.
- Prepared a work order together with a scope of work and budget for the newly selected AfDB transaction advisor, which was later approved by USAID. However, before the transaction advisor can be deployed, both a secondment agreement and a memorandum of understanding (MoU) between USAID and the AfDB needs to be concluded. Given the challenges in finalizing the MoU, PATRP proposed to USAID/Cote d'Ivoire that the candidate identified be deployed to Abidjan as an interim regional TA pending finalization of the AfDB role. This was approved and the transaction advisor will begin work in January 2016.

Objective 2: Transactions

As of the end of the quarter, PATRP was supporting approximately 150 active transactions totaling approximately 23,000 MW in 16 countries¹. Aggregated data on these transactions, by stage, country and technology, is presented in Part 3 of this report.

Late-stage transaction updates:

The quarter witnessed the following developments related to some of the late-stage transactions that PATRP is supporting:

- **Nigeria - Azura Power Plant (gas; 450 MW):** PATRP transaction advisors reviewed a draft second amendment to the power purchase agreement (PPA) that Azura's legal counsel sent to Nigeria Bulk Electricity Trading (NBET) for comments and questions. The amendment was limited to resetting the deadlines, which were affected by the delay in closing and were subsequently approved by the parties and regulator, the Nigerian Electricity Regulatory Commission (NERC). Ultimately, all conditions precedent were met and the transaction reached financial close on December 28, 2015.
- **Nigeria - Solar IPPs.** NBET, with support from PATRP, has concluded tariff negotiations with seven solar IPPs. It is now presenting the projects to the company's management, and then to NERC, where PATRP will request approval of the agreed tariff.

¹ These are transactions that are at various stage of the project cycle, to include those projects that have already reached financial close.

- **Nigeria – Two Gas to Power generation projects, totalling 650 MWs:** With PATRP’s assistance in reviewing the PPA and other project documents, all parties initialled their respective PPAs without the gas price and submitted their generation application to the regulatory authority (NERC).
- **Ethiopia – Geothermal project; 20 MW, phase 1:** A number of meetings were held during the quarter between the government and project sponsors to finalize any residual issues in the PPA and implementation agreement (IA). One obstacle to this transaction advancing is the absence of either an interim geothermal legal framework to govern this particular project, or alternatively, a comprehensive geothermal legal framework to govern all current and future geothermal projects that can be implemented in a timely manner. The government has now decided to press forward with adopting a comprehensive legal framework. In this direction, the Ministry of Water, Irrigation and Electricity (MoWIE) convened a consultative workshop on the new geothermal proclamation drafted with the help of USEA on November 19. A second draft was circulated on December 7, which Power Africa has commented upon and a final version is expected early in January 2016, which will then need to be ratified by the Council of Ministers. It is understood that the government is anxious to have this ratified as soon as possible. Therefore, it is projected that financial close will now occur in the first quarter of 2016. In parallel, and with Power Africa’s support, the government signed an agreement to extend the mandate of its external legal advisors (who are funded through the African Legal Support Facility (ALSF)). This should increase the government’s ability to provide any final comments on remaining commercial issues in the project documents
- **Kenya – Solar PV project, 40 MW:** The parties to this project expect to initial the PPA by the end of January 2016. Further, and in support of this process, PATRP is planning to provide a capacity building program for Kenya Power on solar PPAs.
- **Ghana – Two Gas to Power generation projects, totaling 1,000 MWs:** Both transactions are now entering a critical phase. In brief, the parties continue to negotiate the terms of the government guarantee structure, which backstops the obligations of the off-taker (Electricity Company of Ghana (ECG)) under the PPA. There has been a shift from using the Government Consent & Support Agreement (GCSA) to a new government support structure currently under development by the Ministry of Finance (MOF) and their external consultants and lawyers, which is similar to a put/call option agreement. Ghana’s needs in terms of new generating capacity are progressively being covered, with several projects currently in the commissioning stage. This has influenced the Government’s negotiating position with developers. Further developments on both transactions are anticipated in January 2016.

Other activities under Objective 2:

Other activities performed during the quarter under Objective 2 included:

- **Djibouti.** The TA’s activities included:
 - Meeting with a US developer, which explained that it does not have any firm power projects at this time, but is exploring opportunities. The developer and USTDA are in contact in order to follow-up on the possibility of using USTDA funding to provide front-end technical support as they consider different IPP development opportunities. The developer is considering a project to respond to Djibouti’s need for base load power, and to this end, gas is being considered along

with other fossil fuels, such as HFO and diesel. While the developer would prefer to use gas, concerns exist that the temperatures in Djibouti may impede efficient energy production from gas. One concept under discussion is that the developer could request USTDA assistance for technical support to evaluate whether gas fuel or gas fuel blends could be used to generate electricity efficiently in Djibouti's hot temperatures.

- Meeting with World Bank in connection with an ongoing drilling project for geothermal resources near Lake Assal that is being pursued in conjunction with EDD. Stemming from this discussion it was agreed that Power Africa would be well placed to provide some capacity building and training to the Djibouti Office for Geothermal Energy Development (ODDEG) on their drilling program. The next step is for ODDEG to propose the scope for capacity building and training to USAID/Djibouti.
- Providing continued support to the Ministry of Energy in Charge of Natural Resources (MERN) in the drafting of secondary legislation, which will aid the implementation of the new IPP law.

▪ **TANESCO.** The TANESCO transaction advisor:

- Prepared a consolidated list of all large generation and transmission projects that are under development or have been identified by TANESCO's Planning Department as priorities. The key topical areas for PATRP are understanding the 2016 generation vs. transmission project priorities and schedules; the priority TANESCO places on completing the 400 kV ring and associated benefits; international interconnection priorities defined for 2016, other than Kenya-Tanzania; new renewable energy generation to be placed in the north to stabilize the grid and to feed power to the mining companies, etc.
- Prepared a management brief and PowerPoint for a proposed 150 MW solar plant. The project would supply power to the mines in the north and, as such, would help displace the diesel imports that are currently providing reliable power to the mines.
- Met with TANESCO's head of planning to discuss two hydroelectric power stations that are of urgent priority in the north to further augment power reliability to the mining sector. PATRP assisted in preparing a presentation for donors that took place on October 21 regarding the two projects and started on a value-for-money study to determine which of the following options would be the best for implementing these two projects: 1) TANESCO implementation, 2) build-transfer operate, 3) IPP, or 4) IPP joint venture with TANESCO as minority partner.
- Reviewed a proposal by an international bank to provide cash flow for the equity needed by the Kinyerezi 1 (expansion) for an additional 185 MW. The financing proposal suggested the restructuring of a current loan syndication facility that could realize about US \$64 million in deferred principal and interest over the next two years. TANESCO could use this deferral as a source of liquidity for the expansion of the Kinyerezi 1 power plant.
- Kinyerezi 2 (240 MW) also requires equity of US \$52 million. In this case, an international financial institution has offered to enable a drawdown on one of their budget support credit facilities for US \$20 million. The Ministry of Finance has also indicated that it would be able to provide US \$14 million from the treasury. If this works for TANESCO, it leaves a gap of around US \$18 million.

▪ **NEPAD Transaction Advisor.** The activities of the NEPAD TA were:

- Following various meetings with USAID, the Kenyan Ministry of Energy and Petroleum and the Geothermal Development Company (GDC), the transaction advisor reviewed the project documentation on the Suswa Geothermal Project and provided feedback to GDC on how it can be updated to ensure it maximizes the project's chances of attracting funding. Subsequently, the

- TA also reviewed a funding proposal on the Suswa Project from one potential export finance institution.
- Met with the Office for Promoting Private Power Investment and other parties working on various sections of the Zambia-Tanzania-Kenya (ZTK) transmission interconnector line, including an additional section that aims to connect Malawi, to discuss possible assistance from NEPAD in the form of reviewing interconnection studies and wheeling tariffs, finding an appropriate partner for a section of the line, etc. Thereafter, the TA drafted a letter to the permanent secretary of the Zambian Energy Ministry outlining NEPAD's interest to engage on the ZTK transmission interconnector line.
 - Met with the NEPAD Business Foundation to discuss collaboration. It subsequently invited PATRP to a meeting with the Department of Energy IPP office in South Africa, which has received various requests from African governments to assist the Foundation's renewable energy programs. The IPP office was keen to discuss if this could be done through the platform already present in the AU/NEPAD.
- **East Africa.** PATRP's regional advisor performed the following activities:
 - Liaised with the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) in preparation for the annual Council of Ministers meeting in Uganda. The NELSAP business plan and budget were presented at this meeting; PATRP played a significant role in preparing the underlying materials. The aim was to obtain member state support for the institution before approaching donors to finance the gap.
 - After an invitation from Kalangala Infrastructure Services Project and Industrial Promotion Services for the West Nile Rural Electrification Company Limited, continued to perform a high-level overview of their generation, transmission and distribution activities with a view to providing services to accelerate the closure of various transactions on their books. Reports are still being produced that will serve as a prospectus for the solicitation of funding from various development partners active in Uganda. In line with this, the TA assisted USAID regional staff with prioritizing areas of support to regional institutions next year and identifying critical transmission and generation projects in the region. A draft report is in the final stages for consideration.
 - The Rwandan Ministry of Infrastructure (MININFRA) through the support of the European Union (EU), retained consultants to develop a Rural Electrification Strategy and Renewable Energy Law. The draft reports have been developed and there is a need for them to be validated by energy sector stakeholders before they can be adopted. PATRP consolidated comments received from various sources and delivered them after attending the review workshop in December.
 - **Nigeria:** During this quarter, the transaction advisory team performed the following activities:
 - Met with the DCA to discuss the status of its US \$90 million credit guarantee facility to Standard Chartered Bank, which was then able to on-lend to Zenith Bank. PATRP's advisor updated the DCA on the regulatory stumbling blocks preventing the facility's utilization, specifically the Central Bank of Nigeria's (CBN) recent ban on foreign currency lending. Zenith Bank requested an exemption and is awaiting a response from the CBN.
 - Following on from the above, the PATRP Nigeria team reviewed and analyzed the issues regarding CBN's currency restrictions and the potential impact on Nigeria's power sector. PATRP's TA reviewed various CBN circulars that have been issued in the past, which banned dollar-denominated transactions among Nigerian local entities, prohibited local banks from issuing

foreign currency loans, and restricted the withdrawal of dollars from USD deposit accounts in Nigeria as well as other dollar transactions. CBN's special advisor on energy is willing to consider an exemption that will be provided to the power sector, but would like empirical data and evidence to support this proposition. As such, USAID/Nigeria proposed a study to determine the impact of CBN's currency restrictions, which PATRP performed in November (see further information below under Objective 4B).

- Met with a US company that was recently made a Power Africa partner, to discuss some of its initiatives and current projects in Nigeria and how Power Africa could be of assistance. The company is working on a greenfield gas-fired project and a gas-fired embedded generation project supplying power to an industrial zone, and an embedded generation coal project, and is considering the purchase of a power plant. PATRP's TA informed the company of Power Africa's financing tools and mechanisms, and sent a standard non-disclosure agreement for its review in order to facilitate the exchange of information.
 - Supported NBET in its tariff negotiations with a 100 MW solar power IPP in Lokoja, Kogi State. The project developers have been engaging with NBET for over two years and have now completed the due diligence requirements and are about to negotiate the PPA.
 - Reviewed NBET's final draft gas and solar PPA before it was sent to the Federal Ministry of Justice and Federal Ministry of Finance for comments.
 - Contacted USTDA for support to a 540 MW gas-fired generation facility. USTDA is considering the project.
 - Supported NBET in its negotiations for a 500 MW gas-fired power plant in Ondo State.
 - Participated in a meeting with NBET and a developer on the 900 MW gas-fired power plant in Ebonyi State on proposed PPA terms.
 - Reviewed project documents in connection with a 350 MW hydropower project located along the Gurara River in Niger State. Documents include the pre-feasibility report, power evacuation study, environmental impact assessment, and a business case presentation.
 - Held discussions with a developer to review the status of its three projects. Two will be utilizing a hybrid technology of solar and hydrocarbon power with a capacity of 150 MW each (75 MW of solar generation and 75 MW of liquefied natural gas or diesel-fired generation). The third project will be purely gas-fired generation. PATRP's TA reviewed the project documents to determine whether either of the projects could benefit from Power Africa's assistance.
 - Met with the developer of an 80 MW solar project in Jigawa State. The project has completed feasibility studies, is concluding its EIA, is commencing a security study, and is in the process of concluding its PPA negotiations with NBET. PATRP's TA sent the developer a non-disclosure agreement, after which, further information will be requested in order to conduct QTAT analysis.
- **Ghana.** PATRP's Ghana TA was involved in a tragic incident at the beginning of November and was evacuated from post. Thereafter, the senior transaction advisor, together with other PATRP staff members, traveled to Ghana in the last week of November to review work progress and discuss resourcing needs going forward. Arrangements were made for a person to act as a temporary replacement, who will arrive in Ghana in January.

During this quarter, the transaction advisor and other PATRP team members performed the following activities:

- 60 MW PV solar: The new lead sponsor asked PATRP for assistance with next steps to proceed to the financing phase. PATRP's TA discussed the current limitation on GCSAs as well as the

- alternative being considered by other IPPs. He also provided names of legal advisors active in the power sector in Ghana.
- Met with Amandi Energy's 200 MW power project and OPIC to review progress in achieving financial close in 2016. The government indicated that this will be the first project to be switched from the government consent and support agreement to the put/call option agreement (PCOA) after the PCOA has been finalized.
 - Volta River Authority (VRA) thermal plant rehabilitation: A draft advisory paper was submitted to the Ministry of Power and stakeholders to provide a basic assessment of the state of the VRA plants and their rehabilitation requirements. The report suggests that up to 160 MW of additional capacity could be facilitated with the rehabilitation of existing VRA thermal power plants. Missing data requests were sent to VRA.
- **Southern Africa.** PATRP's Southern Africa TA continued to identify potential transactions for Power Africa support. His activities during the quarter included:
 - **Zambia.** 1) Identified two possible off-grid transactions in Zambia and discussed the same with two potential developers, 2) connected Phoenix InfraWorks with a developer that is looking at a possible financing (debt/equity) role, 3) added a 50 MW solar PV transaction in Zambia to the PATT, 4) followed-up with existing IPPs to determine possible Power Africa support – especially in meeting financing requirements and identifying funding sources for development/feasibility costs, and 5) secured USAID Mission approval to include all transactions in PATT as “qualified Power Africa transactions”.
 - **“Off-grid anchor off-taker” concept.** PATRP's TA participated in an all-day session with a Swedish developer/financier on transactions in Namibia and Liberia utilizing the “captive off-taker” business model. Next steps are for the developer to put together a plan for a presentation to client mining companies.
 - **Malawi.** 1) Secured approval to add two 50 MW run-of-river hydro transactions in Malawi to PATT based on ESCOM and MCC consent. The feasibility studies are completed, but now a limited tender is needed to secure a private IPP to develop/finance the projects, and 2) held further discussions with private IPPs in Malawi to obtain their input on requirements to move things forward toward financial close.
 - **Mozambique.** Met with an investment bank representative to discuss the planned expansion of a large hydro project. PATRP suggested several areas in which Power Africa might be of some assistance.
 - **Lesotho.** Met with a representative of a developer to discuss prospective renewable energy deals in Lesotho.
 - **South Africa.** Met with a Power Africa partner to discuss ways PATRP could provide support in the forthcoming South African RFP for 3,126 MW gas-to-power project.
 - **Liberia.** Performed a preliminary assessment on potential options for utilizing existing HFO plants to bring additional emergency power online in Liberia.
 - **Kenya.** The Kenyan transaction advisory team performed the following activities:
 - **Baringo-Silali Geothermal Project:** PATRP was informed that GDC intends to use the structure from the draft joint development agreement that PATRP produced. In this structure, the IPP has shared responsibility for thermal energy supply with GDC. As a result of the most recent discussions, PATRP will proceed with finalizing the pro-forma economics, term sheet and JDA on

this basis. GDC provided feedback that they want certain changes to the financial model to make it better conform to their business model.

- **62 MW geothermal well-head power generation project:** PATRP met with the developer for an update on a project to supply 62 MW from 14 wells using geothermal well-head power generating units. The project will use old and new technology to generate power from abandoned wells, and some steam field equipment will come from the US. The signing of the contract is held up in litigation. The developer is looking at possible Power Africa assistance.
 - **Kenya – competitive generation auctions:** Kenya will likely eliminate its current feed-in tariff program in the next six months to a year. The intention is to replace it with a competitive procurement/auction. In this context, there was a request from the Kenyan Power Africa team to perform a study on what pricing levels could be expected in Kenya in a competitive generation procurement. This request was also discussed and supported by the Director of Renewable Energy in Kenya for the Ministry of Energy and Petroleum. A key aspect of the study will be to propose appropriate price caps that the Ministry of Energy intends to impose on bids. Establishing a proper price level and thus the price cap is fundamental to the success of the competitive procurement. PATRP has retained a policy expert to perform the study; a draft report was submitted to USAID this quarter.
 - **Developer (250 MW Gas):** PATRP had previously assisted the developer and its subsidiary in its request for an extension to its license for the development of its power project. The gas reserves are proven, but the size of the reserves has not been determined. PATRP also assisted the developer with identifying appropriate IPP partners. At the end of November, the Ministry of Energy and Petroleum provided the developer with an 18-month extension. The developer will now proceed with drilling.
 - **Solar PPA Capacity Building for Kenya Power:** PATRP facilitated a meeting between Kenya Power and a US law firm that is likely to provide support for this project. The scope is planned to be finalized shortly. The PPAs for several solar projects are delayed until PATRP helps Kenya Power understand the nuances of solar PPAs.
 - **30 MW Solar Project:** PATRP held a meeting with the developer's CEO in December. It is developing a 30 MW solar PV power plant in Makueni County. The objective of the meeting was for PATRP to be briefed on the project and for the developer to know what assistance Power Africa may be able to provide. As part of the project's community engagement, the developer has also included a stand-alone 50 kW solar mini-grid. PATRP informed the developer of the Power Africa Tool Box and emphasized the need to comply with the Equator Principles and have a formalized community engagement agreement.
- **Francophone West Africa.** The West Africa transaction advisor continued to identify potential transactions for Power Africa support. His activities during the quarter included:
- **Senegal.** 1) Solar 100 MW tender: After at least a month of negotiations between IFC and the Government of Senegal and little movement on the contract, the Senegalese Government requested assistance from PATRP's transaction advisor. After a detailed review, the TA explained to the government that three of the five clauses with objections were usual in the context of such contracts and provided supporting examples. IFC later confirmed that a meeting occurred the day after the TA's review and the government ultimately accepted the three clauses with the TA's recommendations included. The TA is now reviewing the remaining two clauses and will revert to the government with recommendations.

- PATRP met with an investment firm to discuss opportunities in Senegal, Guinea Conakry and Cameroon. The investor could request PATRP assistance if two of the MoUs it is negotiating reach a favorable conclusion.
- PATRP and USAID presented part of the assistance program that Senelec (and all IPPs engaged in intermittent renewable energy) could benefit from. This program would see USEA and PATRP providing assistance on grid management, negotiating approaches and renewable energy power plant management. Senelec and IPPs provided input and USEA will adjust its plan to reflect their needs.
- **Cameroon.** The TA travelled to Cameroon in response to a request for assistance from a developer that is engaged in two hydropower projects totaling 400 MW. The government lacks experience in implementing a hydropower facility where the project sponsor is a private company. As such, there is a need for technical and legal capacity building to move projects forward. The objective of the trip was to validate the Cameroon Government's interest in seeking Power Africa assistance. PATRP met with the energy minister, director of electricity, and counsellor to the minister. All agreed that the Power Africa assistance would be greatly welcomed.
- **Mali.** The TA and a developer had a conference call about a possible project in Mali. Questions were asked on the general issues of power and operating in Mali, including processes, requirement, permits, etc. Since most of the questions were for the Government of Mali, PATRP's TA gave the developer his contacts within the Investment Ministry.
- **Guinea Conakry.** On the sidelines of the November 26 meeting of the WAPP donors in Dakar, the TA met the new General Administrator of Electricity of Guinea (EDG). Several points were discussed, including the development of the country's hydro generation capacity. Follow-on discussions are anticipated.
- **Guinea Bissau:** The Secretary General of the OMVG asked for a meeting to discuss possible PATRP support on the implementation of three hydroelectric dams in Guinea Bissau. Further details are expected during January 2016. The World Bank is expected to support the project.
- **Benin.** Following a formal request for assistance from a Power Africa Partner for a 10 MW PV plant in Benin, PATRP recommended this transaction be added to the PATT (this was also confirmed by USAID).

Objective 3: Small-Scale Renewable Energy (SSRE)

- **Change in Personnel/Realignment.** During November USAID approved PATRP's candidate to replace the current SSRE advisor. The new SSRE advisor will begin in January 2016. This will allow the existing SSRE advisor to focus more on technical advisory assistance.
- **Project Preparation Facilities Report (PPF).** Meetings were held throughout the quarter to gather feedback from the Coordinator's Office on the draft PPF report. Several versions were circulated; the last one contained information from the latest Infrastructure Consortium for Africa study. The final draft version was submitted at the end of the quarter. The next step will be to generate a PPF tool box that can be utilized by the TAs and the broader Power Africa team. This will be a focus of next quarter's activities.

- **Beyond the Grid Scope of Work.** The BTG Work Order was approved in November. This important step will allow the BTG team to move forward with an implementation plan that will allow PATRP to meet important contractual goals. One of the key components of the BTG scope of work is the recruitment of new local advisors in three or more countries. PATRP prepared draft scopes of work for these advisors and shared them with USAID's BTG activity manager for approval. The location of the new advisors will be confirmed early next quarter.

- **Kenya BTG.** Activities for Kenya included:
 - The Mutunguru 6 MW Hydro Project. This project will be owned by the local community. PATRP has identified potential funding sources to provide training to the community on governance best practices, structure of the project company and the role of the community, and legal structures of the SPV.
 - Followed up on nine companies identified in Kenya that may need BTG support.
 - Conducted outreach to the Kenya Tea Development Agency, which has 15 small hydropower plants, for potential areas of cooperation.
 - Tindinyo Falls 1.5 MW Hydro Project: Equity funding arrangements were confirmed and a term sheet for debt financing concluded. The project is now projected to close in late January 2016.

- **Tanzania BTG.** Activities for Tanzania included:
 - The PATRP TA identified two new hydropower plant (HPP) projects for potential inclusion as Power Africa transactions: Lupali 317 kW and Ijangala 360 kW. Lupali is in the final stages of being approved and the Ijangala application requires some adjustments. On the Lupali HPP, the PATRP TA was invited to participate in reviewing the indicative term sheet that was issued by a local lender bank in October for the small hydro project. After its review, PATRP prepared a list of recommended changes to the indicative term sheet issued by the lender on behalf of the project promoters. That was followed by a joint teleconference meeting with the project advisors. A consolidated list was then sent to the lender for its consideration. A second round of comments on the indicative term sheet was provided. PATRP met with project promoters, who shared some additional concerns they had with the indicative term sheet. PATRP assisted the promoters in drafting a letter of response to the lender.
 - The Tanzania Rural Electrification Expansion Project (TREEP) will contain a project aggregation element whereby local developers who lack development skills will be allowed to form partnerships between local and strategic developers such as Ruaha Power Company. Ruaha has re-engaged in discussions with a local project developer for potential collaboration in developing one of its resources that was assessed to have a potential installed capacity of up to 5.7 MW. PATRP is supporting this engagement.
 - On the 407 kW Isigula Small Hydro Project, PATRP resubmitted all project documentation: technical and feasibility studies, environmental impact assessment, and socio-economic analysis of beneficiaries. The lender requested some updates in order for the project to be considered bankable. PATRP discussed the lender's recommendation with the developer and advised on the appropriate changes. All other permits and user rights (land, water, etc.) as well as the environmental certificate have been submitted to the lender.
 - PATRP reviewed and provided comments to the DFID First Annual Review of the Green Mini Grids Program, which is being implemented by the Rural Energy Agency.

- PATRP completed reviewing and commenting on the information memorandum for the 10 MW Nakatuta small hydro project, which requires investment for expenditures associated with construction, management during construction and financing. As previously reported, the electricity generated will be sold to TANESCO via a SPPA (20 years) at a standardized tariff, which will be scalable on an annual basis.
 - 10 MW Kiwira Small Hydro Project: The parties executed the new US dollar-based standardized PPA after the Energy and Water Utilities Regulatory Authority (EWURA) approved amendments to the newly published standardized PPA. This is the first PPA signed under the new small power producers (SPP) framework – known as the second generation SPP Framework – which was established in April 2015.
 - Tulila (hydro, 7.5 MW): Construction was completed and the plant commissioned. The project has been built as designed and contractually agreed, and is operational in so far as the technical limits will allow. TANESCO has to upgrade some equipment in order to fully utilize the plant’s initial 5 MW (at present it can only evacuate 1.4 MW); Phase 2 (the additional 2.5 MW) is contingent upon the construction of a 220 kV line by TANESCO.
- **Liberia.** Here:
 - PATRP’s small-scale renewable energy (SSRE) team participated in four telephone discussions with companies interested in developing off-grid investments in Liberia, possibly making use of USAIDs Global Development Alliances (GDA).
 - PATRP provided input to recommendations for a U.S. African Development Foundation RFP for Off-Grid Energy Challenge grants in Liberia. Five potential IPPs were recommended for consideration to receive the RFP.
 - The TA attended a stakeholders’ consultative forum at LEC for the launching of the Rural Renewable Energy Agency’s (RREA) Environmental and Social Management Framework and Resettlement Plan Framework for the Scaling-up Renewable Energy Project (SREP) in Liberia starting in Lofa County. The project is being sponsored by the World Bank under SREP to electrify the rural population centers of: 1) Zorzor, Lofa County 1-2 MW – micro-grid hydro-diesel hybrid system, estimated population 26,000; 2) Voinjama, Lofa County – 2-3 MW – micro-grid solar battery system, estimated population 5,000; 3) solar lantern distribution nationwide – a continuation of the Lighting Lives in Liberia Project. PATRP is in discussions with RREA on possible Power Africa collaboration on these projects.
 - PATRP held a meeting with the Ministry of Energy to obtain an update on the cross-border interconnector project with Cote d’Ivoire. A stakeholder’s forum was held in Nimba to assess the status of the project. In 2013, the Government of Liberia signed a PPA with Cote d’Ivoire through the WAPP to supply at least 18 villages and towns along the Liberia border for a period of 25 years as a means of electrifying rural areas. The final conclusion of the forum was that the cross-border power supply be placed under private sector management instead of the state utility (LEC) and that the citizens should benefit from a share of the tax revenues deriving from the privatization. PATRP advised that the director consider the privatization proposal from the stakeholders and make an appropriate study of the management system for the cross-border project. PATRP will follow up to see what will be the outcome and what opportunities exist for its support.
 - In addition, the SSRE team performed the following activities:

- Finalized documentation for the DFID Nigeria-solar program review, including preparing a final report, presentation and completed log frames.
- Participated in the Global Off-Grid Lighting conference in Dubai.
- Teleconferenced with the West Africa Regional TA to discuss several proposed small solar projects through a US solar developer – a teleconference call with the developer was held later and potential areas of assistance discussed
- Reviewed the Swaziland investment prospectus (SE4All) and provided feedback.
- Drafted a program for short term technical assistance in Malawi to initiate the proposed USAID BTG activities and developed a related work program.
- Reviewed four QTATs for mini-hydropower projects in Tanzania.

Objective 4: Regulatory and Institutional Strengthening and Policy

Sub-Objective 4-A: Electricity Transmission & Distribution (T&D)/Regional Trade, and Institutional Strengthening of Power Pools

EAPP-IRB.

- **EKT Wheeling Agreement and Tariff**
 - Developed a second draft of the transmission service agreement (TSA) that is planned to be delivered to the Transmission Working Group at its next meeting
 - Developed a first draft of the KPLC accession agreement, which will eventually become an attachment to the TSA
 - Worked with USEA to contract with Mercados for the completion of a TOR for developing a tariff methodology for KETRACO for the EKT TSA.
 - Began developing a standard interconnection agreement (IA) that is needed to support the EKT transaction. Such an agreement would be executed between EEP and KPLC, and KPLC and TANESCO. The first step in the process is to develop a list of issues that need to be addressed in the IA.
- **EAPP Interconnection Code Compliance Program**
 - Developed a first draft of the self-assessment process, which is part of the overall design that will be presented to the Steering Committee and Council of Ministers for approval at their next meeting.
 - Began the development of a tutorial for entities that will participate in the compliance program.
 - Began reviewing the grid code compliance steps being taken by ERC in Kenya to ensure this program complements the actions taken by the ERC.
- **Ethiopia Grid Management Support (GMSP).** PATRP deployed consultants to Addis Ababa as part of ongoing work for the Ethiopia GMSP. They participated in meetings with local stakeholders individually and as part of the working group. They continued to gather technical data on system operations, system planning, standards, and technical data on generation, transmission and demand for both existing and planned projects. PATRP has solicited some initial feedback on some portions of a draft grid code. All of these activities are being implemented in support of the various components of the GMSP (grid code development, system integration study, and system operation gap analysis). Local counterparts continued to express strong interest in the GMSP.

- **Kenya Grid Management Support.** PATRP prepared new drafts of the grid code and the regulatory impact analysis. The GMSP team was in Nairobi during November, where it worked with the Ministry, ERC, KPLC, KenGen, Ketraco and the IPPs, primarily on revisions to the draft grid codes. The process was a consultative one involving various stakeholders including the Ministry, the Attorney General’s office and Parliament.

- **Nigeria.** PATRP advisors conducted the following activities this quarter:
 - As a follow-up to its paper, “Options for Ownership and Management of Transmission Company of Nigeria,” PATRP developed approaches for implementing transmission concessions. This work was requested by USAID/Nigeria in response to feedback received from the Office of the Vice President of Nigeria and the donor coordination group, which requested further USAID support to flesh out the concession concept.
 - PATRP worked with McKinsey to develop summaries of bottlenecks for two high-priority ongoing transmission projects, one for lines and one for a substation. The diagnostic assessments are for delivery to the newly set up Advisory Power Team reporting to the vice president of Nigeria.
 - PATRP also continued work on the joint PATRP-DFID activity to help address bottlenecks for ongoing transmission projects. A local engineering firm is currently conducting field investigations of the status of 45 stalled projects and will deliver its report in January 2016. This work will inform requests to the Office of the Vice President for targeted interventions to remove bottlenecks for project completion.
 - PATRP is assisting TCN with restructuring multiple EPC contracts for high-priority transmission projects that are stalled due to lack of government funding. To date, the PATRP-TCN working group has negotiated term sheets with four of the contractors and held discussions with a total of eight contractors. However, the shortage of funding available to TCN has remained a bottleneck to executing agreements. In a significant breakthrough, the managing director/CEO of TCN has proposed to AfDB that the company use US \$14 million of the recently released second tranche of an existing AfDB loan facility to address funding gaps for four projects. PATRP’s assistance was instrumental in establishing the projects as high priorities, elevating them to the attention of executive management, negotiating term sheets with the contractors that address remaining issues for project completion, and driving this initiative. PATRP also drafted a letter for the CEO to authorize use of the funds.
 - At the request of TCN’s managing director/CEO, PATRP prepared a presentation on the non-resolution of TCN’s tariff application from May 2014, non-payment of market invoices by the distribution companies, and status of regulatory oversight of the Transitional Electricity Market (TEM).
 - The PATRP financial advisor is leading the preparation of the 2016-17 TCN Financial Plan, in coordination with a working group set up by TCN’s Finance and Accounts Department. The team is currently updating the PATRP-prepared financial model for TCN. At the request of the TCN managing director/CEO, PATRP prepared a summary of TCN’s budgets, expansion plan and funding requirements for submission to the Ministry of Power Works and Housing. TCN is requesting an appropriation of \$700 million (N 139 billion) from the federal budget for 2016 to complete ongoing projects.
 - In coordination with TCN executive management, PATRP prepared an assessment of NERC’s new proposal for transmission tariffs to be effective starting in the first quarter of 2016. In a significant breakthrough, NERC is now using the PATRP-prepared forecast of TCN’s revenue requirements as input to its own tariff model. However, PATRP has identified two issues in NERC’s model that

should be addressed: the wheeled energy forecast used to develop the unitized rate is too high, resulting in tariffs that are too low; and NERC has reduced the forecasted operating expenses below the amounts required. At the request of TCN's managing director, PATRP prepared a letter to the chairman of NERC summarizing TCN's concerns. PATRP participated in two meetings with NERC staff and commissioners to further elaborate TCN's position.

- **Tanzania.** PATRPs TANESCO-transmission system operator (TSO) team performed the following activities:
 - Developed a detailed work plan for Task 1, Market Analysis Forecast and Planning. The specialist for Task 1 arrived in Dar on November 29 to work on the first stage of the Task 1 work plan.
 - Received feedback from TANESCO's Finance Sub-working Group on "Preliminary Scope Document - Accounting for TANESCO TSO Functions." After reviewing the report, the sub-working group was satisfied with the contents and gave its consent. Using that report as a foundation, PATRP moved forward to develop the financial model. The preliminary scope document for the design of the TANESCO TSO financial model, developed as part of Task 3, was sent to the TANESCO chief financial officer for her review and comments.
 - Reviewed documents and data obtained from TANESCO Sub-working Group for Task 2, including a list of new generation and transmission line projects. Reviewed the methodology applied to ensure that the proposed transmission line projects are adequate to evacuate proposed new generation.
 - Continued work on transmission metering, assessing detailed drawings and metering points of substations. Detailed information on meters and instrumentation is being collected. Metering gaps will be identified and the list of metering points developed.
 - Began work on Task 5 with the development of an outline organizational chart for the TSO, which meets international standards but is also tailored to the local conditions. A detailed organizational structure, to include roles and responsibilities within the TSO, will be developed.

- **Liberia – Loss Reduction Study**
 - A team of specialists traveled to Liberia to initiate the LEC Loss Reduction Program. The program aims to characterize the sources of transmission and distribution energy losses, identify how they may result from technical and non-technical sources, and develop a plan for reducing them to a level consistent with international utility practice using both technological and administrative measures. An inception report was submitted to USAID/Liberia following the initial kick-off meetings and data gathering. Follow-on activities were performed in December, including assessing revenue protection activities undertaken by LEC, making recommendations to improve performance, and reviewing LEC's billing cycle and metering systems.

Sub-Objective 4-B: Policy and Regulatory Reform

- **Policy/ desk top studies:** PATRP continued work with the authors and review panel to verify data and policy recommendations for Kenya, Ethiopia, Tanzania, Nigeria and Ghana. The document was delivered to USAID on October 15 in line with the Policy Work Order deadline.

- **Enabling Environment Tracker.** Several discussions were held with USAID to design the Enabling Environment Tracker. Once the design was agreed, PATRP populated the tracker with the relevant data.
- **Study on the Sustainability of Nigeria’s Power Sector.** PATRP secured USAID approval for two consultants to investigate the impact of the Central Bank of Nigeria circulars, which imposed restrictions on certain foreign currency activities, on the sustainability of power sector firms. The consultants were in-country from November 16-28. A first draft of the report was submitted to USAID/Nigeria. Revisions were made to the report based on feedback from them and a second version was submitted at the end of the quarter.
- **Renewable Tariff Levels.** In the context of Kenya’s new generation auction process, PATRP is preparing a report that sets out to benchmark feed-in tariffs and competitively bid prices achieved over the past three years in renewable energy auctions around the world, but especially in emerging economies and developing countries. The report will also assess how prices might differ in Kenya because of its country profile and project attributes. A first draft of the report was delivered at the end of the quarter.
- Reviewed and provided comments on the Draft Rwanda Rural Electrification Strategy (dated September 2015) and Draft Renewable Energy Law (dated May 2015).
- Provided input to USAID on the “Strengthening the Enabling Environment” chart for the Power Africa Roadmap.

Sub-Objective 4-C: Natural Gas

The activities performed by the Ghana gas advisor during the quarter included:

- PATRP participated in stakeholder meetings in order to collate comments for finalizing the Gas Master Plan. It continued to work on finalizing the Master Plan and Gas Market Review – the latter document was submitted to USAID for consideration at the end of the quarter.
- PATRP submitted a work plan for the “Establishment of a Private Power Unit” to the MOP/MOF/MOPET.
- Work started on the “Study on Securitization and Water Fall Mechanism for Gas and Power Sector Entities.” In this direction, PATRP arranged and participated in meetings with MOF/MOPET/MOP. This work also complements the Electricity Suppressed Demand and Forecasting Study (SDFS) that is underway.

Sub-Objective 4-D: Mobilizing Finance and Building Institutional Capacity

Nothing significant to report.

PART 2 – ISSUES AND PROPOSED SOLUTIONS

Staffing: A new monitoring and evaluation expert was engaged this quarter to work directly with the DCOP. PATRP also identified a candidate for the deputy to the senior transaction advisor. After obtaining approval from USAID, the candidate ultimately declined to join the team and the search for another suitable candidate was initiated. We also obtained approval for an assistant for the transaction advisor in Ethiopia. The candidate selected is scheduled to start on January 25, 2016.

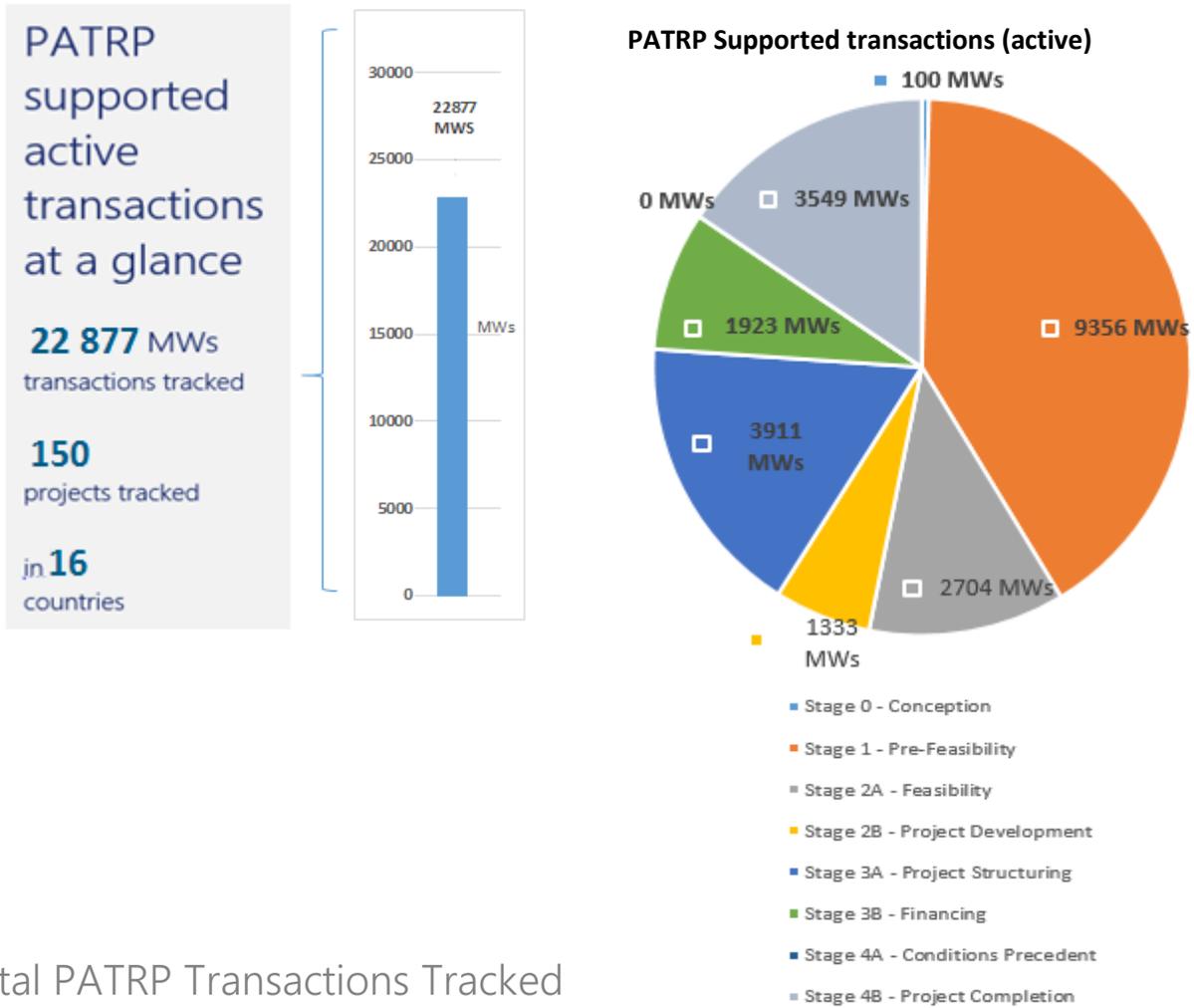
At the request of USAID, PATRP realigned its SSRE team. During November, PATRP received approval from the client to replace the SSRE advisor and will reassign the current SSRE advisor to work on more focused technical activities.

Expenditure Forecast and Budget Realignment: As previously reported, the additional program activities that PATRP is performing have increased its burn rate. At the current rate, the obligated amount will be exhausted by December 2016. The lack of certainty on future funding levels presents a challenge to PATRP's ability to plan its activities beyond the next 12 months. It is hoped that this issue will be addressed in January 2016 with greater certainty provided on funding levels.

Forecast of Upcoming Activities. The following activities are anticipated to take place next quarter:

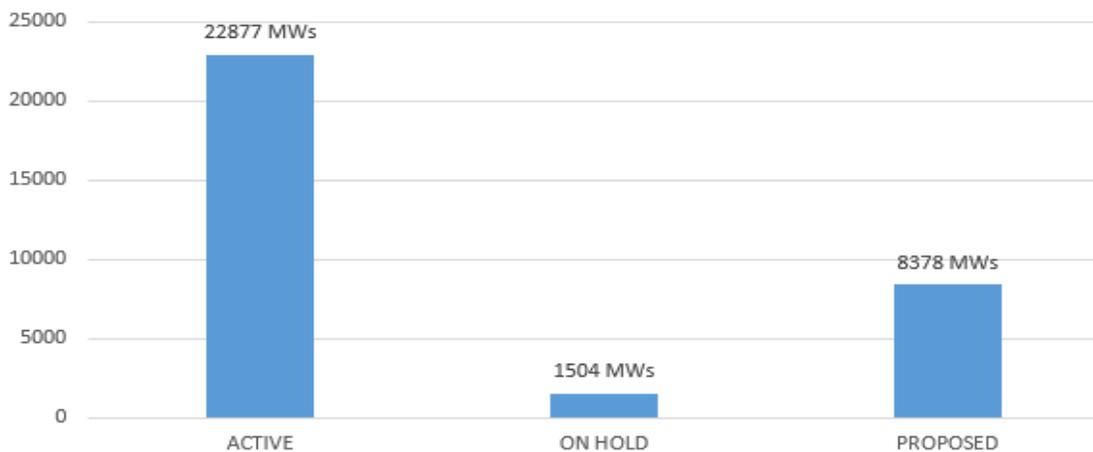
- Receive approval for the Kenya community engagement work order.
- Receive approval for Djibouti IPP legal support work order.
- Receive approval for the Kenya solar PPA capacity building work order.
- Continue with the development of the PATT app and related public website.
- Participate in a workshop in Nairobi on the proposed Kenya competitive procurement/auction for new generation.
- Finalize targets for the PMP with USAID.
- Await confirmation that the secondment contract (and related MoU) have been agreed by AfDB.
- The assistant to the transaction advisor in Ethiopia will join on January 25, 2016.
- The designated AfDB transaction advisor will deploy to Cote d'Ivoire as the interim second West Africa Regional transaction advisor.
- Attendance at the Powering Africa Summit in Washington, DC. This will also coincide with the launch of the Power Africa Road Map.
- Public launch of the PATT app on iTunes and subsequently on Android.
- Selection and deployment of new PATRP Nigeria team lead.
- Deployment of second TA for Ethiopia to Addis Ababa.
- Deployment of the new SSRE advisor to Pretoria, South Africa.

PART 3 – OVERVIEW OF TRANSACTIONS BEING TRACKED



Total PATRP Transactions Tracked

Total Number of Transactions - 237
 Total MWs - 32759



PART 4 – PERFORMANCE INDICATORS RESULTS

This section presents PATRP’s performance from October 1 to December 31, 2015. The results for the performance indicators are captured in the Power Africa Information System (PAIS).

			FY 2016		Cumulative Disaggregated Total(s) 2014 -2017	Cumulative Total(s) 2014-2017
			Actual	Target		
<i>Indicator Name</i>	<i>Indicator</i>	<i>Disaggregate By</i>	Q1	FY 2016		
<i>Generation Capacity Pending Financial Closure</i>	<i>Number of MW from transactions that have not yet achieved financial closure</i>	Solar (in MW)	590	2,500	2,346.5	18,602.1
		Wind (in MW)	650		1,226.8	
		Biomass (in MW)	420		481	
		Hydroelectric (MW)	6,764.3		7,310.8	
		Gas (in MW)	233		5,722	
		Geothermal (MW)	300		1,515	
<i>Transactions Pending Financial Closure</i>	<i>Number of transactions that have not yet achieved financial closure</i>	Solar (in MW)	9	110	30	112
		Wind (in MW)	3		7	
		Biomass (in MW)	1		4	
		Hydroelectric (MW)	38		47	
		Gas (in MW)	2		15	
		Geothermal (MW)	1		9	
<i>Generation Capacity Reached Financial Closure</i>	<i>Number of MW from transactions that achieved financial closure due to USG assistance</i>	Solar (in MW)	0	550	0	1,117.5
		Wind (in MW)	0		310	
		Biomass (in MW)	0		0	
		Hydroelectric (MW)	0		7.5	
		Gas (in MW)	450		800	
		Geothermal (MW)	0		0	

<i>Transactions Reached Financial Closure</i>	<i>Number of transactions that have achieved financial closure</i>	Solar (in MW)	0	28	0	4
		Wind (in MW)	0		1	
		Biomass (in MW)	0		0	
		Hydroelectric (MW)	0		1	
		Gas (in MW)	1		2	
		Geothermal (MW)	0		0	
<i>Private Sector Partner Engagement</i>	<i>Number of private sector companies involved in transactions receiving services and support from USG agencies</i>	# of US Firms	0	200	22	187
		# of non US Firms	0		165	
<i>Training and Capacity Building Activities</i>	<i>Person hours of training completed in technical energy fields supported by USG assistance</i>	Male (# of hours) trained	0	4,480	1,898.5	2,275
		Female (# of hours) trained	0		376.5	
<i>Policy</i>	<i>Number of policy reforms/laws/regulations/administrative procedures drafted and presented for public/stakeholder consultation to enhance sector governance and/or facilitate private sector participation and competitive markets as a result of USG assistance.</i>	Drafted	2	6	12	12
		Presented	0		10	10
		Regional	1		1	1
		National	1		10	10
		Private sector participation	0		6	6
		Clean and cleaner energy	0		4	4
		Small scale and off grid energy	0		0	0
		Gender equity	0		0	0

