OFFICE OF INSPECTOR GENERAL
U.S. Agency for International Development

Misjudged Demand, Stalled Reforms, and Deficient Oversight Impeded USAID/Haiti's Sustainable Electricity Goals

AUDIT REPORT 9-521-19-001-P
NOVEMBER 13, 2018

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MEMORANDUM

DATE: November 13, 2018

TO: USAID/Haiti Mission Director, Jene C. Thomas

FROM: Global and Strategic Audits Division Director, Van Nguyen /s/

SUBJECT: Misjudged Demand, Stalled Reforms, and Deficient Oversight Impeded USAID/Haiti's Sustainable Electricity Goals (9-521-19-001-P)

This memorandum transmits the final report on our audit of USAID/Haiti's Pilot Project for Sustainable Electricity Distribution. Our audit objective was to determine whether the project helped the Haitian Government modernize the country's electricity sector and expand the generation, transmission, and distribution of electricity in targeted areas. In finalizing the report, we considered your comments on the draft and included them in their entirety, excluding attachments, in appendix B.

The report contains two recommendations to help the mission move the project forward and address project oversight deficiencies. We reviewed information you provided in response to the draft report, and we consider recommendation 1 resolved but open pending completion of planned activities and recommendation 2 closed.

For recommendation 1, please provide evidence of final action to the Audit Performance and Compliance Division.

We appreciate the assistance you and your staff extended to us during this audit.

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INTRODUCTION

About three-quarters of all Haitians have no electricity.[1] Even for those with access to the national utility, Electricité d'Haïti (EDH), blackouts are common because of dilapidated infrastructure and a shortage of paying customers—despite Haitian Government subsidies of over $200 million a year. Lack of access to reliable electricity obstructs business development and productivity and holds down living standards, while hefty subsidies leave less funding available for Haiti's other critical needs.[2]

As one of many U.S. Government efforts to help Haiti rebuild after the January 2010 earthquake, USAID/Haiti built a new 10-megawatt power plant for the Haitian Government, which owned the plant, in the northern part of the country. USAID/Haiti hired private companies to operate and maintain the plant for eventual integration into the EDH system. In May 2013, USAID/Haiti followed up with the Pilot Project for Sustainable Electricity Distribution to grow the utility and position it to last without U.S. Government support. By May 2016, USAID/Haiti envisioned transferring to the Haitian Government responsibility for running an expanded 25-megawatt power plant and distribution system that would provide modern electricity services to 25,000 Haitian households and the Caracol Industrial Park, which was funded by the U.S. Government and other donors to create manufacturing jobs for Haitians. This electric utility would also be self-sustaining—that is, able to cover its costs without relying on subsidies.

Our objective was to determine whether USAID/Haiti's Pilot Project for Sustainable Electricity Distribution achieved its goals to help the Haitian Government modernize the electricity sector and expand the generation, transmission, and distribution of electricity in targeted areas. In answering this objective, we also included steps to assess sustainability risks and project oversight.

To conduct our audit, we reviewed project documentation; interviewed officials from USAID, the contractor supporting the utility, the contractor supporting the utility transfer strategy, and the Haitian Government; toured the power plant; and interviewed electricity customers in the Caracol Industrial Park and surrounding communities. We conducted a second, limited phase of fieldwork to update our findings and recommendations after USAID/Haiti and the Haitian Government signed a new agreement that changed the transfer strategy and enabled gradual increases to electricity prices. Appendix A details our scope and methodology.

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[1] Reported by multiple sources, including the International Energy Agency's "World Energy Outlook for 2016," http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/, accessed on January 6, 2017, and the Copenhagen Consensus Center's "Transmitting and Distributing Electricity in Haiti," https://www.copenhagenconsensus.com/sites/default/files/electricity_grid_pauyo_english.pdf, accessed on September 22, 2017.

[2] In May 2017, a series of studies by an international panel of researchers and economists found that improvements to Haiti's electricity sector would bring greater economic, social, and environmental benefits to the country per dollar invested than any other intervention (Copenhagen Consensus Center with financial support from the Government of Canada, Haiti Prioritizes Project, http://www.copenhagenconsensus.com/halti-priorise, accessed on August 1, 2017).

SUMMARY

The USAID mission in Haiti (USAID/Haiti) has not achieved its goals for electricity modernization or expansion in northern Haiti. By January 2017, the Pilot Project for Sustainable Electricity Distribution generated reliable electricity and supplied it to the Caracol Industrial Park and about 8,000 Haitian households. However, customer services were underdeveloped, and the utility was not self-sustaining. USAID/Haiti continued to pay for its operation and maintenance. Moreover, the power plant remained at its initial 10-megawatt capacity and served a fraction of planned users. At the time of the audit, the mission planned to extend the project contract until at least May 2019; it had added nearly $5 million to the contract budget and planned to add up to $8.3 million more to provide continuous electricity service to the homes and businesses connected to the utility.

In addition to less demand for electricity from industrial customers than anticipated, the project also experienced stalled reform and oversight problems. Prolonged elections, turnover in key Government positions, lack of political will, and shifting focus within the Haitian Government obstructed reforms to the energy sector. The reforms—including strengthening EDH management and increasing the fixed prices customers paid for electricity—were steps USAID and its contractor considered key to reaching cost-recovery and transferring responsibility for running the utility. Further, the mission struggled to oversee the project, which was initiated in response to the State Department's commitment to help rebuild Haiti after the January 2010 earthquake. Having longstanding staffing shortfalls, the mission focused on the State Department's priority: ensuring that the power plant generated reliable electricity for the Caracol Industrial Park rather than modernizing metering, billing, and other standard customer services in communities or fulfilling day-to-day project oversight functions.

USAID/Haiti has attempted to get back on track with new efforts underway to transfer the utility to a private sector operator, but uncertain profit potential and the risks in Haiti's political and business climate cast doubt on the success of these efforts. Further, USAID does not have a detailed plan with hard benchmarks and timelines to conclude the Pilot Project for Sustainable Electricity Distribution with its contractor, or a formal contingency plan should a private sector operator not materialize in due time.

We made two recommendations to move the project to the next stage and help the mission address project oversight deficiencies. USAID/Haiti agreed with both recommendations.

BACKGROUND

In January 2010, a large earthquake struck Haiti near the nation's capital, Port-au-Prince, killing hundreds of thousands of people and severely damaging infrastructure and livelihoods. The Port-au-Prince area was home to 65 percent of the country's economic activity and was virtually wiped out by the earthquake. The Haitian Government thus urged the decentralized development of "infrastructures and services necessary for

rapid expansion of economic activities outside the Port-au-Prince area" in its action plan for nationwide recovery.[3] The U.S. Government responded by prioritizing reconstruction investments in three targeted regions—the north, the west, and the capital—that would catalyze economic growth and stability for the country.

Both governments emphasized the need to modernize and expand Haiti's electricity infrastructure and improve energy sector governance, and both pledged to implement the U.S. Government's postearthquake reconstruction strategy.[4] The Haitian Government committed to energy sector reforms, from establishing a new legal and regulatory framework and a high-level energy position in the Government to improving the management and profitability of EDH, the national electric utility. The U.S. Government agreed to construct a power plant in the north—specifically, in Caracol, a small village on the coast that had no access to electricity—and to provide technical expertise and financial assistance for planned reforms. The plant would power the Caracol Industrial Park, a new development that the U.S. Government and other donors funded to attract both local and international businesses which would create up to 65,000 new manufacturing jobs, according to State Department calculations. The industrial park would offer a large labor pool, ample factory space, and subsidized energy prices to tenants; trade agreements with the United States offered the park's garment makers duty-free access to the U.S. market.[5]

In June 2012, USAID/Haiti completed construction of a $19 million, 10-megawatt diesel and heavy fuel oil power plant, with plans to reach full 25-megawatt capacity by late 2014. According to a memorandum of understanding, the Haitian Government owned the plant and planned to integrate it into the EDH grid after a few years. Until then, USAID agreed to operate and maintain the power plant on behalf of the Haitian Government and to improve and expand the services it offered. The plant supplied electricity to the Caracol Industrial Park and gradually extended service to adjacent communities. For electricity sales, USAID/Haiti agreed to charge industrial park tenants the same low prices they had negotiated with industrial park managers, and community-based customers the same subsidized prices charged by EDH across Haiti; the mission anticipated that opportunities to increase prices to cost-recovery levels would come with energy sector reforms. The Haitian Government agreed to provide fuel until the utility became self-sufficient to help offset the effects of the subsidies.

In May 2013, USAID/Haiti awarded the National Rural Electric Cooperative Association International Limited (NRECA) a contract—which by January 2017 was worth nearly $29.4 million—to continue the plant's operation, maintenance, and expansion under the Pilot Project for Sustainable Electricity Distribution. According to the contract, NRECA would deliver all the services of a modern electric utility following "modern

[3] Haitian Government, "Haiti Earthquake PDNA: Assessment of damage, losses, general and sectoral needs," Annex to the Action Plan for National Recovery and Development of Haiti, March 2010.
[4] U.S. Government, "Post Earthquake USG Haiti Strategy: Toward Renewal and Economic Opportunity," January 2011.
[5] The Caribbean Basin Trade Partnership, the Haitian Hemispheric Opportunity through Partnership Encouragement (HOPE, HOPE II), and the Haiti Economic Lift Program (HELP) Acts, as cited in the March 2015 Haiti Investment Guide by the Centre de Facilitation des Investissements (CFI) Haiti, http://cfihaiti.com/images/pdf/INVESTMENT_GUIDE_EN.pdf, accessed on September 26, 2017.

international utility standards and practices." All customers were to pay for the services they received at a subsidized price, and NRECA was to remove all illegal connections and shut off power to customers who did not pay their bills.

NRECA's 2013 contract reflected USAID/Haiti's plan to expand generating capacity to 25 megawatts by 2014; to increase the legal customer base to approximately 25,000 Haitian households, at the mission's discretion, by 2016; and to break even by 2017. Implementing these activities would lead to a self-sustaining utility that would be a model, helping "inform and shape the reform processes needed for the entire country," according to USAID/Haiti officials.[6]

USAID/HAITI HAS NOT MET ITS SUSTAINABLE ELECTRICITY GOALS AND THE PROJECT EXPERIENCED SIGNIFICANT PROBLEMS

USAID/Haiti's Pilot Project for Sustainable Electricity Distribution has not achieved its modernization and expansion goals. With NRECA running it, the USAID-supported utility has generated reliable electricity for the Caracol Industrial Park and targeted communities. To an extent, the project has also shown that Haitians will pay for electricity if metered for usage and charged low prices. However, other aspects of modernization—metering, billing, collecting payment from all customers, and providing customer service—have not fully materialized, expansion has been curtailed, and the mission has not transferred operation of the utility to the Haitian Government. Besides industrial demand that did not meet expectations, problems have included stalled Haitian Government reforms and inadequate oversight of the project by USAID, stemming from State Department pressures and a shortage of qualified staff.

Demand From Industrial Customers Was Misjudged

The U.S. Government's initial investment in the power plant was to supply reliable electricity for job creation in the north, but demand for electricity from the Caracol Industrial Park did not meet expectations. New businesses were added at a much slower rate than anticipated, and the park's main tenant, an international garment manufacturer, did not grow its business in Haiti as rapidly as projected.[7] Ultimately industrial customers consumed only a third of the electricity generated by the plant, whereas early plans pegged over half for industrial use. USAID/Haiti staff said the plan to increase the power plant's generating capacity to 25 megawatts by 2014 was not implemented because only 5 megawatts was being used at peak times. Furthermore, they said USAID had already redirected the funds set aside for generation expansion to other priorities.

[6] Fiscal year 2014 Department of State Operational Plan for Haiti.

[7] As of June 2017, the Caracol Industrial Park reported about 13,000 employees, most from the main tenant's 10,500 workers. While the State Department's early plans projected that the park would create up to 65,000 new jobs within 10 years, park managers later reduced the target to between 20,000 and 40,000 new jobs because of delays constructing new buildings and attracting new tenants.

The Government of Haiti Did Not Meet All Commitments

The Haitian Government did not meet important reform commitments that had to occur for the utility's eventual integration into EDH, service expansion to new residential areas, and cost recovery. Despite a history of unsuccessful reform efforts, the U.S. Government and other donors had been optimistic that Haiti would "build back better" after the earthquake. However, according to USAID/Haiti officials and other sources, work to strengthen Haiti's national electric utility fell short, resulting in only minor and temporary improvements to EDH's management and profitability. Turnover in key Haitian Government positions and the decision not to install a high-level energy official in the Haitian Government interrupted progress. Another factor preventing reforms was the absence of a fully functioning Haitian Government for a year due to prolonged and contested elections. The limbo this created particularly impeded efforts to raise electricity prices, as did a lack of political will. Although higher prices were critical to making the NRECA-run utility self-sustaining, they were politically risky around elections. The mission's efforts to raise electricity prices consequently stalled until August 2016—over 3 years into the project.

Further, the Haitian Government's fuel deliveries to the utility were routinely late, coming through at the last minute after high-level USAID, State Department, and industrial park officials intervened. On occasion, the mission turned to the project's budget and sales revenues to fill in gaps so the power plant could continue generating electricity. Because of these experiences with EDH, electricity prices, and fuel, the mission decided it could not responsibly transfer the utility to the Haitian Government as planned or expand the residential area the utility served.

Residential expansion and cost recovery suffered. As of January 2017, NRECA counted fewer than 8,000 official residential customers—about 25 percent of households in the service area—far short of the 25,000 USAID/Haiti had anticipated reaching by May 2016. With the small customer base and ongoing price subsidies, the utility could not recover its costs even if all customer bills were fully paid.

Project Oversight Was Deficient

The State Department's early commitments to support Haiti reconstruction fell heavily on USAID to implement. USAID/Haiti officials said the mission was under tremendous pressure from top decision makers and other international donors to implement this complex, risky, and highly political project, which they said they were not equipped to manage. Recognizing the significance the State Department placed on the industrial park and its need for electricity, USAID/Haiti and NRECA officials focused on generating reliable electricity and let lapse other project requirements, such as running a responsive customer service center. Mission staff also spent less time on planning and analyses. For example, they waited until April 2015 to analyze electricity prices

needed for cost-recovery and until June 2015 to complete the project's sustainability study.[8]

Moreover, USAID/Haiti had difficulty attracting and retaining qualified staff. Mission officials cited a shortage of staff with appropriate experience in the aftermath of the earthquake; in fact, the mission still reported staffing shortfalls as significant deficiencies in its assessments of internal controls for 2015, 2016, and 2017. These were prepared in accordance with the Federal Manager's Financial Integrity Act of 1982 (FMFIA), which requires agency heads to report annually on the status of their internal control systems. Lacking contracting officers, monitoring specialists, and engineering support staff, USAID/Haiti tried to manage vacancies throughout the project by overburdening existing positions and using short-term personnel. For example, mission officials charged with project oversight in the first years of implementation were engineers who needed stronger project management skills and supervision. Other staff said that there was not enough time to do all that was asked of them, particularly managing supplementary requests and visits by Washington-based officials observing postearthquake reconstruction projects.

These management deficiencies impeded achievement of project goals. A key example with lasting effects was USAID/Haiti's hurried approach to expand modern electricity services to selected communities, where homes received either poor-quality electricity from EDH or no service at all. Early plans called for an orderly rollout that would keep pace with NRECA's ability to meter households and upgrade distribution systems to ensure that USAID-supported service met modern standards. However, because of high-level pressure to show results quickly and quell energy-driven protests in the north, USAID/Haiti decided to serve as many households as soon as possible once the Haitian Government gave authorization.[9] According to NRECA officials, USAID/Haiti also directed them not to disconnect nonpaying customers. While the rapid rollout earned USAID goodwill with the Haitian Government and communities, the project was not prepared. NRECA's systems, staff, and processes were underdeveloped and unable to accommodate the thousands of electricity users (both legal and illegal) the project absorbed in a matter of months starting in May 2014.

The decision to rapidly expand had several implications for safety, billing, and repayment rates. According to NRECA, much of the EDH infrastructure it inherited did not meet safety standards. Many households did not have breaker boxes or appropriate internal

[8] According to the project's May 2013 to May 2016 work plan, by February 2014 NRECA planned to complete the initial cost-of-service study, which was the first step to requesting revised electricity prices. USAID's Policy Framework 2011 – 2015 (in place at the time of the project's design and initiation) asked missions to build sustainability in from the start, and USAID/Haiti's Mission Order 36, "Implementation of Projects/Programs with Engineering and/or Construction Activities," in effect from September 2014, called for a comprehensive sustainability plan for construction projects, including projects that involve the improvement, alteration, and repair of power lines.

[9] On April 30, 2014, representatives from USAID/Haiti, NRECA, the Haitian Government, and EDH signed a memorandum of understanding that formally authorized NRECA to take over for EDH and "sequentially supply electricity to the cities of Trou du Nord, Terrier Rouge, and Limonade and to take full management of such distribution and marketing of such electricity." According to NRECA, the three areas and a fourth area—Sainte Suzanne—were connected to the USAID project utility between May 1 and July 25, 2014.

wiring to receive electricity safely, and residents lacked information on safe use and payment practices. The project was unable to catch up metering customers, renovating powerlines, and taking down illegal connections and did not have the capacity to turn off electricity for those who did not pay. NRECA tried unsuccessfully to bill customers without meters by preparing flat-rate bills and leaving them in local offices, but few customers picked up their bills (resulting in boxes of unclaimed bills each month, like the one shown in the following picture).

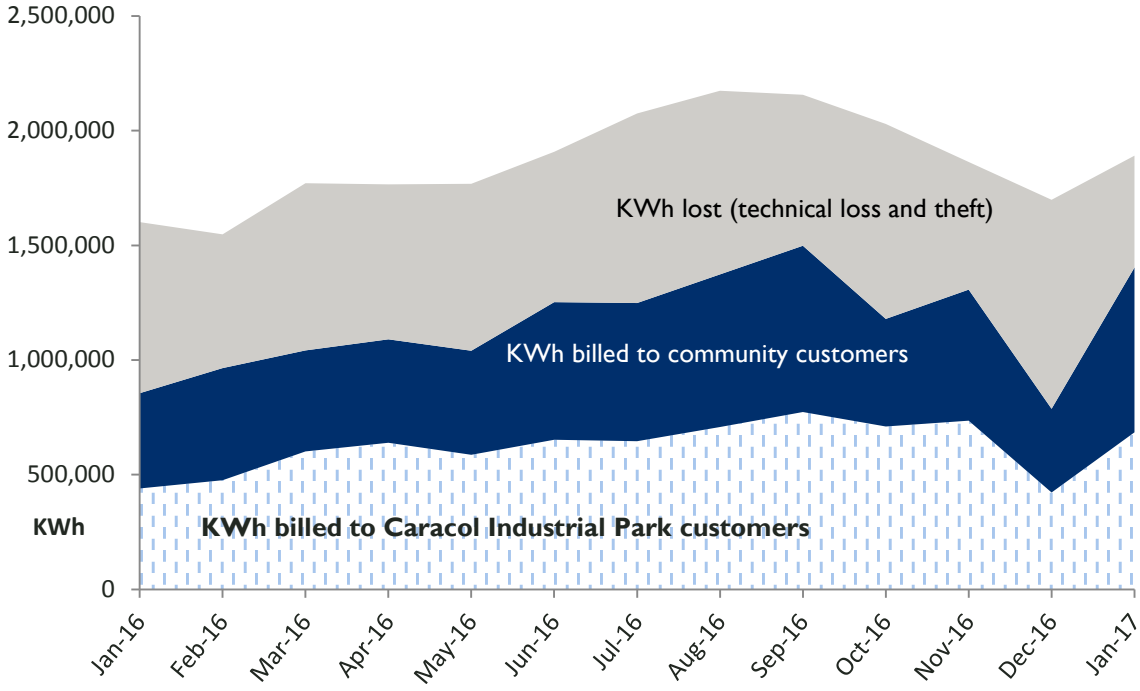
This box of unclaimed, flat-rate bills sits in the Limonade office. Photo: OIG (August 2015)

As the project progressed, NRECA achieved high repayment rates in the limited areas it had fully modernized and metered. Yet overall repayment rates were low due to the slow start, poor billing practices, and ongoing electricity theft. By January 2017, NRECA reported collecting only about half of what it billed to communities, resulting in lost revenue of $1.5 million that officials said was unlikely ever to be recovered. NRECA ultimately decided to stop billing all unmetered households and in June 2016 retired about 3,600 accounts, some that were hard to bill and were inherited from EDH, and others that were database errors made during the rushed transition. Still, NRECA reported that about a third of electricity generated by the power plant was routinely lost each month, mostly to theft in communities (as shown in the figure on page 8).

Because of its staffing and management problems, USAID/Haiti did not satisfy other Agency and contract monitoring requirements.[10] For example, mission staff did not establish clear and appropriate targets for community expansion, revenue collection, or electricity losses. The mission also did not consistently obtain, review, or approve NRECA's work plans, monitoring plans, performance reports, financial reports, or standard operating procedures. Furthermore, it did not ensure performance data met reasonable quality standards or perform recommended impact or midterm performance evaluations. These actions were required to facilitate effective project oversight.[11]

[10] Automated Directives System (ADS), chapter 302, "USAID Direct Contracting," and Mandatory Reference, "Model Letter and Procedures for Designating the Contracting Officer's Representative (COR) for Contracts and Task Orders."
[11] ADS 201, "Program Cycle Operational Policy," effective September 7, 2016, and ADS 203, "Assessing and Learning," which has been superseded by the revised ADS 201 but was in place during the audit.

Electricity Sales and Losses, January 2016 to January 2017
(kilowatt-hours)



Source: OIG generated from NRECA's monthly reports to USAID/Haiti.

USAID/Haiti was consequently unable to assess the utility's actual performance and financial health, and staff could not consistently define project success. Overtaxed and undersupervised staff missed overstatements in results reported to Congress, along with significant errors in the project's database that would have revealed problems with metering, billing, and collecting from customers. While USAID/Haiti attributed some of these implementation deficiencies to NRECA, the mission nevertheless rated NRECA's performance "satisfactory" or better in its annual contractor performance assessment reports.

USAID/HAITI HAS ATTEMPTED COURSE CORRECTIONS BUT SIGNIFICANT RISKS REMAIN

Over the past several years, USAID has recognized and sought solutions to serious, long-term problems facing the project:

- In May 2015, the mission formally revised its energy strategy. It decided to transfer operation of the utility to a private sector entity instead of the Haitian Government for integration into EDH.
- In August 2016, the mission signed a new agreement with the Haitian Government, formalizing the new transfer strategy but maintaining the Haitian Government's

ownership of the power plant as established in the original memorandum of understanding. Further, USAID/Haiti awarded a $1.1 million contract to an outside firm to help the Haitian Government attract private bidders and facilitate the plant's transfer.

- The agreement that the mission signed with the Haitian Government in August 2016 also permitted the project to raise electricity prices gradually over a 2-year period, reaching cost-recovery levels for current costs in 2018. With the agreement, the Haitian Government tacitly approved additional and indefinite increases to cover changes in fuel costs and inflation.
- The mission capped community expansion plans to about 10,000 households in the existing service area through the end of the project, rather than branching out to more households and new communities as initially planned and requested by the Haitian Government. According to some mission officials, this decision was taken to limit immediate costs and risks for the U.S. Government; it was also consistent with the April 2014 memorandum of understanding with the Haitian Government that permitted additional expansion only when the first phase "had been successfully completed and was being efficiently and sustainably managed."

Having already extended NRECA's contract twice and added $4.9 million to the budget to ensure continued operation of the plant, the mission was working to add another year and an estimated $4.3 million at the time of the audit. We confirmed later that USAID/Haiti planned to extend the contract again without competition to May 2019 and add an estimated $4 million to continue plant operations and maintenance.

USAID/Haiti's new transfer strategy is to maintain responsibility for the utility until at least May 2019, when it hopes the Haitian Government will have found a private sector operator to take over. However, this new strategy may not be viable because electricity prices are still too low and the paying customer base too small to recover costs or generate profits attractive to the private sector. Even higher prices may not lead to the intended cost recovery; officials say there is a limit to what most Haitians are able pay, as well as a limit to what industrial park tenants are willing to pay before seeking other business opportunities.

Haiti's difficult business environment and ongoing political volatility may further deter private sector interest in taking over the unprofitable utility.[12] Notably, in 2015, the Haitian Government sought private operators for electric utilities in other parts of the country but failed to attract any bidders.

And fuel remains a concern. As a condition of service, the August 2016 agreement required the Haitian Government to provide fuel until the utility reached a break-even point or the project ended, but USAID/Haiti waived this requirement. Officials said they did so despite the bigger financial burden this made for the project because the Haitian Government consented to gradually raise prices and because upholding the earlier

[12] The World Bank ranked Haiti as one of the most difficult places in the world to do business locally (181 out of 190 countries in 2017), and Transparency International categorized Haiti as one of the most corrupt countries in the world (159 out of 176 countries in 2016).

commitment took too much time and effort. By January 2017, USAID/Haiti had filled in fuel gaps with at least $1.9 million from the project budget and $1.4 million in electricity sales revenues needed for other operation and maintenance expenses.

Until USAID/Haiti can find a qualified entity to accept the risks and take over the utility, the U.S. Government will continue to be on the hook. According to USAID officials, letting the utility fail is not an option because it would cost thousands of Haitian jobs, put thousands of Haitians in the dark, and undermine the U.S. Government and Haitian Government's mutual objectives for postearthquake reconstruction. Heightening the risk is that USAID/Haiti has not documented a detailed plan to conclude its project with NRECA, with deliberate benchmarks and timelines for modernization and expansion through the end of the project that would best position the utility for the private sector transfer strategy, or a formal contingency plan should a private sector operator not materialize in due time. USAID/Haiti relies on year-long contract extensions without competition "to provide continuity of critical energy services until a private operator has been procured by the Government of Haiti," according to mission officials. However, the extensions are shortsighted, lack clear objectives for NRECA, and are uncoordinated with the search for a private sector operator.

CONCLUSION

Modernizing and expanding Haiti's electricity sector are essential to rebuilding the country from the devastating January 2010 earthquake. While USAID/Haiti's Pilot Project for Sustainable Electricity Distribution provides reliable electricity to the Caracol Industrial Park and a limited number of Haitians, it has not become the self-sustaining, model utility USAID/Haiti envisioned. It has cost more and achieved less than anticipated. The effects of Haiti's challenging operating environment and volatile political landscape hamper USAID/Haiti's ability to plan, implement, and oversee the project—on top of longstanding problems with staff turnover and lack of expertise. The mission has taken some action to reduce risks and costs to the U.S. Government, but more action is needed to document plans for positioning the utility to contribute—without prolonged U.S. Government support—to an economically viable and stable Haiti. Finally, addressing the broader problem of staffing shortfalls, which has been acknowledged in FMFIA certifications, could position the mission to provide stronger oversight of other USAID projects in Haiti.

RECOMMENDATIONS

We recommend that USAID/Haiti take the following actions:

1. Document and implement a detailed plan to conclude the Pilot Project for Sustainable Electricity Distribution that includes deliberate benchmarks and timelines for modernization and expansion to best position the utility for the private sector transfer strategy at the end of the project, and a formal contingency plan in case a private sector operator is not on track to take over the utility by the specified time.

2. Implement a plan to address the longstanding staffing challenges at USAID/Haiti, reported repeatedly in the mission's Federal Manager's Financial Integrity Act of 1982 certifications, to enable the mission to better address the project oversight deficiencies identified in this report.

OIG RESPONSE TO AGENCY COMMENTS

We provided our draft report to USAID/Haiti on August 28, 2018, and on October 1, 2018, received its response, which is included as appendix B.

The report included two recommendations. We acknowledge management decisions on both recommendations. We consider recommendation 1 resolved but open pending completion of planned activities and recommendation 2 closed.

APPENDIX A. SCOPE AND METHODOLOGY

We conducted our work from April 2015 to August 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe that the evidence obtained provides that reasonable basis.

The objective of our audit was to determine whether this project helped the Haitian Government modernize the electricity sector and expand the generation, transmission, and distribution of power in targeted areas. Throughout the audit, we assessed sustainability risks and whether USAID met contract oversight requirements.

The mission implemented this project through a cost-plus-fixed-fee contract with NRECA, a U.S.-based nonprofit organization. USAID/Haiti awarded the original contract in May 2013, for 3 years and $24.4 million, but continually added to it.

- In December 2014, USAID/Haiti added $83,673 for repairs of a Haitian power plant in Fort Liberté, which the mission authorized as part of an optional task included in the original contract.
- In August 2015, USAID/Haiti extended the project to May 2017 and added $4.9 million, increasing the total to nearly $29.4 million.
- In April 2017, USAID/Haiti extended the project through June 2017 with no change in budget or scope.
- At the time of the audit, the mission was in the process of extending the project's end date by an additional year to May 2018 and adding an estimated $4.3 million.
- After our fieldwork, USAID/Haiti planned to extend the contract again without competition to May 2019 and add $4 million to continue plant operations and maintenance.

As of January 31, 2017, the end of the audit scope, USAID/Haiti had obligated $29.4 million and disbursed $23.9 million for the project.

We performed fieldwork in two phases. Initially, the audit scope covered the project's inception to June 30, 2015. We performed fieldwork at USAID/Haiti in Port-au-Prince from July 9 to October 16, 2015. We traveled to the Caracol Industrial Park and surrounding areas from August 3 to 6 and August 17 to 20, 2015, for audit testing, meetings with NRECA staff, and interviews with electricity customers. We spoke with representatives of the four largest electricity consumers in the Caracol Industrial Park—the park manager, the National Society of Industrial Parks and tenants SAE-A; Peintures Caraïbes; and Goal SA—accounting for 96 percent of the electricity NRECA sold to the project's 12 operational clients in June 2015. We interviewed 77 customers from communities—13 from Caracol, 13 from Limonade, 9 from Sainte Suzanne, 32 from Terrier Rouge, and 10 from Trou-du-Nord—representing all the communities the utility

served and about 1 percent of the 7,899 community-based customers NRECA reported billing in its June 2015 progress report.

Significant events relevant to our findings and recommendations occurred before we issued the draft audit report to the mission, leading us to perform additional fieldwork. Primarily, USAID/Haiti signed a new agreement with the Haitian Government in August 2016 that, among other things, permitted USAID/Haiti to raise electricity prices and pursue the new private sector transfer strategy. In February 2017, we made the decision to update the report for the changed conditions. We extended the audit scope to January 31, 2017, and performed additional document reviews and interviews at USAID/Haiti and NRECA's office in the Caracol Industrial Park. We also toured the power plant and warehouse where USAID-funded materials were stored and conducted limited site visits and interviews in surrounding communities.

As part of the audit, we identified and assessed the mission's significant internal controls for project management. These included controls for monitoring performance, environmental compliance, and branding and marking. To understand the project and to assess internal controls significant to the audit, we reviewed documents extensively, including contract documentation; work plans; progress reports; mission strategies; Federal Manager's Financial Integrity Act certifications for fiscal years (FY) 2014, 2015, 2016, and 2017; and Federal and Agency regulations, correspondence, and agreements between the United States and Haitian Governments.

To answer the audit objective, we obtained an understanding, through document review and interviews, of the project's objectives and key activities. To assess progress, we reviewed annual work plans, results documentation, and progress reports. We spoke with USAID officials from the Haiti mission, the Latin America and the Caribbean Bureau, and the Haiti Task Team, as well as with NRECA staff and Haitian Government officials. We corroborated our conclusions with site visits and interviews with electricity customers in the industrial park and in each community served by the utility. We inquired about allegations of illegal acts or noncompliance with laws and regulations during interviews.

To verify performance data, we reviewed data quality assessments and supporting documentation for the indicators that USAID/Haiti reported for the project for its FY 2014, 2015, and 2016 performance plans and reports to Congress. Our review identified weaknesses that call into question the data's reliability and validity.

During interviews and document review, we identified shortcomings with the project's monitoring and evaluation plan, and thus did not perform extensive testing of the quarterly or annual performance data that NRECA reported to USAID/Haiti. Instead, we focused on other measures that USAID/Haiti and NRECA officials said could indicate project success (although USAID/Haiti had not established clear targets for these measures at the time of our audit): the number of billed customers (both metered and unmetered), the amounts billed to and collected from these customers, and electricity reliability.

As part of our initial testing through June 30, 2015, we audited NRECA's customer database and billing system (Oracle RDBMS 12c Release 1) for completeness and accuracy. We considered but did not rely on the customer database because of deficiencies that cast doubt on the data's reliability and validity, including duplicate and inactive accounts. We also verified electricity reliability as of June 2015 by reviewing NRECA's monthly generation reports, outage reports, and progress reports, and by discussing service quality during customer interviews. As part of our additional fieldwork, we completed spot checks of NRECA's new database and billing system implemented in June 2016 (WebCIS), noting that NRECA's decision to retire the accounts of all unmetered customers improved prior reliability concerns. We did not perform additional data verification because of the limited nature of our extended fieldwork. Despite noted data quality weaknesses, we believe that when viewed with other evidence from interviews, documents, and site visits, the opinions, conclusions, and recommendations in the report provide valid evidence.

To observe activities and talk to electricity customers, we conducted site visits to the Caracol Industrial Park and each of the five communities where the utility supplied power as of June 30, 2015—Caracol, Limonade, Sainte Suzanne, Terrier Rouge, and Trou-du-Nord. The utility served these same locations (and no others) as of January 31, 2017. We selected 4 of NRECA's 12 customers in the Caracol Industrial Park for interviews based on power usage: these clients collectively used 96 percent of the electricity sold to the park in June 2015 and continued to be the primary users in January 2017. In communities, we selected customers for interviews and payment verification using NRECA's database but adjusted our approach when we found that many of those selected were not at home and could not feasibly be tracked down. We instead interviewed customers who were home and obtained supporting documentation for their accounts at NRECA's office. As part of our testing, we corroborated account information and payment history with our interview information. We do not consider the change in methodology a scope limitation. Our site visits included a tour of the power plant and a warehouse storing construction materials, where we verified environmental compliance, and the local offices in each community, where we verified the availability of education and outreach materials as well as branding and marking compliance.

Since we judgmentally selected our samples for testing and site visits, we must limit our results and conclusions to the items and areas tested and cannot project them to all areas and customers served by the power plant. We believe our substantive testing supports the audit's findings.

APPENDIX B. AGENCY COMMENTS

TO: Van Nguyen, Global and Strategic Audits Division Director

FROM: Jene C. Thomas, Mission Director /s/

DATE: October 1, 2018

REF: VNguyen /JThomas Memo dated 08/28/2018

SUBJECT: Mission response to the draft report titled "Short Demand, Stalled Reform, and Deficient Oversight Impeded USAID/Haiti's Sustainable Electricity Goals" (9-521-18-00X-P)

The Mission would like to thank the Office of Inspector General for the opportunity to provide comments on the subject draft report. The Mission agrees with both recommendations and herein provides plans for incorporating the guidance and reports on significant progress already made.

Background

Since the conclusion of the audit field work in April 2017, significant positive movements have occurred in the operation of the utility. Clients served by the Pilot Project for Sustainable Electricity Distribution (PPSELD), both inside the park and in five surrounding communities, remain the only customers in Haiti served 24/7 power. Moreover, we would like to highlight important improvements achieved following the audit field work, such as, improved cost recovery through comprehensive metering and billing, reduced losses, and a gradually increasing tariff rate; improved project oversight and management at the contractor, and within USAID; and improved customer service, outreach and education through pamphlet development, hands-on training, and an education campaign. Finally, the Mission has developed a plan that is being implemented together with the Government of Haiti (GOH) to transfer management of the utility to a Public-Private Partnership (PPP), beginning in May 2019.

Improved cost recovery:
As of July 2018, 13,465 metered customers are in service outside of the industrial park. This level of comprehensive metering allows for increased cost recovery. In addition, each metered customer receives a clearly written bill delivered to them each month, directly after the meter is read.

As of July 2018, total (commercial plus technical) losses stand at 15.0%. This compares to average losses of 29.7% in April 2017. For reference, the neighboring Dominican Republic and Jamaica have losses of 12% and 27%, respectively, per World Bank reported data for 2014.

This halving of losses took place when USAID began rising tariffs to increase the sustainability, demonstrating that consumers continue to value electricity service, even at higher prices. The average tariff rate in April 2017 was 11.2 HTG ($0.16) per KWH. The average tariff rate in May 2018 was 18.8 HTG ($0.26) per KWH.

In terms of collections, the combined collection rate of metered customers in Caracol, Trou du Nord, Terrier Rouge, Sainte Suzanne and Limonade was 88% of the billed consumption for the month of July, 2018. The combined collection rate inside the park is 100%. For comparison, Electricite d'Haiti (EdH) senior management staff reported in September 2018, that they provide bills for just 50% of their customers. World Bank data from 2014 indicates losses at EdH of 60%.

Finally, people are more likely to pay their bill when the service is reliable. The average service availability in July 2018 was 99.67%.

Improved project management and oversight:
PPSELD is directly managed by the National Rural Electric Cooperative Association (NRECA), a U.S. based association well versed in the management of utilities. Key positions have been filled consistently since 2016, including the COP, which turned over with a two-week overlap in December 2016. NRECA draws upon a large cadre of international and local expertise to manage the utility, including experts from Haiti, Tanzania, the U.S., and Bolivia. The operation of the power plant is sub-contracted to ESD Engineering & Services (ESD), a Korean firm based in the Dominican Republic. ESD built the plant under contract to USAID, and is fully conversant in its operation.

The oversight of PPSELD has become progressively more effective since 2016. All key positions have been continually filled for the past two years, as discussed below under Recommendation No. 2. Regular site visits over the past year has included monthly visits by USAID staff to the utility. In terms of day to day oversight, a daily check-in meeting is held at USAID to discuss any challenges, as well as a weekly phone call including NRECA HQ staff. Finally, a routine financial review is underway through USAID Office of Financial Management.

Improved customer service, outreach and education:
Customer service has been internally identified as a challenge in implementing PPSELD. To rectify, USAID staff have undertaken a series of measures to improve customer service and to educate their customer base as tariffs have risen. The goal is to increase understanding of the true cost of electricity. A series of pamphlets has been developed. One describes, in Haitian Creole, the cost per hour of typical appliances in customer's homes. Another graphically displays the production cycle relating the cost per household back to the cost of fuel and machinery. Another discusses the ramifications of electricity theft. The presentations use graphics because a large portion of the customer base is not literate. (See attachment 1)
Another key initiative underway is direct training of customer-facing staff in customer service best practices. A recent two-day intensive customer service workshop was held for PPSELD staff provided directly by USAID staff. This workshop increased the skills of 28 customer-facing meter readers and bill collections staff working for the utility.

Lastly, a sub-contract with a well-known local training service company is underway. The Centre de Formation et d'Encadrement Technique (CFET) is working to increase community outreach and education related to the cost of electricity. Activities under this contract will be underway for seven months starting in September 2018.

Development of a Private Public Partnership (PPP) to manage the utility at the end of the project:
Improvements documented since the OIG field work in April 2017 have significantly increased the potential of this utility to be operated and expanded under concession, through the development of a PPP. USAID/Haiti brought into the INVEST contract, a blended financial transaction advisory service managed by Development Alternatives, Inc. INVEST, together with dedicated USAID Mission staff, are now actively supporting the GOH in the development of the PPP. Weekly meetings, in addition to field work and analysis, have been held since July, 2018. The work plan, attached, is on schedule with the expectation of a transfer in May, 2019. During the anticipated 30-year concession, the private operator is expected to expand service to a larger customer base at a lower per unit cost.

Recommendation No. 1: *Document and implement a detailed plan to conclude the Pilot for Sustainable Electricity Distribution that includes deliberate benchmarks and timelines for modernization and expansion to best position the utility for the private sector transfer strategy at the end of the project, and a formal contingency plan in case a private sector operator is not on track to take over the utility by the specified time.*

Mission Response
The Mission agrees with this recommendation and has prepared a detailed plan and GANTT-Style timeline that documents the steps to implement the PPP under development by the GOH that will take over utility operations at the end of the PPSELD project. (See attachments 2 & 3)

This plan includes clear benchmarks and timelines for the transfer of the Caracol Power Utility (CPU) to management under a PPP, including:

Preparation of a detailed financial model (completed),
Preparation of Prequalification, Concession and RFP documents,
Modeling of bids,
Support to the GOH for negotiations, and
Signature and closing.

As USAID completes its direct management of the utility, it is exploring options to further support the build out of the utility, possibly through the introduction of an energy mix that includes renewable energy, and the reduction of cost to the end-user of the electricity, whether industrial, commercial, or residential.
Furthermore, a formal contingency plan is being developed to ensure the continuity of the present level of service in the event that the transfer to a PPP is not possible.
***Target completion date*:** The plan for the transfer to a PPP was prepared and approved in July, 2018, and is now being implemented. In addition, a formal contingency plan in the event the transfer to a PPP is not possible will be completed by December 31, 2018.
Recommendation No. 2: *Implement a plan to address the long lasting staffing challenges at USAID/Haiti, reported repeatedly in the mission's Federal Manager's Financial Integrity Act of 1982 certifications, to enable the mission to better address the project oversight deficiencies identified in this report.*

Mission Response

The Mission agrees with the recommendation and in past years has invested in short-term contractors and lengthy TDYs to help address the staffing gaps. As addressed in the annual FMFIA certifications, maintaining full staffing is a continuous challenge for USAID/Haiti. Haiti is a hard-to-fill post due to the difficult living conditions and security concerns due to a volatile political environment. Staffing gaps are also exacerbated by delays associated with language training and curtailments of assigned Foreign Service Officers (FSO). Recognizing that a long-term solution is needed, the Mission also worked on a long-term plan to improve staffing by better aligning positions based on current needs as well as implementing the following:

Reducing the French language requirement for all support offices to 2/2;
Advertising the majority of our FSO positions two years in advance to allow for language training;
Establishing the difficult to Staff Incentive Differential (DSID) for FSOs who extend for a third year.

In the 2015 staffing pattern for the Office of Infrastructure, Engineering and Energy (OIEE), the office responsible for managing PPSELD, we note ten vacancies out of 23 positions. In 2016, the two Environmental Officers positions were moved to the Program office. As a result, the staffing pattern for OIEE was reduced to 21 positions, of which 10 remained vacant. In 2017, at the time of the OIG field visit, an additional position was

added for a total of 22 positions with 11 remaining vacant. By September of 2018, the office reduced two USPSC positions and added a Foreign Service Program Officer for a total of 21 positions of which only five vacancies remain to be filled. Two of these are FSN engineers, now in the final stages of the recruitment and hiring process. Staff availability has allowed for increased project oversight to include more frequent and longer field trips to the project site in northern Haiti.

The oversight of PPSELD has become progressively more effective since 2016. The current personnel dedicated to the oversight of PPSELD in OIEE team consists of the Contracting Officer, the Financial Analyst, the Contracting Officer Representative and the Alternate Contracting Officer Representative positions, and a senior engineer advisor. All of these positions have been continually filled for the past two (2) years. All are supported by financial specialist, negotiators and similar staff. This will remain the case going forward.

In addition, to properly execute the PPP according to the timeline, USAID has developed a four part team. The first part is the GOH, as represented by the Ministry of Economy and Finance's PPP Unit and by the newly formed energy regulator, ANARSE. The second part is the management team at USAID. The third part of the team is financial advisory service provided by INVEST. The fourth part of team is the legal advisory service provided under subcontract by INVEST. This team meets weekly, and is executing the detailed plan referenced above.

Target completion date: The Mission deems that it has addressed Recommendation 2 and requests its closure upon issuance of the report.

Attachments:

Education brochure to be used by PPSELD in the field.
Haiti CPU PPP – Workplan – Final;
Haiti CPU PPP – GANTT chart – Final;

APPENDIX C. MAJOR CONTRIBUTORS TO THIS REPORT

The following people were major contributors to this report: Van Nguyen, director; Jon Chasson, regional inspector general; Brad Moore, audit manager; David Clark, audit manager; Hannah Maloney, auditor; Robyn Blount, auditor; Guilloux Cayo, auditor; Elizabeth Paul, analyst; Steven Ramonas, auditor; Kartik Srinivasan, auditor; and Christopher Walker, auditor.