

SIGAR

**Special Inspector General for
Afghanistan Reconstruction**

SIGAR 19-37 Audit Report

Afghanistan's Energy Sector: USAID and DOD Did Not Consistently Collect and Report Performance Data on Projects Related to Kajaki Dam, and Concerns Exist Regarding Sustainability



MAY
2019

SIGAR

Special Inspector General for Afghanistan Reconstruction

WHAT SIGAR REVIEWED

Since 2004, the U.S. Agency for International Development (USAID) and the Department of Defense (DOD) have implemented 17 infrastructure projects and spent about \$775 million to increase electric power generation capacity at the Kajaki Dam in Helmand Province to 51.5 megawatts, provide short-term, diesel-fueled power generation, and improve the delivery of power to customers in Helmand and Kandahar provinces through the Southeast Power System (SEPS). USAID has been responsible for 6 of the projects, which have primarily focused on rehabilitating the power generation equipment at the dam, while DOD has been responsible for 11 infrastructure projects aimed largely at constructing and rehabilitating transmission lines and substations in Helmand and Kandahar that make up SEPS, which is part of a broader U.S. government effort to supply power to southern Afghanistan. These projects are intended to contribute to broader U.S. strategic objectives in Afghanistan of creating sustainable jobs and supporting socio-economic development. USAID's projects also aim to support expanded sustainable physical infrastructure and agriculture-led economic growth. To support the infrastructure projects, USAID also implemented capacity-building efforts at Da Afghanistan Breshna Sherkat (DABS), Afghanistan's electric power utility, which is ultimately responsible for operating and maintaining the Kajaki Dam and SEPS, along with quality assurance and oversight projects.

The objectives of this audit were to determine the extent to which (1) USAID's and DOD's projects to increase the generation and transmission of electric power from the Kajaki Dam adhered to their original schedules; (2) USAID and DOD assessed whether the projects are contributing to the achievement of the U.S. government's and USAID's strategic objectives; and (3) USAID and DOD have assessed DABS's ability to sustain these projects.

May 2019

Afghanistan's Energy Sector: USAID and DOD Did Not Consistently Collect and Report Performance Data Regarding Projects Related to Kajaki Dam, and Concerns Exist Regarding Sustainability

SIGAR 19-37 AUDIT REPORT

WHAT SIGAR FOUND

SIGAR found that 12 of the 17 infrastructure projects USAID and DOD implemented to increase power generation and transmission from the Kajaki Dam were 3 to 40 months behind their original planned schedules. Eleven of the 12 projects are closed, and one was active as of December 2018. These 12 infrastructure projects were delayed mainly because of insecurity in the areas surrounding the dam. For example, USAID staff and its contractors evacuated the dam in June 2006 because of insurgent activity. This delayed work on the Rehabilitation of Economic Facilities and Services program, which included refurbishing turbine generator unit 3 at the dam. By the time the British military secured the area in October 2007, the subcontract for this work had expired. Other significant delays resulted from poor contractor performance, delays delivering necessary equipment, and issues involving the Afghan government. For example, DABS did not resolve disputes over land ownership and poorly managed its contractors and procurements. Of the five remaining projects, four were completed within their original schedules, and one had not yet started.

After investing about \$775 million over the past decade, USAID and DOD have not finished SEPS, which is needed to transmit power from the Kajaki Dam, and Afghans in southern Afghanistan have not yet received the intended benefits from these projects. As of December 2018, there were two projects left to complete SEPS. DOD estimated that its active SEPS Completion Phase I – Sangin to Lashkar Gah project would be completed in August 2019, and USAID's planned SEPS Completion II project had not yet started.

SIGAR also found that USAID and DOD did not collect complete performance data on their infrastructure projects to increase power generation and transmission from the Kajaki Dam. USAID's Automated Directives System (ADS) 203, *Assessing and Learning*, which was later incorporated into ADS 201, *Program Cycle Operational Policy*, requires that the agency develop performance management plans that define indicators, baselines, and targets, and then collect and report data on the targets and results. USAID's performance management plans for Afghanistan identified 18 strategic-level indicators for its energy sector projects in southern Afghanistan, which includes the Kajaki Dam and SEPS. However, USAID did not establish baselines for 7 of the indicators, did not set targets for 11 of the indicators, and did not report results for 9 of the indicators. According to USAID, several factors prevented it from collecting and reporting complete performance data, including Afghanistan's unique and difficult operating environment, changes in USAID's internal policies over time, and frequent turnover in project staff.

DOD did not collect or report strategic-level performance data for its projects because it had no requirements to do so. Despite not having requirements to collect and report this data, DOD acknowledges the importance of its projects to achieving counterinsurgency and socio-

economic development objectives. In a joint statement, the Department of State (State), USAID, and DOD said USAID intends to conduct a survey to assess the impact of U.S. efforts to increase access to electric power in southern Afghanistan once all projects related to the Kajaki Dam are complete. However, the statement does not mention what, if any, role DOD will have in the assessment given its responsibility for the active SEPS Completion Phase I – Sangin to Lashkar Gah project. Without complete performance data, USAID and DOD cannot determine the full extent to which their efforts to increase electric power generation and transmission from the Kajaki Dam are contributing toward the U.S. government's and USAID's strategic objectives.

Because USAID and DOD did not collect and report complete performance data on their projects to generate and transmit electric power from the Kajaki Dam, SIGAR reviewed data from DABS on electric output from the Kajaki Dam and the results of surveys conducted by The Asia Foundation of Afghans' perception of access to electric power in southern Afghanistan. Both sets of data suggest that USAID's and DOD's infrastructure projects to increase electric power generation and transmission from the Kajaki Dam have made some progress in improving the generation and delivery of electric power from the Kajaki Dam. For example, according to DABS's data, the dam's average power generation output increased from 15 megawatts in 2004 to about 41 megawatts in June 2018. In addition, Afghans surveyed in Helmand and Kandahar provinces have reported improved perceptions of access to electricity since 2015. However, the projects have not yet achieved their intended results. USAID and DOD officials acknowledge that Afghans will not fully realize the benefits of the dam's increased power output until the SEPS projects are complete. State, USAID, and DOD have warned that if increased access to electric power is not attained, Afghans could harbor negative views of the Afghan government, which could negatively affect U.S. efforts in southern Afghanistan.

SIGAR also found that although USAID and DOD complied with requirements in the Fiscal Year (FY) 2013 National Defense Authorization Act (NDAA) to assess DABS's capacity to sustain U.S.-funded infrastructure projects to generate and transmit electric power from the Kajaki Dam, challenges remain regarding DABS's ability to sustain those projects. In each assessment, USAID and DOD determined that DABS was becoming a reliable partner while acknowledging that the utility faced challenges inherent in building and sustaining critical infrastructure. The agencies determined that DABS might or could possess the capacity to sustain the four projects in the future based on, for example, DABS's expected revenue growth at the time of the assessment and by assuming that capacity-building projects at DABS would be implemented successfully.

In October 2017, USAID paused its on-budget assistance to DABS, including funding committed to its planned SEPS II Completion project, and initiated an assessment of its projects in Afghanistan's energy sector that included a review of the Afghan government's capacity to sustain these projects. The agency took these steps because of weaknesses in DABS's human and financial operations, and shortcomings in its management and oversight of construction activities related to ongoing and planned power projects. After completing the assessment in July 2018, USAID determined that DABS was no longer commercially viable, citing concerns with DABS's procurement abilities, commercial viability, integrity, and management and oversight of construction activities. However, USAID concluded that based on DABS's track record, there is no reason to believe that the utility will not be able to operate and maintain additional infrastructure. In the assessment, USAID said it would work with DABS to design and implement a capacity development road map to improve DABS's capacity to sustain energy sector projects. However, this road map has not yet been developed or implemented.

The Afghan government has taken steps intended to increase output from the Kajaki Dam and enhance its operation and maintenance capability. For example, in October 2018, the Afghan Ministry of Energy and Water entered into a private agreement with 77 Construction Company to further increase the dam's power generation capacity to 150 megawatts by installing four additional turbines and raising the dam's reservoir height. It remains to be seen what impact the Afghan government's actions and USAID's capacity-building efforts will have on DABS's ability to sustain the Kajaki Dam and SEPS once it is complete.

WHAT SIGAR RECOMMENDS

SIGAR is making two recommendations. SIGAR recommends that the USAID Mission Director for Afghanistan:

- 1. Direct personnel responsible for assessing the extent to which USAID has met its strategic-level performance indicators concerning southern Afghanistan's energy sector to adhere to ADS 201 requirements to collect and report baselines, targets, and results for each indicator, and evaluate the extent to which its projects related to the Kajaki Dam are contributing to USAID's strategic objectives for its energy projects in Afghanistan.**
- 2. Work with DABS to complete and begin implementing the capacity development roadmap discussed in USAID's July 2018 technical assessment by June 30, 2019.**

SIGAR received written comments on a draft of this report from the USAID Mission for Afghanistan (USAID/Afghanistan) and the Office of the Assistant Secretary of Defense for Asian and Pacific Security Affairs. USAID/Afghanistan concurred with the intent of the first recommendation and concurred with the second recommendation.

Regarding our first recommendation, USAID/Afghanistan described multiple efforts that it says collectively fulfill the intent of the recommendation. For example, USAID said it is currently revising its internal project design guidance to refine activity management roles and delineate responsibility for adherence to ADS 201. In addition, USAID/Afghanistan said it plans to evaluate the extent to which projects related to the Kajaki Dam contribute to the agency's strategic objectives for its energy projects in Afghanistan, and it will conduct an assessment of SEPS after the Ghazni-to-Kandahar transmission line and substations are complete and energized, which are expected to occur in 2022. We give USAID credit for taking these steps to ensure continuous performance monitoring and evaluation of its projects against its strategic objectives. We will continue to monitor the agency's ongoing and planned efforts until they are completed.

Regarding our second recommendation, USAID/Afghanistan said before it implements the capacity-development road map, it retained the U.S. Energy Association to complete an assessment of DABS's corporate governance to identify strategic areas of focus for future USAID assistance to improve the utility's management and operations. According to USAID/Afghanistan, the association will complete the assessment on or about June 30, 2019. USAID/Afghanistan said it can refine and begin implementing the road map with DABS after it reviews the assessment. We are encouraged by USAID's actions and will continue to monitor the agency's efforts to implement the road map.

In our draft report, SIGAR recommended that the USAID Mission Director for Afghanistan develop a contingency sustainment plan for the SEPS Completion II project that specifies how this project will be sustained should DABS be unable to develop the capacity needed to operate and maintain the project. USAID/Afghanistan did not concur with this recommendation, stating that there is no evidence that DABS has not been able to operate and maintain its national transmission system to date. The mission added, "... it would be counterproductive to the U.S. goals of reinforcing the legitimacy of the Afghan Government and increasing Afghan progress on the Journey to Self-Reliance if the U.S. Government were to develop contingency sustainment plans for DABS. DABS and the Afghan Government are responsible for the sustainment of the overall power system in the country." Although we continue to have concerns about DABS's capacity to maintain the Kajaki Dam and SEPS, we acknowledge USAID's position that it does not intend to develop a sustainment plan for the SEPS Completion II project and removed this recommendation from the report.

Also in the draft report, SIGAR recommended that the Under Secretary of Defense for Policy define the department's roles and responsibilities for collecting and reporting strategic-level performance data on its ongoing SEPS Completion Phase I – Sangin to Lashkar Gah project to USAID for the agency's planned survey to assess the impact of U.S. efforts to increase access to electric power in southern Afghanistan. The Office of the Assistant Secretary of Defense for Asian and Pacific Security Affairs concurred with the recommendation and commented that the data needed for the assessment will come from DABS and surveys USAID is planning to implement. The office said DOD has no separate data to provide. Based on this response, SIGAR closed the recommendation as implemented and removed it from this final report.



SIGAR

Office of the Special Inspector General
for Afghanistan Reconstruction

May 1, 2019

The Honorable Michael R. Pompeo
Secretary of State

The Honorable Patrick M. Shanahan
Acting Secretary of Defense

The Honorable Mark Green
Administrator, U.S. Agency for International Development

This report provides the results of SIGAR's audit of the U.S. Agency for International Development's (USAID) and Department of Defense's (DOD) efforts to increase the generation and transmission of electric power from the Kajaki Dam. Since 2004, USAID and DOD have implemented 17 infrastructure projects and spent about \$775 million to increase electric power generation capacity at the Kajaki Dam to 51.5 megawatts, provide short-term, diesel-fueled power generation, and improve the delivery of power to customers in Helmand and Kandahar provinces through the Southeast Power System (SEPS).

We are making two recommendations. We recommend that the USAID Mission Director for Afghanistan (1) direct personnel responsible for assessing the extent to which USAID has met its strategic-level performance indicators concerning southern Afghanistan's energy sector to adhere to Automated Directives System (ADS) 201 requirements to collect and report baselines, targets, and results for each indicator, and evaluate the extent to which its projects related to the Kajaki Dam are contributing to USAID's strategic objectives for its energy projects in Afghanistan; and (2) work with Da Afghanistan Breshna Sherkat (DABS) to complete and begin implementing the capacity development road map discussed in USAID's July 2018 technical assessment by June 30, 2019.

We received written comments on a draft of this report from the USAID Mission for Afghanistan (USAID/Afghanistan) and the Office of the Assistant Secretary of Defense for Asian and Pacific Security Affairs. These comments are reproduced in appendices III and IV, respectively. They also provided technical comments, which we incorporated into this report, as appropriate. USAID/Afghanistan concurred with the intent of the first recommendation and concurred with the second recommendation.

Regarding our first recommendation, USAID/Afghanistan described multiple efforts that it says collectively fulfill the intent of the recommendation. For example, USAID said it is currently revising its internal project design guidance to refine activity management roles and delineate responsibility for adherence to ADS 201. In addition, USAID/Afghanistan said it plans to evaluate the extent to which projects related to the Kajaki Dam contribute to the agency's strategic objectives for its energy projects in Afghanistan and will conduct an assessment of SEPS after the Ghazni-to-Kandahar transmission line and substations are complete and energized, which are expected to occur in 2022. We give USAID credit for taking these steps to ensure continuous performance monitoring and evaluation of its projects against its strategic objectives. We will continue to monitor the agency's ongoing and planned efforts until they are completed.

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SIGAR conducted this work under the authority of Public Law No. 110-181, as amended, and the Inspector General Act of 1978, as amended; and in accordance with generally accepted government auditing standards.

John F. Sopko
Special Inspector General
for Afghanistan Reconstruction

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ABBREVIATIONS

ADS	Automated Directives System
AIRP	Afghanistan Infrastructure Rehabilitation Program
CERP	Commander's Emergency Response Program
DABS	Da Afghanistan Breshna Sherkat
DOD	Department of Defense
FY	fiscal year
NDAA	National Defense Authorization Act
REFS	Rehabilitation of Economic Facilities and Services
SEPS	Southeast Power System
State	Department of State
USAID	U.S. Agency for International Development
USAID/Afghanistan	USAID Mission for Afghanistan

According to the Department of State (State), U.S. Agency for International Development (USAID), and the Department of Defense (DOD), in 2003 southern Afghanistan had among the world's lowest rates of electricity access. Helmand and Kandahar provinces, in particular, were isolated from the national power grid and external sources of power. To improve electricity access in these provinces, the United States has spent about \$775 million since 2004 on infrastructure projects to increase the amount of electric power generated at the Kajaki Dam located in Helmand Province, provide short-term, diesel-fueled power generation, and improve the delivery of power to Afghans in Helmand and Kandahar.¹ The U.S. Agency for International Development (USAID) first built the hydropower plant at the Kajaki Dam in 1975. This included installing two turbine generator units and leaving one generator bay vacant for an additional unit to generate more power in the future. However, the turbine generator units fell into disrepair following the Soviet Union's invasion in 1979 and the subsequent years of civil war and Taliban rule.

USAID began rehabilitation efforts at the Kajaki Dam in 2004. By late 2009, the agency had refurbished the two turbine generator units and attempted to install a third. However, USAID had to vacate the project again because of persistent insurgent attacks. In 2011, USAID returned to the dam to install the third turbine generator unit and help the Afghan government develop the ability to manage, operate, and maintain the dam and Afghanistan's power system. At the same time, DOD started to implement projects to deliver power generated at the dam to Afghans in Helmand and Kandahar provinces by repairing and building transmission lines and substations. These transmission lines and substations make up the Southeast Power System (SEPS), which is part of a broader U.S. government effort to supply power to southern Afghanistan.² When construction is complete, USAID and DOD plan to transfer these transmission lines and substations to Da Afghanistan Breshna Sherkat (DABS), which will then be responsible for managing, operating, and maintaining the infrastructure for the Afghan government.³

USAID's and DOD's infrastructure projects to increase electric power generation and transmission from the Kajaki Dam contribute to two U.S. strategic objectives for Afghanistan: (1) creating sustainable jobs for population centers and corridors, and (2) supporting socioeconomic development. In support of these two objectives, USAID's projects also aim to achieve the agency's strategic objective of supporting expanded sustainable physical infrastructure and sustainable agriculture-led economic growth.

The objectives of this audit were to determine the extent to which (1) USAID's and DOD's projects to increase the generation and transmission of electric power from the Kajaki Dam adhered to their original schedules; (2) USAID and DOD assessed whether the projects are contributing to the achievement of the U.S. government's and USAID's strategic objectives; and (3) USAID and DOD have assessed DABS's ability to sustain these projects.

To accomplish these objectives, we reviewed U.S. strategy documents, contract documents, oversight and management assessments, and the laws, policies, and procedures governing the implementation of these projects from 2004 through 2018. We reviewed the contracts, modifications, project schedules, deficiency reports, performance indicators and evaluations, and sustainment assessments. We also interviewed officials from State, USAID, DOD, the Afghan Ministry of Energy and Water, and DABS, along with other senior Afghan government officials and contractors responsible for implementing U.S.-funded infrastructure projects in

¹ We define an "infrastructure project" as "a project involving the construction, expansion, alteration of, or the acquisition of equipment for, a physical facility or physical infrastructure, including related engineering design (concept and detail) and other services, the procurement of equipment (including any related services), and feasibility studies or similar engineering and economic services" (see 22 U.S.C. § 2421e, as referenced in the National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239, §1273). Because the 17 projects are interrelated, we included all of them in our analyses for this audit.

² In addition to transmitting power from the Kajaki Dam, SEPS is intended to transmit power imported to northern Afghanistan from Tajikistan, Turkmenistan, and Uzbekistan to the southern part of the country.

³ DABS is Afghanistan's electric power utility.

southern Afghanistan. We conducted our work in Washington, D.C., and Bagram and Kabul, Afghanistan, from May 2016 through May 2019.

BACKGROUND

The lack of reliable and affordable electric power is a fundamental constraint to economic growth in Afghanistan. According to the World Bank's 2019 *Doing Business* survey, it costs about \$14,000 for a business to connect to Afghanistan's electrical grid, equivalent to more than 2,000 percent of the country's per capita income, and the bank continues to give Afghanistan the lowest possible score for transparency and reliability of service.⁴ Moreover, Afghanistan is almost completely dependent on electricity imports. In July 2018, USAID reported that Afghanistan imported nearly 80 percent of its electricity from neighboring countries and about 30 percent of the Afghan population has access to electric power.⁵ Afghanistan's two largest power systems funded primarily by USAID and DOD, the North East Power System and SEPS, are not yet interconnected, leaving southern Afghanistan reliant on local hydroelectric and diesel-fueled power generation.⁶

U.S.-Funded Infrastructure Projects to Increase Electric Power Generation and Transmission from the Kajaki Dam

In the 1950s, with funding and assistance from the Export-Import Bank of the United States, the Afghan government built the Kajaki Dam, which one senior State official called the most ambitious project ever undertaken in the history of modern Afghanistan. In 1975, USAID built a three-generator bay hydropower plant and installed turbine generator units 1 and 3 at the dam. However, from 1979 through 2001 units 1 and 3 deteriorated after they fell into disrepair following the Soviet invasion and the subsequent Afghan civil war and Taliban rule.

The most recent U.S. efforts to improve the reliability and sustainability of electric power generated at the Kajaki Dam began in late 2004, when USAID initiated two projects to refurbish turbine generator units 1 and 3 and later install a third turbine generator, unit 2, at the Kajaki Dam. Since 2004, USAID and DOD have implemented 17 infrastructure projects to increase electric power generation capacity at the dam to 51.5 megawatts, provide short-term, diesel-fueled power generation, and improve the delivery of power to customers in Helmand and Kandahar Provinces through SEPS.⁷ USAID is responsible for six infrastructure projects, along with three capacity-building, quality assurance, and oversight projects to support the infrastructure projects.⁸ DOD is responsible for 11 infrastructure projects that focused primarily on the construction and rehabilitation of transmission lines and substations in Helmand and Kandahar.⁹ USAID

⁴ World Bank, *Doing Business 2019: Training for Reform – Economy Profile Afghanistan*, May 2018.

⁵ According to USAID, Afghanistan imports 28 percent of its power from Uzbekistan, 23 percent from Tajikistan, 14 percent from Iran, and 14 percent from Turkmenistan. See USAID, *Compiled Data for Afghanistan Electricity Supply in 2016 (April 2016-March 2017)*, July 2018.

⁶ The North East Power System imports electricity from Central Asia and provides power to the northern provinces of Balkh and Kunduz through Kabul. SEPS is intended to serve Durai Junction, Kandahar City, Lashkar Gah, and Sangin.

⁷ After a discussion of our preliminary audit findings in December 2018, USAID said it implemented three additional projects between 2003 and 2008 to provide diesel-fueled generators, fuel, and maintenance in major urban areas of Kabul, Kandahar, Lashkar Gah, Nangarhar, and Qalat. However, USAID could not determine how much it spent specifically related to supplementing electric power in southern Afghanistan. Therefore, we did not include these projects in our scope.

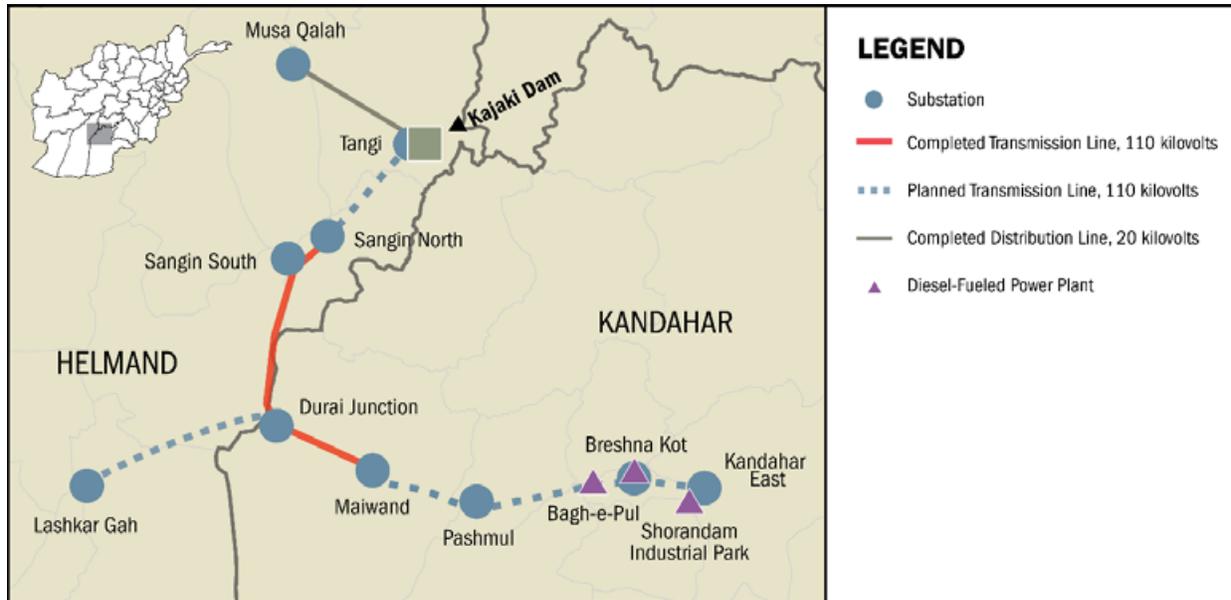
⁸ USAID implements projects through contracts and on-budget assistance to the Afghan government. On-budget assistance is funding channeled through the Afghan government's budget, which allows the government to manage the funds.

⁹ U.S. Forces-Afghanistan implements infrastructure projects to increase electric power generation and transmission in southern Afghanistan for DOD through contracts awarded and managed by the U.S. Army Corps of Engineers.

funded its projects with the Economic Support Fund, while DOD used funds from the Commander’s Emergency Response Program (CERP) and the Afghanistan Infrastructure Fund.

Figure 1 shows the locations of USAID’s and DOD’s infrastructure projects to increase electric power generation and transmission from the Kajaki Dam, and Table 1 provides a brief description of these projects. Appendix II describes the infrastructure projects and USAID’s capacity-building efforts, quality assurance, and oversight projects that supported the infrastructure projects.

Figure 1 - Locations of USAID’s and DOD’s Infrastructure Projects to Increase Electric Power Generation and Transmission from the Kajaki Dam and Diesel-Fueled Power Generation



Source: USAID and DOD data, September 2018.

Table 1 - Description of USAID's and DOD's Infrastructure Projects to Increase Electric Power Generation and Transmission from the Kajaki Dam and Diesel-Fueled Power Generation

Project Name	Agency	Description	Spent (\$ Millions)
Rehabilitation of Economic Facilities (REFS) Job Order 13	USAID	Refurbish turbine generator turbine generator units 1 and 3 at the Kajaki Dam.	\$10.6
REFS Job Order 22	USAID	Refurbish turbine generator unit 3 and install unit 2 at the Kajaki Dam.	17.0
Afghanistan Infrastructure Rehabilitation Program (AIRP) Task Order 02	USAID	Provide auxiliary infrastructure support to rehabilitate turbine generator turbine generator unit 3 and install unit 2 at the Kajaki Dam and construct new transmission lines.	47.6
Kandahar City Electrical Infrastructure Starter Kit One	DOD	Purchase and deliver electrical equipment and materials to DABS to prepare the Kandahar City distribution system for increased power from the Kajaki Dam.	4.2
Kandahar City Electrical Infrastructure Starter Kit Two	DOD	Purchase and deliver equipment and materials for DABS's to use in the rehabilitation of distribution and connection grids in Kandahar Province, and install new electrical monitoring meters to support DABS's revenue collection.	2.1
Kandahar Completion Kits	DOD	Purchase and deliver equipment and materials for DABS's to use in the rehabilitation of distribution and connection grids in Helmand Province, and install new electrical monitoring meters to support DABS's revenue collection.	6.7
Helmand Completion Kits	DOD	Fund the construction of two 10-megawatt diesel-fueled power plants at Shorandam Industrial Park and Bagh-e-Pol, and provide fuel and maintenance services.	10.2
Kandahar Bridging Solution (Funded by CERP)	DOD	Fund diesel fuel and maintenance services, including technical training services and consumables, for diesel-fueled power plants in Kandahar City.	114.8
Kandahar Bridging Solution (Funded by the Afghanistan Infrastructure Fund)	DOD	Construct and rehabilitate infrastructure for electric power; rebuild the Kajaki Dam substation and transmission system; and perform repairs and inventory of government-furnished equipment.	141.6
Kandahar Helmand Power Project	USAID	Increase the Kajaki Dam's capacity by 18.5 megawatts to 50.5 megawatts.	228.2
On-Budget Assistance to DABS - Installation of Unit 2	USAID	Rebuild substation at the Kajaki Dam and Sangin-North; construct substations at Sangin-South and Tangi switchyard; construct 110-kilovolt transmission lines from the Kajaki Dam to Lashkar Gah; and construct 20-kilovolt transmission lines to Kajaki village and Tangi switchyard.	62.4
SEPS Phase I - Kajaki to Lashkar Gah (Terminated)	DOD	Construct 110-kilovolt transmission lines from Sangin North to Sangin South substations, through Durai Junction and to Lashkar Gah.	53.7
SEPS Completion Phase I - Sangin to Lashkar Gah ^a	DOD	Rebuild and construct substations at Tangi, Sangin North, and Sangin South.	39.4
SEPS Completion Phase I - Civil Works	DOD	Rebuild and construct Maiwand and Pashmul substations, and construct 110-kilovolt transmission lines from Durai Junction, through Maiwand and Pashmul, and to Breshna Kot.	9.4
SEPS Phase II - Maiwand to Durai Junction (Terminated)	DOD	Rebuild and construct Maiwand and Pashmul substations, and construct 110-kilovolt transmission lines from Durai Junction to Maiwand.	2.0
SEPS Phase II - Maiwand to Durai Junction (Reprocurement)	DOD	Construct 110-kilovolt transmission lines from Kandahar East, Breshna Kot, Pashmul, and Maiwand, and between Sangin North and the Kajaki Dam; install electrical switchgear at the Tangi and Kajaki switchyards, and at the Sangin South, Sangin North, and Kajaki substations; and install additional bays at the Breshna Kot and Durai Junction substations.	24.9
SEPS Completion II ^b	USAID		0
Total			\$774.8

Source: SIGAR analysis of USAID and DOD projects.

Note: Because USAID and DOD do not use the same definition of a project, we combined their definitions and describe a project as an effort with a defined beginning and end date, a defined scope and budget, and an identifiable purpose or set of objectives to accomplish a singular goal.

^a As of December 2018, DOD had disbursed \$39.4 million on its SEPS Completion Phase I - Sangin to Lashkar Gah project.

^b USAID plans to award its SEPS Completion II project in early 2019 with an estimated cost of \$65 million.

Strategic Objectives for U.S. Infrastructure Projects to Increase Electric Power Generation and Transmission from the Kajaki Dam

The U.S. government's efforts to increase the generation and transmission of electric power from the Kajaki Dam span three U.S. administrations and several strategic documents. Nevertheless, the strategic objectives have remained relatively consistent over time. According to *Afghanistan and Pakistan Regional Stabilization Strategy*, signed by the Secretaries of State and Defense in 2010, the U.S. government's overall objectives in Afghanistan were "building the capacity of Afghan institutions to withstand and diminish the threat posed by extremism" and "delivering high-impact economic assistance to create jobs, reduce the funding that the Taliban receives from poppy cultivation, and draw insurgents off the battlefield."¹⁰ This strategy was supplemented by *United States Government Integrated Civilian-Military Campaign Plan for Support to Afghanistan*, which was released in 2009 and updated three times through 2013.¹¹ The two strategic objectives in the plan most relevant to U.S. efforts at the Kajaki Dam were to (1) create sustainable jobs for population centers and corridors, and (2) support socioeconomic development. Projects related to the Kajaki Dam were just some of the many efforts implemented to support these objectives.

In October 2018, State, USAID, and DOD provided us with a joint statement describing the importance of rehabilitating the Kajaki Dam and SEPS to achieving U.S. strategic objectives.¹² In their statement, the agencies linked the availability, reliability, and sustainability of electric power in southern Afghanistan to their broader efforts to catalyze economic growth, improve quality of life for hundreds of thousands of Afghans, and demonstrate the Afghan government's growing capacity to deliver essential services to Helmand and Kandahar provinces, two of the country's most volatile areas.

In support of the U.S. government's strategic objectives, USAID developed its own strategic objectives to guide its energy projects in Afghanistan, to include those involving the Kajaki Dam. Its 2010 and 2015 performance management plans for Afghanistan identified two strategic objectives to support (1) expanded, sustainable physical infrastructure and (2) expanded, sustainable agriculture-led economic growth.¹³ Unlike USAID, DOD does not have its own separate objectives guiding its infrastructure projects to increase electric power generation and transmission from the Kajaki Dam.

TWELVE OF USAID'S AND DOD'S PROJECTS WERE BEHIND THEIR ORIGINAL SCHEDULES MAINLY BECAUSE OF SECURITY CHALLENGES

According to our analysis of each project's original and actual schedule, as of December 2018, 12 of 17 infrastructure projects that USAID and DOD implemented to increase power generation and transmission from the Kajaki Dam were 3 to 40 months behind their original planned schedules.¹⁴ Eleven of these projects are

¹⁰ State Office of the Special Representative for Afghanistan and Pakistan, *Afghanistan and Pakistan Regional Stabilization Strategy*, updated February 2010.

¹¹ U.S. Embassy Kabul and U.S. Forces-Afghanistan, *United States Government Integrated Civilian-Military Campaign Plan for Support to Afghanistan*, August 10, 2009; U.S. Embassy Kabul and U.S. Forces-Afghanistan, *United States Government Integrated Civilian-Military Campaign Plan for Support to Afghanistan*, Revision 1, February 2011; U.S. Embassy, Kabul, and U.S. Forces-Afghanistan, *Civil-Military Strategic Framework*, March 2012; and U.S. Embassy Kabul and U.S. Forces-Afghanistan, *U.S. Civil-Military Strategic Framework for Afghanistan*, Revision 2, August 2013.

¹² Joint statement from State, USAID, and DOD, "SIGAR 115A Inquiry Response, Electric Power Generation & Distribution in Southern Afghanistan," October 5, 2018.

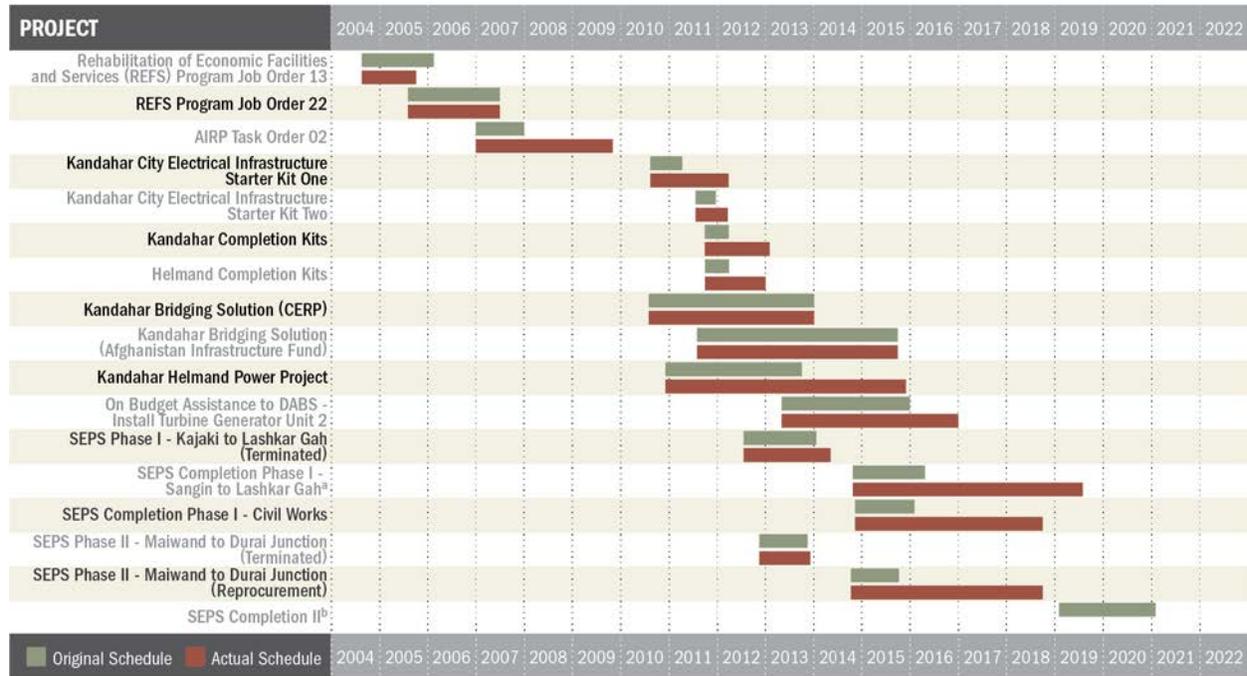
¹³ U.S. Mission for Afghanistan, *U.S. Foreign Assistance for Afghanistan Post Performance Management Plan-2011-2015*, August 28, 2010; and USAID, *Afghanistan Performance Management Plan: Afghanistan Implementation Plan for Transition 2015-2018*, July 2015.

¹⁴ We compared each project's original period of performance defined in contract documents—that is, planned start and end dates—with the actual period of performance to determine the extent to which projects met their original schedules.

closed, and one is still active.¹⁵ The delays were primarily due to security issues resulting from a high level of insurgent activity in the areas surrounding the dam. Other contributing factors were poor contractor performance, issues involving the Afghan government, and delays delivering necessary equipment. Of the five remaining projects, one finished ahead of schedule, three finished on schedule, and one had not begun. USAID planned to award the remaining project after February 2019.

Figure 2 shows the original and actual schedules for each project.

Figure 2 - Original and Actual Schedules of USAID’s and DOD’s Infrastructure Projects to Increase Power Generation and Transmission from the Kajaki Dam and Diesel-Fueled Power Generation as of December 2018



Source: USAID and DOD data.

^a DOD’s SEPS Completion Phase I – Sangin to Lashkar Gah project is active and estimated to be completed in August 2019.

^b USAID’s SEPS Completion II project is estimated to start after February 2019 and be completed by February 2021.

From 2004 to 2009, USAID implemented three projects to rehabilitate the equipment at the Kajaki Dam: (1) Rehabilitation of Economic Facilities and Services (REFS) Job Order 13, (2) REFS Job Order 22, and (3) the Afghanistan Infrastructure Rehabilitation Program (AIRP) task order 2. The three projects focused on refurbishing turbine generator units 1 and 3, and installing turbine generator unit 2 in the hydropower plant at the dam. Of the three, our analysis showed that REFS Job Order 13 was the only project to be completed in accordance with its original schedule. The contractor completed the work by October 2005 as initially planned. According to contract documents, the other two projects—REFS Job Order 22 and AIRP task order 2—were delayed because of security problems.

Work under REFS Job Order 22 began in July 2005. In May 2006, insurgents began attacking the roads and areas near the dam, and eventually cut off access to the dam completely. USAID evacuated its staff and contractors in June and postponed all work on the project. More than a year later, in October 2007, the British

¹⁵ We considered a project closed after the final payment was made, any disputes settled, and all administrative actions, such as changing accounting and appropriation data or correcting typographical mistakes, were completed. The contractor might not have completed all tasks initially required as part of the project at the time of closure.

military secured the roads and area near the Kajaki Dam, and successfully delivered turbine generator unit 2 to the dam. By that time, REFS Job Order 22 had expired. Because of this, USAID issued AIRP task order 02 in January 2007 to refurbish unit 3 and install unit 2. Insurgents resumed targeting the area surrounding the dam, delaying the project. In addition, according to USAID's performance evaluation of the project, the contractor caused delays. The evaluation stated:

Personnel were inadequately supervised which delayed implementation progress and they mobilized to the project site unprepared to perform work in a remote environment . . . lack of planning for work in a remote environment required numerous unnecessary deliveries via air transport of items which were not locally available. Their construction and mechanical techniques were outdated and not adequate to perform the tasks required and significantly delayed implementation progress.¹⁶

By October 2009, 22 months behind AIRP task order 02's original schedule, USAID's contractor had refurbished unit 3, but evacuated the Kajaki Dam because of insurgent activity before installing unit 2.

In 2011, State, USAID, and DOD began developing a new interagency strategy to complete the remaining work on the dam by 2014. Since 2010, USAID has been responsible for 3 infrastructure projects, while DOD has been responsible for 11 projects. USAID implemented two of its projects roughly 12 to 27 months after their original schedules; the third project is projected to start in early 2019. DOD implemented two of its projects on schedule and six roughly 3 to 34 months after their original schedules, terminated two projects, and has one active project that is currently 40 months behind its original schedule. Our analysis of contract documents, final project closeout reports, contractor performance evaluations, and project status reports showed that projects were late because of security challenges similar to those USAID experienced from 2004 through 2009. For example, significant increases in anti-government activity affected the region in 2011 to 2012, delaying the completion of the Kandahar Helmand Power Project.

The Afghan government also caused delays on multiple projects. According to USAID, the agency's on-budget assistance to DABS for the installation of turbine generator unit 2 had problems caused by DABS's limited oversight over its contractors and poor management of its procurements. Similar problems have also delayed the initiation of USAID's SEPS Completion II project. Two of DOD's projects, SEPS Completion Phase I – Sangin to Lashkar Gah and SEPS Phase II – Maiwand to Durai Junction (Reprocurement), were delayed because of disputes over land ownership, which, according to the department, DABS was responsible for resolving. In the case of SEPS Completion Phase I – Sangin to Lashkar Gah, DOD had to direct its contractor to reroute significant portions of transmission lines through Lashkar Gah, pushing the project's estimated completion from April 2016 to August 2019, an increase of more than 40 months.

In addition, while USAID was negotiating the Kandahar Helmand Power Project with Black & Veatch Special Projects Corporation in August 2010, the Afghan government outlawed private security contractors throughout Afghanistan. As a result, the agency's contractor could not get to the site until June 2011 when it had a security contract in place that complied with the change in Afghan law. According to a memo from U.S. Forces-Afghanistan, the Afghan government's decision also caused DOD to terminate the SEPS Phase I – Kajaki to Lashkar Gah project because of escalating security costs.¹⁷

Delays delivering required equipment resulting from the weather, border closures, and shipping issues also affected project schedules. According to USAID closeout reports from September and December 2014 for the Kandahar Helmand Power Project, fog and dust storms made deliveries difficult, as did periodic closures of

¹⁶ USAID Construction Evaluation of Afghanistan Infrastructure Rehabilitation Program Task Order 02, *Contractor Performance System*, April 8, 2009, p. 2.

¹⁷ U.S. Forces-Afghanistan Joint Programs Integration Office, "Direction Memorandum: Termination of the Southern Electrical Power System-Helmand (SEPS I) Project, Contract No. W912ER-11-D-0014 0004," April 24, 2014.

entry points along Afghanistan's border with Pakistan.¹⁸ In addition, from November 28, 2011, through July 4, 2012, the port in Quetta, Pakistan, closed, limiting the delivery of equipment made outside of Afghanistan.¹⁹

Due to delays in USAID's infrastructure projects, the Kajaki Dam and SEPS were not able to generate and transmit the amount of power expected. Because of the shortage of electricity, and to support the U.S. government's counterinsurgency campaign, DOD implemented the Kandahar Bridging Solution as a temporary way to supplement the electricity generated at the dam and transmitted through SEPS with diesel power until the projects were completed. According to the justification letter for the bridging solution:

This solution provides an immediate electric power bridging strategy until long-term projects take effect such as the installation of the Kajaki Dam Turbine #2, transmission line repairs and upgrades, and Kandahar City distribution system upgrades.²⁰

DOD implemented the Kandahar Bridging Solution from August 2010 through September 2015. During this period, the department paid more than \$256 million for diesel-fueled generators, fuel, and maintenance. Overall, the delays in completing USAID's and DOD's infrastructure projects to increase the generation and transmission of power from the Kajaki Dam, particularly those that are still active and planned, have prevented Afghans living in Helmand and Kandahar provinces from receiving the intended benefits of these projects. As of December 2018, these projects have cost about \$775 million.

INCOMPLETE PERFORMANCE DATA LIMIT USAID'S AND DOD'S ABILITY TO DETERMINE THE FULL EXTENT TO WHICH THEIR PROJECTS ARE CONTRIBUTING TO THE U.S. GOVERNMENT'S AND USAID'S STRATEGIC OBJECTIVES

USAID Collected and Reported Incomplete Performance Data on Its Efforts to Improve Access to Electric Power in Southern Afghanistan, Including Its Projects Related to the Kajaki Dam

USAID has collected and reported incomplete performance data for its strategic-level performance indicators concerning southern Afghanistan's energy sector, which includes efforts to generate and transmit electric power from the Kajaki Dam. As a result, the agency does not know the full extent to which its projects have supported expanded sustainable physical infrastructure and agriculture-led economic growth. USAID missions, including the mission in Afghanistan, are required to prepare performance management plans for their strategic objectives, based on performance measurement guidance found in USAID's Automated Directives System (ADS).²¹ The guidance requires that each performance management plan define indicators, baselines, and targets.²² Additionally, the missions are required to ensure that their contractors are collecting data on the

¹⁸ USAID, Closeout Report Kandahar Helmand Power Project (KHPP) Component 1 Sub-Component 1: *Replace Kandahar Breshna Kot Substation*, December 10, 2014; and USAID, Closeout Report Kandahar Helmand Power Project (KHPP) Component 2 Sub-Component 2: *Procure Equipment for Additional Substations*, September 5, 2014.

¹⁹ USAID, Closeout Report Kandahar Helmand Power Project (KHPP) Component 2 Sub-Component 1: *Build a New Substation at Durai Junction*, December 10, 2014.

²⁰ U.S. Army Corps of Engineers, "Addendum to Letter of Justification for the Commander's Emergency Response Program (CERP) Kandahar City - Power Bridging Solution, Regional Command (South)," September 13, 2010, p. 1.

²¹ USAID, ADS Chapter 203, "Assessing and Learning," September 1, 2008. In 2016, USAID revised the ADS and combined ADS 203 and three other chapters into ADS Chapter 201, "Program Cycle Operational Policy." We refer to ADS 203 in this report because it was still in effect when USAID prepared the 2015-2018 performance management plan for Afghanistan.

²² Performance indicators are used to measure the extent to which progress is being made toward an objective. Baselines help identify the extent to which change has happened. Baseline values should be measured using the same data collection source and method that is used for the results. If baseline data cannot be collected until later, USAID is required

strategic-level performance indicators, a necessary precursor to USAID's other monitoring and evaluation tasks. Importantly, missions are required to report indicator targets and results to USAID headquarters as part of the agency's performance plan reports, which USAID, in collaboration with State, must submit to the Congress each year.²³

Since 2004, USAID has produced three performance management plans for Afghanistan, but only two were created after the agency established more specific performance measurement guidance in ADS 203. One covered 2011 to 2015, and the other covered 2015 to 2018. These plans identify 18 total strategic-level performance indicators concerning southern Afghanistan's energy sector. Four of the indicators appear in both plans, and each plan also has seven unique indicators. For each indicator, we reviewed whether USAID established a baseline and reported targets and results for all years in which the indicator was in use. Based on our analysis, we determined that USAID did not fully meet the requirements of ADS 203. Specifically, USAID did not establish baselines for 7 of its 18 indicators, did not set targets for 11 of the indicators, and did not report results for 9 of the indicators.

Table 2 lists these 18 strategic-level performance indicators included in USAID's two performance management plans for Afghanistan, and shows whether the agency met ADS 203 requirements to collect and report baseline, target, and result data for each indicator.

to document when and how the baseline data will be collected. Targets are the specific, planned results to be achieved within a specific timeframe, usually 1 year.

²³ USAID, ADS Chapter 203, "Assessing and Learning," September 1, 2008. USAID, ADS Chapter 201, "Program Cycle Operational Policy," October 29, 2018.

Table 2 - USAID's Adherence to ADS Requirements for Performance Indicators Concerning Southern Afghanistan's Energy Sector from 2011 through 2018

PERFORMANCE INDICATOR	BASELINE	TARGETS	RESULTS
Indicators Unique to the 2011–2015 Performance Management Plan			
1. Perceived availability of electricity supply	●	●	●
2. Number of new or upgraded service connections	●	●	●
3. Percent reduction in utility technical losses	●	●	●
4. Percent reduction in utility non-technical losses	●	●	●
5. Milestones toward independent Afghan management of key energy infrastructure	●	●	●
6. Number of people receiving U.S. government-supported training in energy-related business management systems	●	●	●
7. Electrical generation capacity constructed or rehabilitated as a result of U.S. government assistance	●	●	●
Indicators Unique to the 2015–2018 Performance Management Plan			
8. Number of new residential, commercial, and government connections achieved with U.S. government assistance	●	●	●
9. Number of megawatt-hours supplied to customers	●	●	●
10. Number of days of U.S. government-funded technical assistance in technical energy fields provided to counterparts or stakeholders	●	●	●
11. Percent of power line transmission infrastructure completed to date	●	●	●
12. Percent of substation infrastructure completed to date	●	●	●
13. Number of substations complete as a result of U.S. government assistance	●	●	●
14. DABS collected revenue as a percentage of total cost	●	●	●
Indicators Common to Both Performance Management Plans			
15. Annual electricity produced or purchased in megawatt-hours by national electric utility	●	●	●
16. Weighted average cost of electric energy supplied to the grid	●	●	●
17. Number of kilometers of transmission and distribution lines installed/upgraded as a result of U.S. government assistance	●	●	●
18. Number of people with increased access to modern energy services as a result of U.S. government assistance	●	●	●

Requirement Met ● Requirement Not Met ●

Source: SIGAR analysis of USAID data.

Most notably, USAID reported incomplete results for half of its indicators. USAID consistently supplied results from 2011 to 2017 for one indicator: number of people with increased access to modern energy services. For eight indicators, USAID reported results for the years in which those indicators were in use. Three of these indicators were in the 2011-2015 plan, while the other five indicators were in the 2015-2018 plan. However, for the remaining nine indicators, USAID did not collect results for all years in which the indicator was in use. For two of these indicators—perceived availability of electricity supply and annual electricity produced or purchased in megawatt-hours by the national electric utility—USAID referred us to The Asia Foundation and DABS, respectively, for these data.²⁴

USAID officials acknowledged that the agency did not collect and report data across all years for the indicators we examined, citing a number of reasons, including Afghanistan's unique and difficult operating environment, changes in USAID's internal policies over time, and frequent turnover in project staff. Additionally, USAID

²⁴ The Asia Foundation is a nonprofit international development organization committed to improving the lives of people in Asian countries.

officials said many of their strategic-level indicators would not be applicable until all of the agency's projects are complete, a reality they said is typical of infrastructure projects.

Because of this, USAID officials described other ways in which the agency monitored and evaluated performance. They said the agency monitored project implementation through technical assessments at key phases of program development; construction schedules that, when completed, would enable the delivery of intended outputs or services; and third-party monitors. To this end, USAID officials cited the 36 contract milestones across its projects that the agency completed, leading to the successful installation of unit 2. However, this type of monitoring occurred at the project level and does not indicate the extent to which USAID made progress on its strategic-level performance indicators.

Without baseline data, targets, and results for its strategic-level performance indicators, USAID cannot determine the full extent to which its efforts to increase electric power generation and transmission from the Kajaki Dam have supported expanded sustainable physical infrastructure and agriculture-led economic growth.

DOD Did Not Collect or Report Performance Data on Its Projects Related to the Kajaki Dam

DOD did not collect or report performance data to determine whether its efforts to generate and transmit electric power from the Kajaki Dam are contributing toward achieving U.S. strategic objectives of creating sustainable jobs or supporting socioeconomic development because the department was not required to do so.

Among the 11 infrastructure projects DOD was responsible for, the department used funds from CERP for 5 projects and funds from the Afghanistan Infrastructure Fund for 6 projects. DOD's Financial Management Regulation provides guidance to the department on monitoring and evaluation for CERP-funded projects.²⁵ It requires that DOD include performance indicators in its evaluation of CERP projects. Additionally, as part of the department's quarterly reports to Congress, the regulation requires DOD to submit narrative reports describing how the department intends to evaluate these projects against broader goals and then determine whether these projects assisted the United States carry out its strategy. In April 2018, we reported that DOD identified project goals and indicators for all CERP projects worth \$50,000 or more, including the five projects related to the Kajaki Dam.²⁶ However, we found that the department did not report on whether these projects were achieving stated goals, nor did DOD's narrative reports consistently address how the results of CERP projects assisted the United States in carrying out its strategy.

The National Defense Authorization Act (NDAA) provides guidance for DOD's projects funded with the Afghanistan Infrastructure Fund. However, DOD concluded that at no time was it required to monitor and evaluate its projects' progress against U.S. strategic objectives. It reached this conclusion even though section 1273 of the Fiscal Year (FY) 2013 NDAA required it to report semiannually on the stated goals for three of its six Afghanistan Infrastructure Fund projects and the actions taken to verify whether stated goals were being met, among other things. As a result, DOD did not monitor and evaluate the extent to which its projects contributed to the U.S. government's strategic objectives in Afghanistan, such as creating sustainable jobs and supporting socioeconomic development.²⁷

²⁵ DOD, *Financial Management Regulation 7000.14-R*, Volume 12, Chapter 27, "Commander's Emergency Response Program (CERP)," January 2009.

²⁶ SIGAR, *Commander's Emergency Response Program: DOD Has Not Determined the Full Extent to Which Its Program and Projects, Totaling \$1.5 Billion in Obligations, Achieved Their Objectives and Goals in Afghanistan from Fiscal Years 2009 through 2013*, SIGAR Audit 18-45, April 30, 2018.

²⁷ U.S. Embassy Kabul and U.S. Forces-Afghanistan, *United States Government Integrated Civilian-Military Campaign Plan for Support to Afghanistan*, August 10, 2009; U.S. Embassy Kabul and U.S. Forces-Afghanistan, *United States Government Integrated Civilian-Military Campaign Plan for Support to Afghanistan*, Revision 1, February 2011; U.S. Embassy, Kabul,

Despite DOD not having requirements to collect and report performance data on its projects to generate and transmit electric power from the Kajaki Dam, both State and DOD acknowledge the importance of these projects to U.S. strategic objectives in Afghanistan. According to State, improving access to electric power in southern Afghanistan, including increasing power generation and transmission from the Kajaki Dam, is strategically important because these efforts are intended to undermine the insurgency and promote stability. Similarly, DOD told us these efforts are important to achieving counterinsurgency and socioeconomic development objectives. By not collecting or reporting performance data on its projects related to the Kajaki Dam, particularly the ongoing SEPS Completion Phase I – Sangin to Lashkar Gah project, DOD’s ability to assess the extent to which the projects are achieving these objectives is limited.

DOD could not provide us with the performance data needed to determine whether its projects are contributing toward creating sustainable jobs and supporting socio economic development for two reasons. First, according to DOD officials, because the department’s SEPS projects are part of a larger system, the department cannot evaluate performance or assess what it has achieved until SEPS is complete and operational. Instead, DOD developed and tracked project-level indicators such as construction milestones. Second, as noted in the joint statement, once the projects are complete, the department intends for USAID to assess the performance of the transmission system, citing USAID’s expertise in Afghanistan’s energy sector. In the joint statement, State, USAID, and DOD discussed USAID’s intention to conduct a survey to assess the impact of U.S. efforts to increase access to electric power in southern Afghanistan. However, the statement does not mention what, if any, role DOD will have in the assessment, given its responsibility for the active SEPS project.

Other Data Sources Suggest that U.S. Efforts Are Making Progress toward Improving Access to Electric Power in Southern Afghanistan

In July 2018, we identified several performance indicators for all of DOD’s Kajaki Dam projects in Afghan Development Reports—official reports required for each activity funded with CERP—and congressional notification letters for the Afghanistan Infrastructure Fund, and we asked DOD to give us performance data for each project. In response, DOD submitted a joint statement with State and USAID that did not include any of those data. However, in the statement, USAID and DOD did provide five supplemental indicators it used to track efforts in southern Afghanistan’s energy sector with data reported by DABS:

1. *Power generation capacity at the Kajaki Dam* increased from about 9 megawatts in 2003 to about 51 megawatts in 2018.
2. *Amount of energy generated at the dam* increased from 119 gigawatt-hours in 2003 to more than 250 gigawatt-hours in 2018.
3. *Number of legitimate customer connections to the power grid* increased from about 33,000 in 2005 to more than 100,000 in 2018.
4. *Average hours of power received by utility customers* increased from 10 hours of power every 2 days in early 2016 to more than 22 hours of power every 2 days in late 2016.
5. *Afghan government revenue collected from Kajaki-generated energy* increased from about \$1 million with about 60 percent commercial losses in 2003 to about \$5 million in 2018 with about 50 percent commercial losses.

The data for these indicators span the years 2003 to 2018 and appear to reflect positive trends. For example, the Kajaki Dam’s power generation capacity and the amount of energy it generated generally increased during these years. However, data gaps across the indicators remain, and USAID and DOD did not provide targets for any year that they cited data. In addition, the agencies did not explain how these indicators relate to the 18 unique indicators identified in USAID’s performance management plans. Two of the five supplemental

and U.S. Forces-Afghanistan, *Civil-Military Strategic Framework*, March 2012; and U.S. Embassy Kabul and U.S. Forces-Afghanistan, U.S. *Civil-Military Strategic Framework for Afghanistan*, Revision 2, August 2013.

indicators—power generation capacity in megawatts and the number of legitimate residential and commercial connections—appear similar to two of the indicators cited in the performance management plans, but the units of measurement and results differ.

Because USAID and DOD did not consistently collect and report complete performance data on their projects to generate and transmit electric power from the Kajaki Dam, we reviewed data from DABS on electric output from the dam and the results of a survey by The Asia Foundation of Afghans' perception of access to electric power in southern Afghanistan.²⁸ Both sets of data suggest that USAID's and DOD's infrastructure projects to increase electric power generation and transmission from the Kajaki Dam have not yet achieved their intended results.

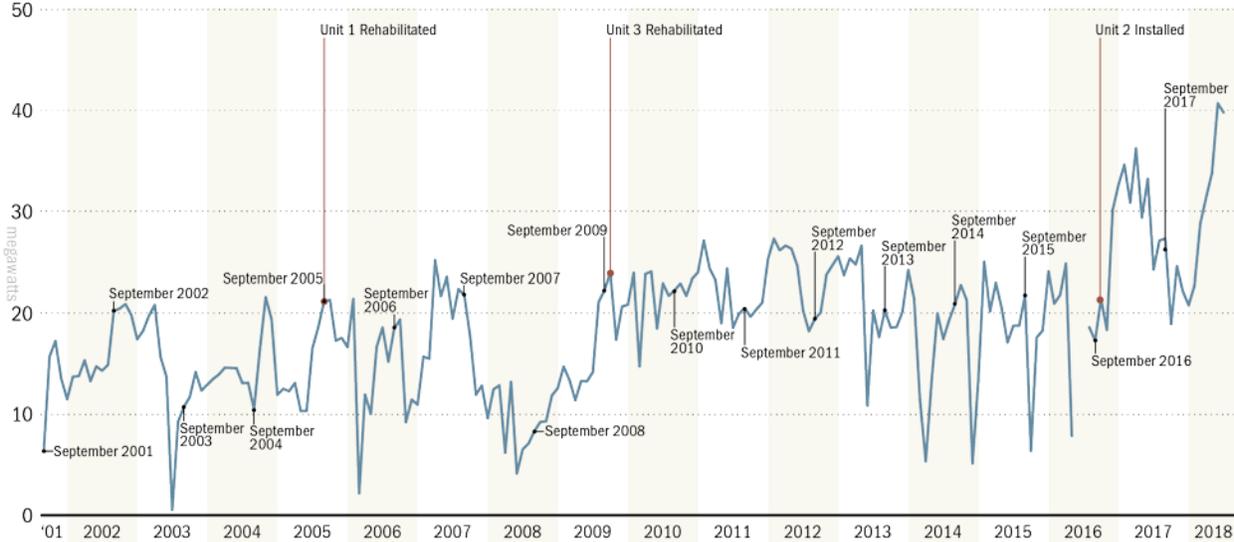
Based on DABS's data, the Kajaki Dam has not generated more than 41 megawatts of power in any month of operation from September 2005, when the rehabilitation of turbine generator unit 1 was completed, to September 2018, as shown in Figure 3. According to State, USAID, and DOD's joint statement, U.S. officials consider the amount of power generated at the Kajaki Dam to be a hard-won success.²⁹ The data indicate that the dam's average power generation output of about 41 megawatts in June 2018 exceeded the 15 megawatts it generated in 2004, with fluctuations caused by the operational status of the turbine generator units installed at the hydroelectric plant and the volume of water in the dam's reservoir.³⁰ However, officials from both agencies acknowledge that Afghans will not fully realize the benefits of the dam's increased power output until the SEPS projects are complete.

²⁸ Each year, The Asia Foundation releases *A Survey of the Afghan People*, a public opinion survey that provides a longitudinal portrait of Afghans' evolving perceptions on key issues. To assess the reliability of the data, we reviewed the methodological notes found in each public release of the survey results and then interviewed foundation officials to determine what steps they took to detect and exclude poor quality data. We determined the data were sufficiently reliable to measure whether USAID's and DOD's efforts were contributing to improving access to electric power in southern Afghanistan.

²⁹ Joint Statement from State, USAID, and DOD, "SIGAR 115A Inquiry Response, Electric Power Generation & Distribution in Southern Afghanistan," October 5, 2018.

³⁰ According to State, the volume of water in the dam's reservoir can vary because of seasonal droughts and water mismanagement.

Figure 3 - Kajaki Dam Average Electric Power Generation Output from September 2001 through July 2018



Source: DABS, September 2018.

Note: The dip in power generation in 2016 represents two scheduled outages to install equipment upgrades and finish installing turbine generator unit 2. The first outage took place from July 23 through 25. The second outage took place from July 26 through September 20. During the second outage, the Kajaki Dam produced power at 50 percent of normal levels from July 26 through August 11 and did not produce any power for the remainder of the outage. Additionally, seasonally low water levels between October 2016 and March 2017 resulted in decreased power output.

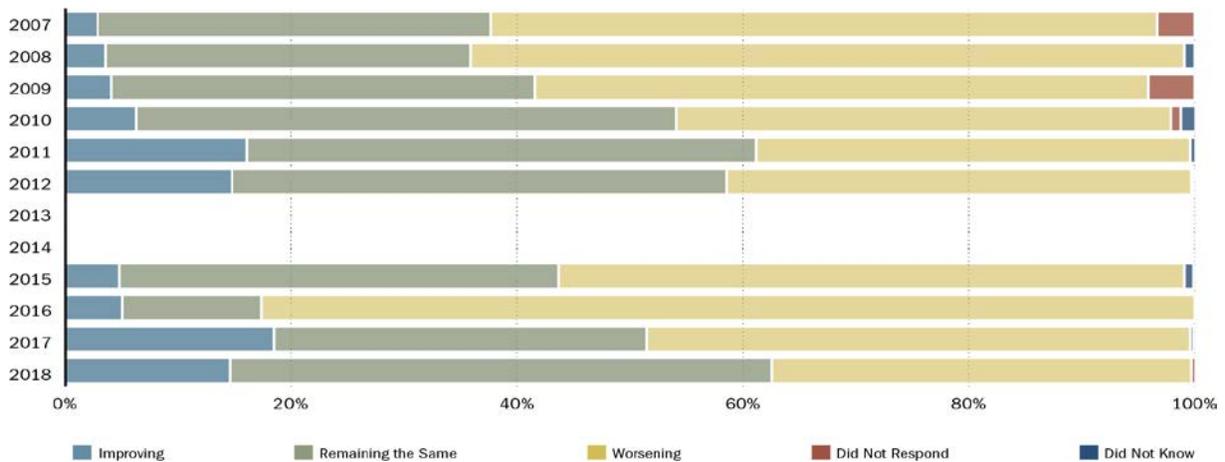
In lieu of data on the amount of power being transmitted from the Kajaki Dam to Helmand and Kandahar provinces, we analyzed data from The Asia Foundation’s survey of Afghans’ perception of electricity supply. The survey results show that although Afghans in Helmand and Kandahar reported mixed perceptions of electricity supply over time, the number who reported improved access to electricity has increased since 2015 (see figures 4 and 5). According to USAID and DOD officials, The Asia Foundation’s survey data do not show the impact of U.S. efforts to improve access to electric power in southern Afghanistan because U.S. projects are still incomplete.

According to an interagency review of the Afghanistan Infrastructure Fund produced jointly by State, USAID, and DOD in FY 2014, southern Afghanistan has a “critical and immediate need for electricity.”³¹ These agencies further concluded that satisfying this need has implications for “increased stability” in the region and “Afghan goodwill toward their government.”³² This interagency group warned that if increased access to electric power is not attained, the U.S. government can expect Afghans to harbor negative views of the Afghan government and perceptions that local resources are being misused, which could negatively affect U.S. efforts in southern Afghanistan.

³¹ State, USAID, and DOD, "Afghanistan Infrastructure Fund (AIF) FY14 Program," n.d., p. 15.

³² State, USAID, and DOD, "Afghanistan Infrastructure Fund (AIF) FY14 Program," n.d., p. 15.

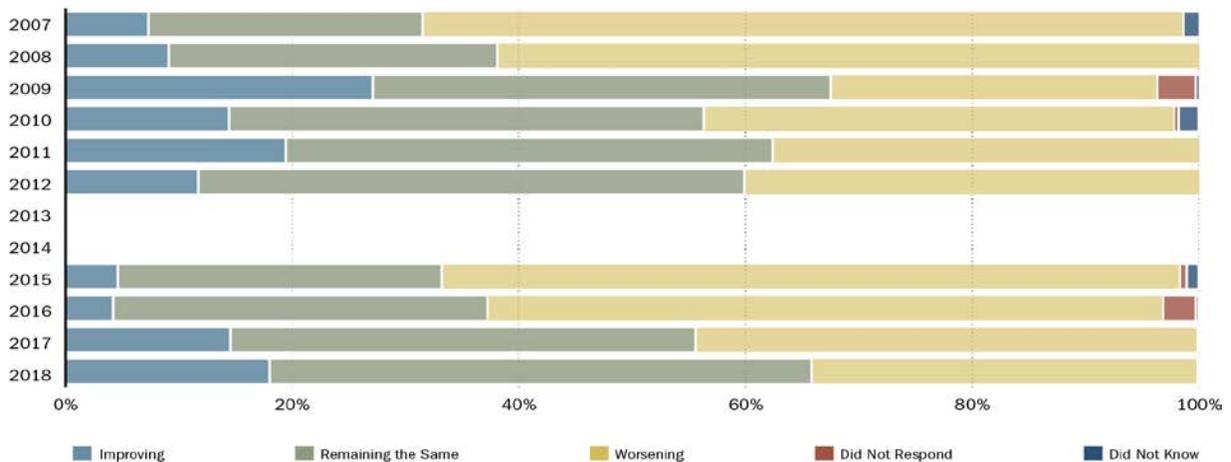
Figure 4 - Survey of the Afghan People: Perceptions of Electricity Supply in Helmand Province from 2007 through 2018



Source: The Asia Foundation, *A Survey of the Afghan People*, 2007 through 2018.

Notes: The Asia Foundation surveys asked recipients, “Compared to one year ago, would you say that the situation for your household has gotten better, remained the same, or gotten worse with respect to electricity supply?” Represented above are the five response categories: (1) improving, which comprises “better” survey results, (2) worsening, which comprises “worse” survey results, (3) remaining the same, which comprises “same” survey results, (4) did not respond, which comprises “refused” survey results, and (5) did not know, which comprises “don’t know” survey results. The foundation first reported the data in 2007 and did not ask these survey questions in 2013 and 2014.

Figure 5 - Survey of the Afghan People: Perceptions of Electricity Supply in Kandahar Province from 2007 through 2018



Source: The Asia Foundation, *A Survey of the Afghan People*, 2007 through 2018.

Notes: The Asia Foundation surveys asked recipients, “Compared to one year ago, would you say that the situation for your household has gotten better, remained the same, or gotten worse with respect to electricity supply?” Represented above are the five response categories: (1) improving, which comprises “better” survey results, (2) worsening, which comprises “worse” survey results, (3) remaining the same, which comprises “same” survey results, (4) did not respond, which comprises “refused” survey results, and (5) did not know, which comprises “don’t know” survey results. The foundation first reported the data in 2007 and did not ask these survey questions in 2013 and 2014.

USAID'S AND DOD'S ASSESSMENTS RAISE CONCERNS ABOUT DABS'S CAPACITY TO SUSTAIN INFRASTRUCTURE PROJECTS TO GENERATE AND TRANSMIT ELECTRIC POWER FROM THE KAJAKI DAM

USAID and DOD Determined that DABS Would Be Able to Sustain Infrastructure Projects Related to Kajaki Dam Once Complete Despite Ongoing Concerns About DABS's Capacity

Section 1273 of the FY 2013 NDAA prohibits USAID, State, and DOD from obligating or expending funds on certain infrastructure projects in Afghanistan, unless the obligating or expending agency assesses the necessity and sustainability of the project.³³ The agencies are authorized to waive this requirement if the “Secretary or Administrator, as the case may be, determines that the project is in the national security, diplomatic, or humanitarian interests of the United States.” The requirements of section 1273 apply to the agencies’ projects to generate and transmit electric power from the Kajaki Dam and the Afghan government, specifically DABS. USAID conducted one assessment for its SEPS Completion II project in 2015, whereas DOD combined its assessments of the SEPS Completion Phase 1 – Sangin to Lashkar Gah, SEPS Completion Phase I – Civil Works, and SEPS Completion Phase II – Maiwand to Durai projects into two system-level assessments of SEPS. The department completed the first assessment in November 2013 and the second in September 2015. According to USAID and DOD, they met the FY 2013 NDAA sustainability requirements by completing these assessments.

One element of the necessity and sustainability assessments mandated by section 1273 requires the agencies to assess “whether the host government has the capacity (in both financial and human resources) to maintain and use the project after completion.” In each assessment, USAID and DOD determined that DABS was becoming a reliable partner while acknowledging that, at the time of assessment, the utility faced challenges inherent in building and sustaining critical infrastructure. The agencies also determined that DABS might or could possess the capacity to sustain the four projects in the future based on the utility’s trajectory and data available at the time of each assessment. For example, USAID reported that it would be spending \$836.5 million through its Power Transmission Expansion and Connectivity project, which aims to expand, strengthen, and integrate the North East Power System with SEPS and continue the agency’s capacity-building efforts at DABS.³⁴ According to USAID’s assessment in 2015, the agency believed that this project could transform DABS into a financially sustainable national electric utility with effective commercial and technical management.³⁵ In its assessment, DOD cited progress that DABS made from 2013 through 2015. In 2013, DOD reported that DABS had increased the number of its customers from 786,000 to 949,000, increased its revenue from \$137 million to \$213 million, and reduced energy losses in Kabul to 35 percent, while its 6,000 employees maintained existing and donor-funded electrical infrastructure worth \$4.8 billion.³⁶ In 2015, DOD reported that DABS had increased the number of its customers to 1.1 million, increased its revenue to \$246 million, and

³³ National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239, §1273. Capital infrastructure projects covered by the assessment and reporting requirements of section 1273 are (1) projects with an estimated value of more than \$10 million that directly support the capacity of indigenous security forces; (2) projects funded by State or USAID with an estimated value of more than \$5 million; and (3) any other project with an estimated value of more than \$2 million.

³⁴ SIGAR is conducting a separate audit and two inspections of USAID’s Power Transmission Expansion and Connectivity project.

³⁵ USAID, *NDAA Section 1273 PTEC Assessment - Southeast Power System Completion: Afghanistan Infrastructure Fund Assessment*, 2015.

³⁶ DOD, *Southeast Power System Completion: Musa Qalah and Other Connections Afghanistan Infrastructure Fund Assessment*, November 19, 2013.

reduced energy losses to about 25 percent, while its 7,000 employees maintained existing and donor-funded electrical infrastructure worth \$4.8 billion.³⁷

We have repeatedly raised concerns about DABS's capacity to sustain projects.

- In January 2010, we found that the management and operational capacity of DABS, which incorporated in 2008, was extremely weak. We reported, "According to U.S. Forces Afghanistan officials, the management and operational capacity of the [Afghan] Ministry of Energy and Water and [DABS] . . . is extremely weak due to an aging labor force and a shortage of educated young people to enter the skilled labor, technical, and professional ranks."³⁸
- In July 2012, we reported that DABS possessed questionable capacity and lacked the necessary resources—financial and otherwise—to sustain projects funded by the Afghanistan Infrastructure Fund, and that USAID, DOD, and State officials all questioned DABS's capacity to sustain FY 2011 Afghanistan Infrastructure Fund projects.³⁹
- In April 2015, we asked about the status of U.S. government efforts to develop a reliable, sustainable source of electric power for Kandahar City after September 30, 2015. In response, State officials said USAID would continue to support DABS with training and technical assistance, but ultimately the responsibility for Kandahar's electric power supply was with the Afghan government.⁴⁰
- Finally, in October 2017, we reported that DABS had not successfully maintained diesel-fueled generators or purchased fuel for the Kandahar Bridging Solution after DOD subsidies ceased in September 2015.⁴¹ As a result, we recommended that USAID and DOD develop contingency sustainment plans that specify how and whether the U.S. government or other international donors intend to ensure that Afghanistan Infrastructure Fund power sector projects are sustained in the event that DABS is unable to operate and maintain these projects. According to USAID and DOD, the development of such plans would create a disincentive for DABS and the Afghan government to operate and maintain the projects. USAID added that neither it nor DOD plans to fund the project in perpetuity. While we appreciated the agencies' decisiveness, we maintained that developing a contingency plan for each project would nonetheless be a reasonable way of taking into account the possibility that circumstances might change to necessitate continued U.S. government support.

USAID Paused Its On-Budget Assistance to DABS in 2017 and Conducted a New Assessment of Afghanistan's Energy Sector that Identified Serious Concerns with DABS's Capacity

In October 2017, USAID deemed it necessary to further examine its approach to supporting Afghanistan's energy sector. The agency made this determination because of weaknesses in DABS's human and financial operations, specifically related to procurement inefficiencies, integrity, and shortcomings in the utility's management and oversight of construction activities related to ongoing and planned power projects. USAID also paused funding more than \$300 million in on-budget assistance to DABS. The agency had committed \$55 million of this funding to the SEPS II Completion project.

³⁷ DOD, *Southeast Power System Completion Afghanistan Infrastructure Fund Project Assessment*, September 12, 2015.

³⁸ SIGAR, *Afghanistan Energy Supply Has Increased but An Updated Master Plan Is Needed and Delays and Sustainability Concerns Remain*, SIGAR Audit 10-4, January 15, 2010, p. 8.

³⁹ SIGAR, *Fiscal Year 2011 Afghanistan Infrastructure Fund Projects Are behind Schedule and Lack Adequate Sustainment Plans*, SIGAR Audit 12-12, July 30, 2012.

⁴⁰ SIGAR, "Inquiry Letter: Reliable and Sustainable Power for Kandahar City," SIGAR 15-47-SP, April 17, 2015.

⁴¹ SIGAR, *Afghanistan Infrastructure Fund: Agencies Have Not Assessed Whether Six Projects That Began in Fiscal Year 2011, Worth about \$400 Million, Achieved Counterinsurgency Objectives and Can Be Sustained*, SIGAR 18-10, October 31, 2017.

Following its decision to pause on-budget assistance, USAID conducted a technical assessment of its portfolio of infrastructure projects in Afghanistan's energy sector that included a review of the Afghan government's capacity to sustain these projects. USAID finished this assessment in July 2018 and determined that DABS lacked the necessary human and financial resources to effectively maintain many of the projects previously completed and transferred to it. For example, USAID found that DABS faced human resources challenges, such as high staff turnover, three different chief executive officers, and delays related to the utility's inexperience managing large-scale infrastructure. In addition, the assessment noted that DABS was commercially unviable and a poorly functioning utility. As a result, USAID concluded that previously planned commercialization and other on-budget assistance activities were no longer viable with DABS.⁴² This conclusion came almost 3 years after the USAID's and DOD's 2015 sustainment assessments, in which they projected that DABS would possess sufficient capacity to sustain these projects in the future.

USAID officials said that although they had serious concerns about DABS's procurement abilities, commercial viability, integrity, and management and oversight of construction activities, the agency considered—and still considers—procurement and construction to be materially different capabilities from sustainment. The officials said DABS has repeatedly shown its ability to maintain its electric power transmission and distribution system. In its comments on a draft of this report, USAID stated that based on DABS's track record, there is no reason to believe that the utility will not be able to operate and maintain additional infrastructure.

In the July 2018 technical assessment, USAID listed potential options to strengthen DABS's corporate governance structure and improve the effectiveness of its capacity-building support to DABS. Specifically, USAID said it would work with DABS to design and implement a capacity development road map with the following potential activities:

- Review and, if needed, amend DABS's articles of incorporation to ensure that they are aligned with relevant Afghan laws;
- Engage, and potentially adjust, the representatives on DABS's governing bodies to reduce vulnerabilities to corruption within the power sector; and
- Identify vocational, technical, and higher education training programs, and provide advisory services.

In addition to completing the technical assessment, USAID decided to suspend its direct assistance funding to DABS indefinitely and shifted its planned project, SEPS Completion II, off budget with plans to award its own contract for the project in February 2019.

According to USAID, the Afghan government has taken steps to increase output from the Kajaki Dam and enhance the DABS's operation and maintenance capability. In October 2018, the Afghan Ministry of Energy and Water entered into a private agreement with 77 Construction Company to increase the Kajaki Dam's power generation capacity to 150 megawatts by installing four additional turbines at the dam and raising the dam's reservoir height. According to USAID officials, the Afghan government awarded a contract to 77 Construction Company in November 2018 to take over the operation and maintenance of the Kajaki Dam's power plant, as part of a long-term implementation agreement with the Ministry of Energy and Water and a power purchase agreement with DABS. USAID officials said this contract demonstrates that DABS is taking the initiative to manage its assets more economically and efficiently.

Despite more than 14 years of U.S.-funded efforts to enhance the capacity of DABS, USAID's July 2018 technical assessment calls into question DABS's suitability for on-budget assistance and its ability to sustain large-scale infrastructure, such as the Kajaki Dam and SEPS. It remains to be seen what impact USAID's and DABS's efforts will have on the utility's capacity to sustain the dam and SEPS once they are complete.

⁴² See USAID, *Afghanistan Energy Sector Technical Assessment Final Report*, July 21, 2018. In this assessment, USAID referenced our October 2017 report, which discussed DABS's inability to sustain the Kandahar Bridging Solution.

CONCLUSION

USAID's and DOD's efforts to improve access to reliable, affordable power in southern Afghanistan span 15 years—nearly as long as the war effort itself. In that time, U.S. agencies have spent about \$775 million to increase the electric power generation capacity at the Kajaki Dam in Helmand Province to 51.5 megawatts, provide short-term, diesel-fueled power generation, and improve the delivery of power to customers in Helmand and Kandahar provinces through SEPS. However, many of these projects were delayed mainly because of insecurity in the areas surrounding the dam, and the construction of SEPS is still ongoing.

Furthermore, the agencies collected and reported incomplete performance data on their projects. USAID did not fully adhere to agency requirements by collecting and reporting incomplete baselines, targets, and results for its strategic-level indicators for its energy projects in southern Afghanistan, including projects related to the Kajaki Dam and SEPS. This limited the agency's ability to measure the projects' contributions to expanding sustainable physical infrastructure and agriculture-led economic growth. DOD did not collect and report any strategic-level performance data for its projects because it was not required to do so. By not consistently collecting and reporting complete performance data, the agencies do not know the extent to which their projects, such as DOD's active SEPS Completion Phase I – Sangin to Lashkar Gah project, are making progress toward increasing Afghans' access to electricity in southern Afghanistan or are contributing to strategic objectives in a region long recognized as critical to the U.S. mission in the country.

However, available data suggest that progress has been made in improving the generation and delivery of electric power from the Kajaki Dam. For example, according to DABS's data, the dam's average power generation output increased from about 15 megawatts in 2004 to about 41 megawatts in June 2018. In addition, according to The Asia Foundation, the number of Afghans surveyed in Helmand and Kandahar provinces who reported improved access to electricity has increased since 2015.

Over the long term, whether benefits of USAID's and DOD's projects are realized depends on DABS's ability to sustain critical infrastructure in southern Afghanistan. However, serious concerns remain about the utility's ability to sustain these projects. To its credit, USAID recognized DABS's capacity weaknesses, paused all direct assistance to the utility, and finalized a technical assessment of its portfolio of infrastructure projects in Afghanistan's energy sector in 2018. This assessment identified three potential actions the agency and DABS could take to build DABS's capacity as part of a capacity-building roadmap. Despite this, USAID and DABS have not yet developed or implemented the roadmap.

RECOMMENDATIONS

To ensure that USAID has the requisite performance data to monitor and evaluate whether its infrastructure projects to increase power generation and transmission from the Kajaki Dam are contributing to its strategic objectives, we recommend the USAID Mission Director for Afghanistan:

- 1. Direct personnel responsible for assessing the extent to which USAID has met its strategic-level performance indicators concerning southern Afghanistan's energy sector to adhere to ADS 201 requirements to collect and report baselines, targets, and results for each indicator, and evaluate the extent to which its projects related to the Kajaki Dam are contributing to USAID's strategic objectives for its energy projects in Afghanistan.**

To improve DABS's ability to sustain the U.S. government's investments in projects to increase power generation and transmission from the Kajaki Dam, we recommend the USAID Mission Director for Afghanistan:

- 2. Work with DABS to complete and begin implementing the capacity development roadmap discussed in USAID's July 2018 technical assessment by June 30, 2019.**

AGENCY COMMENTS

We provided a draft of this report to USAID and DOD for review and comment. The USAID Mission for Afghanistan (USAID/Afghanistan) and the Office of the Assistant Secretary of Defense for Asian and Pacific Security Affairs provided written comments, which are reproduced in appendices III and IV, respectively. They also provided technical comments, which we incorporated into this report, as appropriate.

USAID/Afghanistan concurred with the intent of the first recommendation and concurred with the second recommendation.

Regarding our first recommendation, USAID described multiple efforts that it says collectively fulfill the intent of the recommendation. Specifically, USAID said it

- conducts multi-tiered monitoring, which provides continuous feedback and informs course corrections;
- revised its performance monitoring mission order twice to clarify the guidance in ADS 201 and guide the use of AfghanInfo, which was partly designed to ensure that the reporting of baselines, targets, and results entered by implementing partners and other stakeholders;
- is currently revising its internal project design guidance to refine activity management roles and delineate responsibility for adherence to ADS 201; and
- enhanced trainings for Contracting Officer's and Agreement Officer's Representatives on data collection and reporting requirements.

In addition, USAID/Afghanistan said it plans to evaluate the extent to which projects related to the Kajaki Dam contribute to the agency's strategic objectives for its energy projects in Afghanistan. It said it will conduct an assessment of SEPS after the Ghazni-to-Kandahar transmission line and substations are complete and energized, which are expected to occur in 2022. We give USAID credit for taking these steps to ensure continuous performance monitoring and evaluation of its projects against its strategic objectives. We will continue to monitor the agency's ongoing and planned efforts until they are completed.

Regarding our second recommendation, USAID/Afghanistan said before it implements the capacity-development road map, it retained the U.S. Energy Association to complete an assessment on DABS's corporate governance to identify strategic areas of focus for future USAID assistance to improve the utility's management and operations. According to USAID/Afghanistan, the association will complete the assessment on or about June 30, 2019. USAID/Afghanistan said it can refine and begin implementing the road map with DABS after it reviews the assessment. We are encouraged by USAID's actions and will continue to monitor the agency's efforts to implement the road map.

In our draft report, we recommended that the USAID Mission Director for Afghanistan develop a contingency sustainment plan for the SEPS Completion II project that specifies how it will be sustained should DABS be unable to develop the capacity needed to operate and maintain the project. USAID/Afghanistan did not concur with this recommendation, stating that there is no evidence that DABS has not been able to operate and maintain its national transmission system to date. The mission added, "... it would be counterproductive to the U.S. goals of reinforcing the legitimacy of the Afghan Government and increasing Afghan progress on the Journey to Self-Reliance if the U.S. Government were to develop contingency sustainment plans for DABS. DABS and the Afghan Government are responsible for the sustainment of the overall power system in the country." Although we continue to have concerns about DABS's capacity to maintain the Kajaki Dam and SEPS, we acknowledge USAID's position that it does not intend to develop a sustainment plan for the SEPS Completion II project and removed this recommendation from the report.

Also in our draft report, we recommended that the Under Secretary of Defense for Policy define the department's roles and responsibilities for collecting and reporting strategic-level performance data on its active SEPS Completion Phase I – Sangin to Lashkar Gah project to USAID for the agency's planned survey to assess the impact of U.S. efforts to increase access to electric power in southern Afghanistan. The Office of the

Assistant Secretary of Defense for Asian and Pacific Security Affairs concurred with the recommendation and said the data needed for the assessment will come from DABS and surveys USAID is planning to implement. The office said DOD has no separate data to provide. Based on this response, we closed the recommendation as implemented and removed it from this final report.

APPENDIX I - SCOPE AND METHODOLOGY

This report provides the results of SIGAR's audit of the U.S. Agency for International Development's (USAID) and Department of Defense's (DOD) efforts to increase the generation and transmission of electrical power from the Kajaki Dam since 2004. Specifically, the objectives of this audit were to determine the extent to which (1) USAID's and DOD's projects to increase the generation and transmission of electric power from the Kajaki Dam adhered to their original schedules; (2) USAID and DOD assessed whether the projects are contributing to the achievement of the U.S. government's and USAID's strategic objectives; and (3) USAID and DOD have assessed Da Afghanistan Breshna Sherkat's (DABS) ability to sustain these projects.

To determine the extent to which USAID's and DOD's projects to increase the generation and transmission of electric power from the Kajaki Dam adhered to their original schedules, we requested a list of all projects related to increasing the generation and transmission of electric power from the dam since 2001, and all associated contract and authorizing documents. Based on this information, we identified 17 projects that were within the scope of this audit: 6 for USAID and 11 for DOD.⁴³ We then reviewed USAID and DOD contract documents, including the contracts, modifications, notices to proceed, and closeout documents; implementation letters; congressional notification letters; progress reports; and final reports to determine original and actual schedules for each project, and identify the reasons for any schedule changes. We compared each project's original period of performance, defined by the planned start and end dates in the contract documents, to the actual period of performance to determine the extent to which each project met its original schedule. One exception to this was the second phase of the Kandahar Bridging Solution, which was funded by the Afghanistan Infrastructure Fund. Because DOD issued a series of contracts for this portion of the Kandahar Bridging Solution, each with varying periods of performance, we defined the original and actual schedules for this project according to Afghanistan Infrastructure Fund program reports. Additionally, we interviewed officials from USAID, DOD, U.S. Forces-Afghanistan, the U.S. Army Corps of Engineers, and DABS to obtain updates on the project schedules.

To determine the extent to which USAID and DOD assessed whether the projects are contributing to the achievement of the U.S. government's and USAID's strategic objectives, we reviewed both agencies' approaches to measuring the performance of their infrastructure projects to increase the generation and transmission of electrical power from the Kajaki Dam. We reviewed agency policies, guidance, and other documents to determine what requirements, if any, existed for them to assess the performance of these projects. For USAID, we reviewed Automated Directives System (ADS) 203, "Assessing and Learning," and ADS 201, "Program Cycle Operational Policy," which requires that USAID missions develop performance management plans that identify strategic objectives for their program, along with indicators, baselines, and targets for each objective.⁴⁴ We reviewed two of USAID's performance management plans that would have had to meet ADS 203 requirements: (1) *U.S. Foreign Assistance for Afghanistan Post Performance Management Plan-2011-2015* and (2) *Afghanistan Performance Management Plan: Afghanistan Implementation Plan for Transition 2015-2018*.⁴⁵ Based on our review, we identified 18 strategic-level performance indicators related to the six USAID projects in the scope of our audit. We then reviewed documentation from the USAID Mission for Afghanistan and the Office of Afghanistan and Pakistan Affairs, including spreadsheets with indicator data and copies of the agency's annual *Performance Plan and Report to the Congress*, to identify the baselines, targets, and results for these 18 indicators, and to assess the extent to which USAID met its performance

⁴³ Because USAID and DOD do not use the same definition of a project, we combined their definitions and describe a project as an effort with a defined beginning and end date, a defined scope and budget, and an identifiable purpose or set of objectives to accomplish a singular goal.

⁴⁴ USAID, ADS Chapter 203, "Assessing and Learning," September 1, 2008. USAID, ADS Chapter 201, "Program Cycle Operational Policy," October 29, 2018.

⁴⁵ USAID, *U.S. Foreign Assistance for Afghanistan Post Performance Management Plan-2011-2015*, August 28, 2010; and USAID, *Afghanistan Performance Management Plan: Afghanistan Implementation Plan for Transition 2015-2018*, July 2015.

measurement requirements. For DOD, we reviewed congressional requirements for projects funded by the Afghanistan Infrastructure Fund⁴⁶ as well as the *Financial Management Regulation*, which sets requirements for reporting on projects funded by the Commander's Emergency Response Program (CERP).⁴⁷ From USAID and DOD, we obtained data that DABS collected on electric output from the Kajaki Dam and the results of surveys by The Asia Foundation of Afghans' perception of access to electric power in southern Afghanistan.

To determine the extent to which USAID and DOD have assessed DABS's ability to sustain these projects, we analyzed sustainability requirements outlined the Fiscal Year (FY) 2013 National Defense Authorization Act (NDAA).⁴⁸ We asked USAID and DOD to identify all projects required to comply with the FY 2013 NDAA sustainability guidance, which required the agencies to assess the sustainability of these projects based on six elements. In response, USAID and DOD listed four projects. We then requested and analyzed all sustainability assessments and related documents for these four projects.⁴⁹ We analyzed each assessment to determine the extent to which the agencies fulfilled the six required elements of the FY 2013 NDAA and identified any concerns the agencies raised about DABS's capability to sustain the 17 infrastructure projects. We also reviewed prior SIGAR reports related to DABS,⁵⁰ a 2011 Ernst & Young assessment of DABS,⁵¹ and a 2018 USAID assessment of DABS.⁵²

For all of our objectives, we interviewed officials from the Department of State, DOD, USAID, the Department of the Treasury, the Government Accountability Office, the U.S. Army Corps of Engineers, and U.S. Forces-Afghanistan. In addition, we interviewed Afghan government officials from the Office of the President, the Ministry of Energy and Water, the National Procurement Authority, and DABS. We also interviewed officials from the Asian Development Bank, The Asia Foundation, Integrity Watch Afghanistan, and Tetra Tech.

We relied on computer-processed data when compiling data from DABS on electric output from the Kajaki Dam, and survey results from The Asia Foundation on Afghans' perception of access to electric power in southern Afghanistan. To assess the reliability of DABS's data, we examined the data for obvious errors, missing values, and inconsistencies. Although we did not independently verify the accuracy of DABS's data, we took a series of steps to minimize potential errors and problems. For example, we interviewed both USAID and DOD officials who confirmed that their agencies use the data and referred to them as the best available to measure power generation at the Kajaki Dam, while acknowledging the data's shortcomings. To assess the reliability of The Asia Foundation's data, we reviewed the methodological notes found in each public release of the foundation's survey results and then interviewed foundation officials to determine what steps they took to detect and exclude poor quality data. For example, officials said they use more than 35 logic tests, direct observation by field supervisors, internal checks by the foundation's central office, and quality control reviews completed by external validators to detect poor quality data. Based on our review and interviews with officials,

⁴⁶ National Defense Authorization Act for Fiscal Year 2011, Pub. L. No. 111-383, §1217.

⁴⁷ DOD, *Financial Management Regulation 7000.14-R*, Volume 12, Chapter 27, "Commander's Emergency Response Program," January 2009.

⁴⁸ National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239, §1273.

⁴⁹ DOD, *Southeast Power System Completion: Musa Qalah and Other Connections Afghanistan Infrastructure Fund Assessment*, November 19, 2013; USAID, *NDAA Section 1273 PTEC Assessment - Southeast Power System Completion: Afghanistan Infrastructure Fund Assessment*, 2015; and DOD, *Southeast Power System Completion Afghanistan Infrastructure Fund Project Assessment*, September 12, 2015.

⁵⁰ SIGAR, *Afghanistan Energy Supply Has Increased but An Updated Master Plan Is Needed and Delays and Sustainability Concerns Remain*, SIGAR Audit 10-4, January 15, 2010; SIGAR, *Fiscal Year 2011 Afghanistan Infrastructure Fund Projects Are behind Schedule and Lack Adequate Sustainment Plans*, SIGAR Audit 12-12, July 30, 2012; SIGAR, *Afghanistan's National Power Utility: Commercialization Efforts Challenged by Expiring Subsidy and Poor USFOR-A and USAID Project Management*, SIGAR 13-7, April 30, 2013; and SIGAR, *Afghanistan Infrastructure Fund: Agencies Have Not Assessed Whether Six Projects That Began in Fiscal Year 2011, Worth about \$400 Million, Achieved Counterinsurgency Objectives and Can Be Sustained*, SIGAR 18-10, October 31, 2017.

⁵¹ Ernst & Young, *Report on Pre Award Assessment of Da Afghanistan Breshna Sherkat (DABS)*, August 2011.

⁵² USAID, *Afghanistan Energy Sector Technical Assessment: Final Report*, July 21, 2018.

we determined these data sources were sufficiently reliable to measure whether USAID's and DOD's efforts to increase the generation and transmission of electric power from the Kajaki Dam were achieving their strategic objectives. We also assessed internal controls to determine the extent to which USAID and DOD monitored and evaluated their efforts' progress against strategic objectives in accordance with applicable requirements. The results of our assessment are included in the body of this report.

We conducted audit work in Washington, D.C., Bagram Air Field, and Kabul, Afghanistan, from March 2016 through May 2019, in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The audit was performed by SIGAR under the authority of Public Law No. 110-181, as amended, and the Inspector General Act of 1978, as amended.

APPENDIX II - U.S.-FUNDED PROJECTS TO INCREASE GENERATION AND TRANSMISSION OF ELECTRICITY FROM THE KAJAKI DAM, FROM 2004 THROUGH 2018

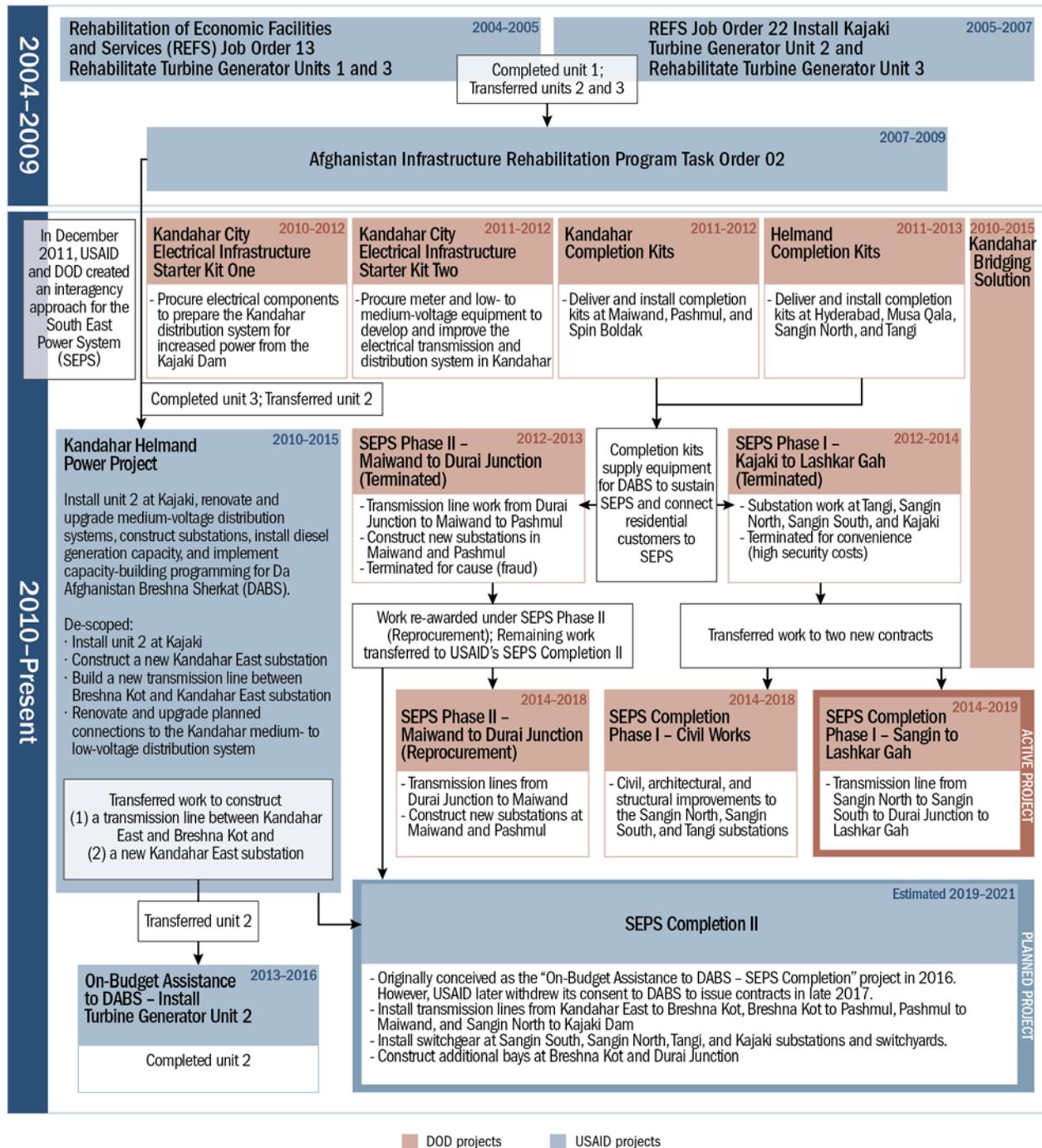
Since 2004, the U.S. Agency for International Development (USAID) and the Department of Defense (DOD) have spent \$774.8 million on 17 infrastructure projects to increase electric power generation capacity at the Kajaki Dam to 51.5 megawatts, provide short-term, diesel-fueled power generation, and improve the delivery of power to customers in Helmand and Kandahar provinces through the Southeast Power System (SEPS).⁵³ As of December 2018, 5 of USAID's projects were closed and 1 project was planned to start in 2019, while 10 of DOD's projects were closed and 1 was active.⁵⁴ In addition to these 17 infrastructure projects, USAID funded three supporting projects to build DABS's management and maintenance capacity, conduct quality assurance, and oversee its infrastructure projects. This appendix describes these projects in greater detail. Figure 6 shows how these infrastructure projects evolved over time.

⁵³ After a discussion of our preliminary audit findings in December 2018, USAID said it implemented three additional projects between 2003 and 2008 to provide diesel-fueled generators, fuel, and maintenance in major urban areas of Kabul, Kandahar, Lashkar Gah, Nangarhar, and Qalat. However, USAID could not determine how much it spent specifically related to supplementing electric power in southern Afghanistan. Therefore, we did not include these projects in our scope.

⁵⁴ We considered a project closed after the final payment is made, any disputes settled, and all administrative actions, such as changing accounting and appropriation data or correcting typographical mistakes, were completed. The contractor might not have completed all tasks initially required as part of the project at the time of closure.

Figure 6 - Evolution of USAID's and DOD's Infrastructure Projects to Increase Electric Power Generation and Transmission from the Kajaki Dam and Diesel-Fueled Power Generation from 2004 through 2018

This figure shows the evolution of USAID and DOD's 17 infrastructure projects to increase electric power generation and transmission from the Kajaki Dam from 2004 through 2018. It describes the objectives of each project and how the work evolved over time. For example, it identifies work that was de-scoped and work that was transferred from one project to another.



Source: SIGAR analysis of USAID and DOD contracts.

Closed Projects to Increase Electric Power Generation at the Kajaki Dam, Provide Short-Term, Diesel-Fueled Power Generation, and Improve the Delivery of Power through SEPS

Rehabilitation of Economic Facilities and Services Program

USAID awarded a contract for the Rehabilitation of Economic Facilities and Services (REFS) Program to the Louis Berger Group in August 2004.⁵⁵ The Louis Berger Group subsequently issued a subcontract—Job Order 13—with USAID’s approval to Voith-Siemens Hydro Power Generation Inc. to complete the work.⁵⁶ The subcontract required Voith-Siemens Hydro to refurbish turbine generator units 1 and 3 at the Kajaki Dam by February 2006 and supply any related equipment. However, to conserve funds, USAID ordered the Louis Berger Group to stop all work associated with unit 3 allowing Voith-Siemens Hydro to leave the dam by October 2005. According to the Louis Berger Group, the subcontractor finished refurbishing unit 1 by October 2005, ahead of its original schedule to refurbish both units by February 2006. USAID spent \$10.6 million on REFS Job Order 13.

USAID transferred the task of refurbishing turbine generator unit 3 and supplying the necessary equipment to REFS Job Order 22. In January 2005, the Louis Berger Group issued a subcontract to the China Machinery International Company to complete the work.⁵⁷ In addition to refurbishing Unit 3, the subcontract also required the China Machinery International Company to manufacture and install turbine generator unit 2. In June 2006, the company abandoned all activities under this job order and evacuated its personnel after insurgents cut off access to the dam, and it did not complete the required work on unit 3. USAID spent \$17 million on REFS Job Order 22.⁵⁸

Afghanistan Infrastructure Rehabilitation Program Task Order 02

In October 2007, more than a year after security issues led the China Machinery International Company to abandon work on REFS Job Order 22, the contractor returned to the dam to commence work after the British military provided security and close air support to secure the roads and area near the Kajaki Dam. In September 2008, the contractor, with support from coalition forces, successfully delivered turbine generator unit 2 to the dam. By that time, REFS Job Order 22 had expired. USAID awarded Afghanistan Infrastructure Rehabilitation Program (AIRP) task order 02 to the Louis Berger Group and Black & Veatch Special Projects Corporation Joint Venture in January 2007.⁵⁹ Initially, the scope of the task order was to provide support, survey and assessment activities, and build a new transmission system, known as the Southeast Power System (SEPS) by December 2007. In July 2007, USAID changed the scope of task order 02 to incorporate unfinished work at the Kajaki Dam, specifically refurbishing turbine generator unit 3 and installing unit 2. USAID modified the task order’s scope two more times from December 2007 to February 2008 to add dedicated rotary wing air transportation to and from the Kajaki Dam campsite and another campsite to serve as a staging base for air transportation. In October 2009, the Louis Berger Group and Black & Veatch Special Projects Corporation Joint Venture finished refurbishing unit 3 but suspended other work on the task order

⁵⁵ The Louis Berger Group is a U.S.-based global professional services firm specializing in engineering, planning, architecture, and construction management.

⁵⁶ Voith Siemens Hydro Power Generation Inc., now called Voith Hydro Inc., is a joint venture between the generator manufacturer Voith and the power and gas conglomerate Siemens. Its U.S.-based subsidiary designs, manufactures, and supplies hydro turbine equipment.

⁵⁷ The China Machinery International Company is a Chinese-based engineering and contracting services firm.

⁵⁸ According to USAID, \$6.6 million was de-subobligated from Job Order 22. However, USAID could not verify this reduction because its accounting system did not track disbursements for individual job orders under REFS. Therefore, we relied on subcontract modifications and USAID’s approval and consent letters for each subcontract action.

⁵⁹ The Louis Berger Group and Black & Veatch Special Projects Corporation entered into a joint venture to implement the Afghanistan Infrastructure Rehabilitation Program.

without installing unit 2 or building the SEPS. USAID spent \$47.6 million on AIRP task order O2, which concluded in October 2009, 22 months behind its original schedule. USAID later transferred work related to installing unit 2 to its Kandahar Helmand Power Project.

Kandahar City Electrical Infrastructure Starter Kit One

DOD awarded a contract for the Kandahar City Electrical Infrastructure Starter Kit One project to Jubaili Bros. in August 2010.⁶⁰ The contract required Jubaili Bros. to procure energy meters and low- to medium-voltage equipment needed to develop and improve the electrical power transmission and distribution infrastructure in Kandahar City by April 2011. However, DOD later de-scoped the procurement of energy meters from the contract. DOD also extended the contract's period of performance twice because manufacturing and customs delays hindered the contractor's ability to deliver the low- to medium-voltage equipment. DOD spent \$4.2 million on this contract, which concluded in March 2012, 11 months behind its original schedule.

Kandahar City Electrical Infrastructure Starter Kit Two

DOD awarded a contract for the Kandahar City Electrical Infrastructure Starter Kit Two project to Jubaili Bros. in July 2011. The contract required Jubaili Bros. to procure energy meters and low- to medium-voltage equipment to support the development and improvement of electrical power transmission and distribution infrastructure in Kandahar City by December 2011. The contractor procured the meters and equipment, which were later transferred to DABS to support SEPS. DOD spent \$2.1 million on this contract, which concluded in March 2012, 3 months behind its original schedule. DOD's contract documentation did not identify what caused the delays in the contract's completion.

Kandahar Completion Kits

DOD awarded the Kandahar Completion Kits to Jubaili Bros. in September 2011. The contract required Jubaili Bros. to procure and deliver all necessary equipment and material to DABS to rehabilitate the existing 20-kilovolt distribution grids and 400-volt final connections to SEPS, and install new electrical monitoring meters to support DABS's revenue collection by March 2012. Jubaili Bros. procured and delivered the equipment and materials to DABS to install at the Maiwand, Pashmul, and Spin Boldak substations in Kandahar Province. DOD spent \$6.7 million on this contract, which concluded in December 2012, 9 months behind its original schedule. DOD's contract documentation did not identify what caused the delays in the contract's completion.

Helmand Completion Kits

DOD awarded a contract for the Helmand Completion Kits project to Jubaili Bros. in September 2011. The contract required Jubaili Bros. to procure and deliver all necessary equipment and material to DABS to rehabilitate the existing 20-kilovolt distribution grids and 400-volt final connections to SEPS, and install new electrical monitoring meters to support DABS's revenue collection by March 2012. Jubaili Bros. procured and delivered the equipment and material to DABS to install at Hyderabad, Musa Qalah, Sangin North, and Tangi substations in Helmand Province. DOD spent \$10.2 million on this contract, which concluded in January 2013, 10 months behind its original schedule. DOD's contract documentation did not identify what caused the delays in the contract's completion.

Kandahar Bridging Solution

The purpose of the Kandahar Bridging Solution was to provide Kandahar City with a short-term power solution, or bridge, while USAID and DOD completed work to increase the generation and transmission of electric power from the Kajaki Dam and complete SEPS. In addition, the bridging solution was an integral part of the U.S. counterinsurgency campaign, which began in 2010. DOD implemented the project in two overlapping phases. For the first phase, DOD used funds from the Commander's Emergency Response Program (CERP) to award a

⁶⁰ Jubaili Bros. is a Lebanese firm that makes diesel-fueled generators.

contract to IAP Worldwide Services in July 2010.⁶¹ The contract required IAP Worldwide Services to increase power generation in Kandahar City by 20 megawatts by constructing two diesel-fueled power plants, installing auxiliary equipment, and providing fuel and maintenance by December 2013. IAP Worldwide Services constructed the plants, one located in the Shorandam Industrial Park and the other in Bagh-e-Pol, in November 2010 and February 2011, respectively, and DOD continued to provide fuel and maintenance until the contract concluded in December 2013.⁶²

However, as efforts to develop SEPS and increase electric power generated at the Kajaki Dam by installing turbine generator unit 2 continued, DOD used the Afghanistan Infrastructure Fund to award a series of contracts to subsidize fuel for and maintain Kandahar City's diesel-fueled generators and plants. The department continued using this fund through September 2015, when the second phase of the project concluded as originally scheduled. At this time, DABS assumed responsibility for funding, operating, and maintaining the plants and generators.⁶³

DOD spent a total of \$256.4 million on the Kandahar Bridging Solution with \$114.8 million coming from CERP and \$141.6 million from the Afghanistan Infrastructure Fund.

Kandahar Helmand Power Project

USAID awarded a contract for the Kandahar Helmand Power Project to Black & Veatch Special Projects Corporation in December 2010.⁶⁴ Originally, USAID required the contractor to complete six major components with various subcomponents:

- Component 1 – Improve the Kandahar power distribution system, which had five subcomponents: (1) replace the Breshna Kot substation, (2) refurbish and expand the Kandahar City medium voltage distribution system, (3) construct a new Kandahar East substation, (4) construct a transmission line between the Breshna Kot and Kandahar East substations, and (5) replace 14 diesel-fueled generators at the Breshna Kot substation.
- Component 2 – Build the Durai Junction substation, which included two subcomponents: (1) build the Durai Junction substation and (2) procure equipment for additional substations.
- Component 3 – Provide regional camp and program management services.
- Component 4 – Provide transportation, installation, operation, and maintenance of the Shorandam Industrial Park diesel-fueled power plant.
- Component 5 – Rebuild the Kajaki Dam substation and local distribution system.
- Component 6 – Install and commission turbine generator unit 2 at the Kajaki Dam, which had three subcomponents: (1) perform an inventory assessment of government-furnished equipment,

⁶¹ IAP Worldwide Services is a U.S.-based logistics, facilities management, and advanced professional and technical services firm with governmental and commercial clients.

⁶² In April 2015, we reported the results of our inspection of the \$7.8 million Shorandam Industrial Park, constructed by Technologists Inc., located 10 miles east of Kandahar City. At the time of our inspection, we found that the park was underutilized by Afghan businesses, and poor recordkeeping, along with lack of electricity, prevented us from conducting a complete assessment of whether construction met contract requirements (see SIGAR, *Shorandam Industrial Park: Poor Recordkeeping and Lack of Electricity Prevented a Full Inspection of this \$7.8 Million Facility*, SIGAR 15-50-IP, April 17, 2015).

⁶³ In October 2017, we reported that DABS lacked the capacity to continue electric power production from the Kandahar Bridging Solution at the previous years' rates because of disabled generators for which DABS lacked spare parts and challenges related to customers not paying their electricity bills. See SIGAR, *Afghanistan Infrastructure Fund: Agencies Have Not Assessed Whether Six Projects That Began in Fiscal Year 2011, Worth about \$400 Million, Achieved Counterinsurgency Objectives and Can Be Sustained*, SIGAR 18-10, October 31, 2017.

⁶⁴ Black & Veatch Special Projects Corporation, a subsidiary of the U.S.-based firm Black & Veatch Holding Company, operates the company's government service, infrastructure development, and project management business.

(2) repair government-furnished equipment and provide missing and additional new equipment for completing the installation of unit 2, and (3) install and commission unit 2.

Black & Veatch Special Projects Corporation completed some of the contract's original work. For example, the contractor rebuilt and renovated the Breshna Kot and Durai Junction substations, and completed the work to transport, install, and commission 10 diesel-fueled generators at the Shorandam Industrial Park. However, 8 of 10 generators fell into disrepair after USAID transferred them to DABS in December 2012.

USAID also modified the contract, de-scoping or transferring certain project components and subcomponents to other USAID and DOD projects because companies and organizations willing to work in the region significantly increased their prices. To accommodate the unexpected cost increases, USAID and DOD reviewed the Kandahar Helmand Power Project in mid-2011. This review prompted changes to the project's component to improve the Kandahar power distribution system. In one instance, USAID de-scoped three subcomponents, which it intended to transfer to its Power Transmission Expansion and Connectivity Program. In another instance, USAID modified a subcomponent to reduce the number of diesel-fueled generators installed at the Breshna Kot substation from 14 to 7. According to USAID's final closeout report, under an agreement between USAID and DABS, five of the seven remaining generators were transferred to locations outside of southern Afghanistan. Additionally, after discussions with the Afghan government, USAID partially suspended work on the installation and commissioning of unit 2 in January 2013, and required the contractor to transfer equipment and other planning documents to DABS for USAID's On-Budget Assistance to DABS – Installation of Unit 2 project.

Delays in the project's implementation and changes to its components were mainly due to the Afghan government, restrictive security conditions, and the increased risk associated with higher security costs. For example, while USAID was negotiating the project with Black & Veatch Special Projects Corporation in August 2010, the Afghan government outlawed private security contractors throughout the country. As a result, the contractor could not finalize a security subcontract and begin work until June 2011, when it hired the Afghanistan Public Protection Force and other risk management companies. In another example, contractor personnel were forced to evacuate the Kajaki Dam and Durai Junction campsites numerous times from 2011 to 2013 as insurgent activity increased in southern Afghanistan. Ultimately, because of insecurity, USAID used increased helicopter transportation services, which contributed to increased costs. These costs affected companies and organizations willing to work in the region, as subcontractors increased their prices to accommodate the higher risk and security costs.

USAID spent \$228.2 million on the contract for the Kandahar Helmand Power Project, which concluded in November 2015, 26 months behind its original schedule.

On-Budget Assistance to DABS – Installation of Unit 2

USAID committed \$75 million in on-budget assistance to DABS in April 2013 to install turbine generator unit 2 at the Kajaki Dam by December 2015. In turn, DABS hired two contractors to implement the project. In December 2013, DABS hired GFA Consulting Ltd. to provide construction management services and manage security risks in lieu of private security contractors.⁶⁵ DABS then hired 77 Construction USA in October 2014 to complete the installation of unit 2.⁶⁶ The project experienced delays for two primary reasons. First, 77 Construction USA evacuated from the Kajaki Dam several times because of restrictive security conditions that prevented it from working at the site. Second, because of difficulties and the length of time involved in obtaining DABS's review and approval, and the Ministry of Finance's subsequent review and approval for both contracts, the project was further extended. As a result, USAID discontinued on-budget funding to DABS for its contract with GFA Consulting and allowed the project to expire. By February 2016, USAID had replaced GFA

⁶⁵ GFA Consulting Ltd. is an Emirati construction engineering management firm specializing in the power and construction industries.

⁶⁶ 77 Construction USA is a U.S. engineering and construction services firm.

Consulting with its own contractor, Tetra Tech, which it hired under the agency's Afghanistan Engineering Support Program.⁶⁷ DABS spent \$62.4 million in on-budget assistance from USAID on the project, which concluded in October 2016, 9 months behind its original schedule and almost 10 years after USAID first planned to complete the installation of unit 2.

SEPS Phase I – Kajaki to Lashkar Gah

DOD awarded a contract for the SEPS I – Kajaki to Lashkar Gah project to Perini Management Services Inc. in June 2012. The contract required Perini Management Services Inc. to:

- Rebuild substation at Sangin-North and replace equipment at the Kajaki Dam switchyard;
- Construct a substation at Sangin-South and switching station at Tangi;
- Construct 110-kilovolt transmission lines from the Kajaki Dam to Lashkar Gah; and
- Construct 20-kilovolt transmission lines from Kajaki Dam switchyard to the Tangi substation.

DOD terminated the contract for convenience in May 2014, 3 months after its original completion date, because of increasing security costs. Perini Management Services Inc. had not attempted to gain clearance for construction and, according to DOD, had not submitted complete design documents.⁶⁸ DOD spent \$53.7 million on this project.

DOD transferred work on the Tangi transmission line to USAID's SEPS Completion II project and transferred the rest of the work to two new projects: (1) SEPS Completion Phase I – Sangin to Lashkar Gah, and (2) SEPS Completion Phase I - Civil Works.

SEPS Completion Phase I – Civil Works

DOD awarded a contract for the SEPS Completion Phase I – Civil Works project to Choice Made Construction Company in September 2014.⁶⁹ The contract required the company to make civil, structural, and architectural improvements at the Sangin North, Sangin South, and Tangi substations by February 2016. Work at the three sites was largely delayed because of insurgent activity and disputes between Choice Made Construction Company and one of its subcontractors. To resolve the disputes, DOD changed the locations of the generator and fuel storage at the Tangi substation. In addition, DOD rated the contractor's management of its major subcontractor as unsatisfactory, and the mismanagement contributed to delays on the project. According to DOD's evaluation, the impacts of delays on this project were substantial because resources were spread over three widely separated project sites. DOD spent \$9.4 million on this project, which concluded in August 2018, more than 30 months behind its original schedule.

SEPS Phase II – Maiwand to Durai Junction

DOD awarded a contract for the SEPS Phase II – Maiwand to Durai Junction project to State Corps Ltd. in September 2012.⁷⁰ The contract required State Corps Ltd. to construct substations in Maiwand and Pashmul, and rebuild transmission lines from Durai Junction to Breshna Kot, through Maiwand and Pashmul by November 2013. DOD terminated the contract for cause in December 2013, 1 month after its original completion date, because State Corps Ltd. committed fraud by misrepresenting its past performance in its solicitation proposal. DOD initially planned to debar State Corps Ltd., but entered into a compliance agreement

⁶⁷ Tetra Tech is a U.S. consulting and engineering firm specializing in water, infrastructure, energy, and international development services.

⁶⁸ Perini Management Services Inc., a U.S. firm, is a wholly owned subsidiary of Tutor Perini Corporation, which specializes in construction for U.S. federal agencies.

⁶⁹ Choice Made Construction Company is an Afghan firm that assists with the development, rehabilitation, and reconstruction of Afghanistan.

⁷⁰ State Corps Ltd is an Afghan firm.

instead.⁷¹ At the time of the termination, State Corps Ltd. had not completed any of the contract requirements, and DOD had spent \$2 million. DOD reprocured the transmission lines between the Durai Junction and Maiwand substations and the Maiwand and Pashmul substation work from this project into the SEPS Completion Phase II – Maiwand to Durai Junction (Reprocurement) project. The department transferred the remaining transmission line and substation work to USAID’s SEPS Completion II project.

SEPS Phase II – Maiwand to Durai Junction (Reprocurement)

DOD awarded a contract for the SEPS Phase II – Maiwand to Durai Junction (Reprocurement) project to Assist Consultants Inc. in August 2014. For this reprocurement, DOD required the contractor to build transmission lines between the Durai Junction and Maiwand substations, and construct the Maiwand and Pashmul substations by October 2015.⁷² Work on the transmission lines between the Durai Junction and Maiwand substations was largely delayed because of land disputes that DABS and the Ministry of Energy and Water could not resolve in a timely manner. DOD spent \$24.9 million on the contract, which concluded in August 2018, 34 months behind its original schedule.

Active Project to Increase Electric Power Generation at the Kajaki Dam, Provide Short-Term, Diesel-Fueled Power Generation, and Improve the Delivery of Power through SEPS

SEPS Completion Phase I – Sangin to Lashkar Gah

DOD awarded a contract for the SEPS Completion Phase I – Sangin to Lashkar Gah project to Assist Consultants Inc. in September 2014.⁷³ The contract required Assist Consultants Inc. to build three transmission line segments that could reliably and safely deliver 50.5 megawatts of power from the Kajaki Dam to the Durai Junction, Lashkar Gah, Sangin North, and Sangin South substations by April 2016.

This project has been delayed largely because Assist Consultants Inc. began constructing a large portion of the transmission line through Lashkar Gah before ensuring that the route was clear of residential structures and met transmission line clearance requirements. Because of the significant amount of time it would take for DABS and the Ministry of Energy and Water to resolve these land issues, DOD developed a plan to reroute the transmission line through the city that included changing the type of utility poles required to carry the transmission lines. As a result, DOD spent an additional \$3.6 million to procure and install new utility poles and connect the transmission lines to Lashkar Gah. As of December 2018, DOD had spent about \$39.4 million on the SEPS Completion Phase I – Sangin to Lashkar Gah project, which is currently required to be completed in August 2019, more than 40 months behind its original schedule.

⁷¹ According to DOD officials, this and other State Corps Ltd. contracts in Afghanistan were determined to be “void ab initio,” or to never have been legally formed because the company made false representations concerning its experience. On January 22, 2014, the U.S. Army entered into a 3-year administrative compliance agreement with State Corps Ltd., in lieu of a debarment. That agreement required the company to remove its president and establish an ethics and corporate compliance program.

⁷² As a reprocurement, DOD was able to use the same solicitation from the terminated SEPS Phase II – Maiwand to Durai Junction project. The solicitation also required the contractor to construct transmission lines from the Durai Junction substation, through Maiwand and Pashmul, to the Breshna Kot substation in Kandahar City. However, DOD removed these activities from SEPS Completion Phase II – Maiwand to Durai Junction (Reprocurement) contract so DABS could implement them with on-budget assistance from USAID.

⁷³ Assist Consultants Inc. is an Afghan construction firm.

Planned Project to Increase Electric Power Generation at the Kajaki Dam, Provide Short-Term, Diesel-Fueled Power Generation, and Improve the Delivery of Power through SEPS

SEPS Completion II

As of December 2018, USAID had not awarded the contract for the SEPS Completion II project, which currently is estimated to cost about \$65 million.⁷⁴ The work has two parts: (1) constructing transmission lines from the Kajaki Dam to the Sangin North substation and farther east through Maiwand, Pashmul, and Breshna Kot to the Kandahar East substation; and (2) installing new equipment at the Kajaki Dam, and the Breshna Kot, Sangin North, Sangin South, and Tangi substations. USAID plans to begin the project after February 2019 and estimates that it will take 24 months to complete, meaning that it will not be completed until January 2021 at the earliest. USAID solicited a proposal for the project in June 2018.

The SEPS Completion II project has evolved over time. Portions of project were originally included in the Kandahar Helmand Power Project and the SEPS Phase I – Kajaki to Lashkar Gah and SEPS Phase II – Maiwand to Durai Junction projects. However, DOD de-scoped some of the substations and transmission lines from these projects, while others that were still required were never completed. Originally, USAID planned for DABS to complete the SEPS Completion II project using on-budget assistance and committed \$55 million to the project in January 2016. DABS spent the next year selecting contractors and decided to divide the project into two contracts with one focused on constructing the transmission lines and the other on constructing the substations. USAID gave DABS consent to issue the contracts in January 2017.

In October 2017, USAID withdrew its consent for DABS to execute the project and paused all of its on-budget assistance to DABS, citing irregularities in the bidding process and shortcomings in DABS's management and oversight of construction activities. Later, in a July 2018 technical assessment of its power sector projects in Afghanistan, USAID determined that DABS lacks the necessary human and financial resources to effectively maintain U.S.-funded capital infrastructure projects to increase electric power generation and transmission, and therefore it is no longer a commercially viable option for on-budget assistance projects.⁷⁵ Because of this determination, USAID now plans to execute the SEPS Completion II project through its own contract.

Capacity-Building, Quality Assurance, and Oversight Projects

In addition to the 17 capital infrastructure projects, USAID provided capacity-building, quality assurance, and oversight under three supporting projects: (1) the Afghanistan Engineering Support Program, (2) the Engineering Quality Assurance and Logistical Support Program, and (3) the Engineering Support Program.

Afghanistan Engineering Support Program

USAID awarded a contract for the Afghanistan Engineering Support Program to Tetra Tech in November 2009. The contract required Tetra Tech to provide engineering, project management, and technical support services to a number of projects overseen by USAID across Afghanistan. USAID spent \$16 million of the project's \$97 million total estimated cost on activities to improve the generation and transmission of electric power from the Kajaki Dam. These activities focused on power networks; included assessment, planning, design, quality assurance, and construction management; and covered electric power generation, transmission, and regulation. The contract's initial period of performance was 5 years. USAID extended it twice, and it concluded in November 2016.

⁷⁴ The Afghanistan Infrastructure Fund originally supported the work for this contract. However, portions of those funds will expire in fiscal years 2019 and 2020. USAID plans to use \$10 million in funding from the Economic Support Fund to make up for any funds that expire.

⁷⁵ USAID, *Afghanistan Energy Sector Technical Assessment: Final Report*, July 21, 2018.

Engineering Quality Assurance and Logistical Support Program

USAID awarded a contract for the Engineering Quality Assurance and Logistical Support Program to International Relief and Development Inc. in April 2011.⁷⁶ Under this program, International Relief and Development Inc. was required to provide USAID with independent quality assurance for construction, design, and maintenance projects throughout Afghanistan.⁷⁷ USAID could not determine how much of the project's \$126 million total estimated cost was spent specifically for projects related to increasing the electric power generated and transmitted from the Kajaki Dam because the agency did not maintain this information. According to USAID, the contractor inspected project sites, verified equipment transfers, reviewed engineering designs, tracked construction milestones, and trained DABS staff until the contract's completion in April 2016. While implementing these activities, the contractor encountered some challenges, including accessing project sites because of security issues and addressing the knowledge gaps of DABS staff.

Engineering Support Program

USAID awarded a contract for the Engineering Support Program to Tetra Tech in July 2016. The contract required Tetra Tech to assist USAID with architectural and engineering services related to several projects throughout Afghanistan. As of July 2018, USAID had spent about \$6 million of the contract's \$125 million total estimated cost on energy sector support, which includes assessing Afghanistan's energy sector, training DABS staff and technicians, and facilitating private sector investment. The contract, which is set to conclude in July 2019, aims to support USAID's implementation of the SEPS Completion II project.

⁷⁶ International Relief and Development Inc., now called Blumont, is a U.S. non-governmental organization responsible for implementing relief and development programs.

⁷⁷ We previously reported that the International Relief and Development Inc. had a total of \$618,286 in total questioned costs for its support to USAID's Engineering Quality Assurance and Logistical Support Program (see SIGAR, *USAID's Engineering, Quality Assurance, and Logistical Support Program: Audit of Costs Incurred by International Relief and Development, Inc.*, SIGAR 16-10-FA, January 6, 2016).

APPENDIX III - COMMENTS FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT MISSION FOR AFGHANISTAN



MEMORANDUM

April 24, 2019

TO: The Honorable John F. Sopko
Special Inspector General for
Afghanistan Reconstruction (SIGAR)

FROM: Peter Natiello, Mission Director

SUBJECT: USAID Response to Draft SIGAR Audit Report titled,
“Afghanistan’s Energy Sector: USAID and DoD Have Not
Fully Assessed How the Kajaki Dam Electricity Projects Are
Contributing to U.S. Strategic Objectives or Their
Sustainability” (SIGAR Report 19-XX-AR under Code 115A)

REF: SIGAR Transmittal email dated 03/09/2019

The U.S. Agency for International Development (USAID) thanks SIGAR for the opportunity to comment on the draft audit report on the Kajaki Dam.

Since 2002, USAID’s \$171.6 million investment to increase the capacity of the Kajaki Dam has resulted in a *per-capita* energy increase available to over two million people in Kandahar and Helmand Provinces from 16 to 114 kilowatt hours (kWh)/year. The one consistent focus of the engagement by the U.S. Government (USG) in Southern Afghanistan has been on improving public access to electricity to promote economic development and stability. USAID and the U.S. Department of Defense (DoD) pursued this overarching sectoral goal through projects aimed at restoring existing infrastructure - primarily the Southern Electric Power System (SEPS) and the Kajaki Dam Power Plant - and through projects to provide new diesel-powered generation quickly, on an interim basis, until the establishment of the long-term, sustainable provision of power. To date, USAID has restored the original two turbines at the Kajaki Dam successfully to their original 1970s capacity; installed a third, larger turbine during a major construction effort between 2015-2016; and rebuilt Kandahar City’s primary substation. DoD has made progress in the repair and reconstruction of SEPS substations and transmission lines. These are major

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achievements given the difficult operating environment in Afghanistan.

Revenues to the Afghan electric utility, *Da Afghanistan Breshna Sherkat* (DABS), from the sale of power from Kajaki have risen from less than \$1 million in 2003 to over \$5 million in the first six months of 2018, an amount that will increase as DABS continues to reduce losses from the theft of energy and non-payment of bills. The clean energy from Kajaki also enabled DABS to displace about \$2.5 million in diesel fuel this past year. The investments in the improvements to the SEPS substations and transmission lines made by USAID and DoD, which total \$271.8 million, have allowed the number of customers DABS serves to grow from 32,992 in 2005 (approximately 231,000 beneficiaries) to over 100,000 in 2018 (over 700,000 beneficiaries).

However, our work is not done. The transmission line from Ghazni to Kandahar that will allow lower-cost, reliable power to be transmitted from Afghanistan's northern neighbors to southern Afghanistan is under construction. The corresponding substations and completion of the SEPS are in procurement. Together, these projects will provide the power to support economic growth and stability in Southern Afghanistan. Until all these projects are complete, it is not possible to assess their total impact fully. Ongoing and planned projects must be completed to realize all the benefits from our prior investments, and to ensure the performance is an enduring U.S. legacy in Afghanistan.

Indeed, SIGAR has acknowledged the progress made by the U.S. Government in the draft report, by stating, "USAID's and DoD's infrastructure projects to increase electric power generation and transmission from the Kajaki Dam have made some progress in improving the generation and delivery of electric power from the Kajaki Dam."

In the draft report, SIGAR makes a number of other statements that USAID believes are inaccurate, and we therefore request that SIGAR either remove them from the final report, or revise them to be factually accurate. These statements, along with USAID's comments, appear below:

1. SIGAR Statement [Draft Cover Letter and Page *i*]

The cover letter and page *i* in the draft report contain multiple inaccurate references that USAID and DoD spent "\$775 million to increase electric power generation capacity at the Kajaki Dam to 51.5 megawatts (MW) and improve [the] delivery of power to customers in Helmand and Kandahar provinces through the Southeast Power System (SEPS)."

USAID Comment:

The cover letter and page *i* in the draft report conflate multiple U.S. Government programs incorrectly, by inflating costs attributable to power-generation at the Kajaki Dam. One of the programs SIGAR misrepresents – USAID’s Kandahar-Helmand Power Project (KHPP) - includes substantial costs for power-generation plants that are electrically isolated from, and unrelated to, both Kajaki power and SEPS.

SIGAR
Comment 1

USAID also believes that SIGAR misrepresents the Kandahar Bridging Solution (KBS), DoD’s initiative to provide additional reliable power to businesses to create jobs, as an interim solution to providing power to Kandahar City until such time as USAID could install and bring online the third turbine (Unit 2) at Kajaki. KBS was actually an integral component of the U.S. Government’s counter-insurgency campaign that started in 2010, and a direct result of General Petraeus’ interagency mandate to “light up Kandahar.” As such, KBS was designed to deliver far more power (16-17 MW of 24/7 power) to Kandahar City, than Kajaki was capable of delivering even after bringing Unit 2 online (about eight MW, seasonally and dependent on transmission lines).

SIGAR
Comment 2

In addition, the SEPS transmission lines and substations were not built exclusively to transmit power from the Kajaki Dam. They are part of larger plans, including Afghanistan’s *Power-Sector Master Plan*, to connect SEPS to its northern counterpart and transmit electricity from other sources.

SIGAR
Comment 3

USAID requests SIGAR to revise page *i* of the draft report to represent more accurately the purpose of the indicated expenditures by changing “...to increase electric power generation capacity at the Kajaki Dam to 51.5 MW and improve the delivery of power to customers in Helmand and Kandahar provinces through the Southeast Power System (SEPS),” to the following:

SIGAR
Comment 4

...to improve the generation and distribution of power to one million beneficiaries in Southern and Eastern Afghanistan, to include both short-term diesel power in support of U.S. military counter-insurgency objectives and long-term capacity-expansion and generation at the Kajaki Dam. The expenditures were split along four main lines of effort, as reflected in Table 1 below, to achieve the goals of DoD and USAID.

Table 1: USAID and DoD Programs to Increase the Generation and Distribution of Power in Southern Afghanistan

SIGAR
Comment 1

Project / Line of Effort	Agency	Description	Spent (\$ millions)
KBS diesel-generation / counter-insurgency campaign	DoD	Two power plants (20 MW) in Kandahar City, plus five years of fuel/operations and maintenance (O&M) in support of U.S. counter-insurgency objectives (2010-2015)	256.4
DABS diesel-generation capacity – Kandahar, Ghazni, Zabul, Uruzgan, Helmand (KHPP components - multiple locations within and outside of SEPS).	USAID	Two power plants (17 MW) in Kandahar City; 4.5 MW in Ghazni; 1.5 MW in Qalat; 1.5 MW in Tirin Kot; Three MW in LKG. Limited O&M, and no fuel.	75.0
Kajaki Dam generation capacity	USAID	Refurbish Units 1 and 3; Install Unit 2; site security	171.6*
SEPS Transmission and Distribution	DoD / USAID	Replacement of a 110-kilometer (km) SEPS transmission line; four substations; megavolt (MV)-feeder replacement in Kandahar City; distribution kits – Kandahar and Helmand; additional procurement of substations	271.8 **
Total			\$774.8
* Includes \$34 million expended for USAID KHPP component 6, plus indirect costs. ** Includes \$119 million expended for USAID KHPP components 1, 2 and 5, plus indirect costs.			

2. SIGAR Statement, [Page i, Paragraph 1]

“SIGAR found that 13 of the 17 infrastructure projects USAID and DoD implemented to increase power generation and transmission from the Kajaki Dam were 3 to 40 months behind their original planned schedules. Only three of the projects were completed within their original project schedules, and one project had not yet started.”

USAID Comment:

SIGAR's assertion that 13 of the 17 infrastructure projects completed by USAID and DoD were between three and 40 months behind their original planned schedules is flawed. It appears SIGAR is confusing programmatic timelines with actual construction schedules. Programmatic timelines are notional, and usually pre-date the procurement process for a project. Best engineering practice is to start the clock on a project after the issuance of a Notice to Proceed (NTP). As correctly noted by SIGAR, a number of the project schedules did slip because of fighting, weather and other factors beyond the control of USAID, DoD, or their contractors. However, by following normal engineering procedures, most projects would be closer to achieving their objectives within the construction schedule agreed as part of the contract, when triggered by a NTP. Therefore, we request SIGAR to use the NTP as the start of each project, not the programmatic estimated start date.

SIGAR Comment 5

3. SIGAR Statement, [Page i, Paragraph 3]

The draft report states that "...USAID and DoD have not finished SEPS, which is needed to transmit power from the Kajaki Dam, and Afghans in southern Afghanistan have not yet received the intended benefits from these projects."

USAID Comment:

SEPS upgrades must transmit not only Kajaki power but also the increased quantities of power the Northeast Power System (NEPS)-SEPS connector will send to the South of the country. USAID recommends that SIGAR edit its statement as follows:

SIGAR Comment 3

"...USAID and DoD have not finished SEPS, which is needed to transmit power from the Kajaki Dam and from the NEPS-SEPS Connector currently under construction, to Afghans in Southern Afghanistan who have not yet received the intended benefits from these projects."

4. SIGAR Statement [Page ii, Paragraph 2]

The draft report states, "For example, according to DABS' data, the dam's average power generation output increased from 26 megawatts in 2004 to about 41 megawatts in July 2018."

USAID Comment:

SIGAR's average power output figure for the Kajaki Dam is incorrect. According to DABS' records at Kajaki, the power plant produced a total of 130,419 MW-hours in 2004. Average power output is total energy production divided by the time a power plant is in service. Average power output for the Kajaki Dam for 2004 was 130,419 MW-hours divided by 8,760 hours, or 14.9

SIGAR Comment 6

MW. USAID asks that SIGAR correct the 26 MW figure to “approximately 15 megawatts.”

5. SIGAR Statement [Page ii, paragraph 2]

The draft report states, “USAID and DoD officials acknowledge that Afghans will not fully realize the benefits of the dam’s increased power output until the SEPS projects are complete and the amount of electric power transmitted from the dam can meet customer demand, which currently ranges from 80 to 100 megawatts.”

USAID Comment:

USAID agrees that benefits from the dam’s increased power-generation capacity – now about 51 MW– will not be fully realized until the SEPS projects are complete. However, SIGAR perpetuates a fundamental mischaracterization of the Kajaki Dam’s power-generation capacity with regard to SEPS. While Kajaki is currently the largest source of power in the South of Afghanistan, it cannot meet customer demand on its own, and USAID has never suggested this. Suppressed demand in Helmand and Kandahar exceeds 200 megawatts, with at least 80 megawatts of demand in Kandahar City alone, and is growing annually. SIGAR’s statement acknowledges the stark disparity between supply and demand in SEPS, and points to the need for the bulk energy supply that the NEPS-SEPS Connector, now in progress, will bring to the South.

SIGAR Comment 7

The additional eight MW that Unit 2 at the Kajaki Dam enables DABS to deliver to Kandahar is less than both the estimated suppressed Kandahar City demand at the time (over 75 MW in 2010) and the 16-18 MW of diesel power (two 10 MW plants) KBS was designed to deliver. Moreover, blending Kajaki and KBS power could not have served the primary beneficiaries of KBS power - the Shorandam Industrial Park and surrounding commercial/industrial area, in Kandahar’s far southeast extremity - because of problems with reliability, synchronization and controls. Therefore, diesel power was, and continues to be, the only viable power source for Kandahar’s industrial center until solar generation or NEPS-SEPS can deliver more-abundant power.

USAID requests that SIGAR revise the above-quoted sentence as follows:

“USAID and DoD officials acknowledge that Afghans will not fully realize the benefits of the dam’s increased power output until the SEPS projects are complete. They also acknowledge that Kajaki power by itself cannot meet customer demand, which currently ranges from 80 to 100 megawatts in Kandahar City alone, and that other power sources, to include both utility-scale solar generation and the NEPS-SEPS Connector, are critically needed.”

6. SIGAR Statement, [Page ii, Paragraph 4]

The draft report states, “USAID determined that DABS was no longer a financially viable partner, citing concerns with DABS’s human and financial operations, and shortcomings in its management and oversight of construction activities related to ongoing and planned power projects.”

USAID Comment:

In October 2017, USAID paused its energy construction projects, as correctly noted by SIGAR. However, as stated in the Energy Assessment for Afghanistan performed by the Bureau for Economic Growth, Education, and the Environment (E3), “The pause was initiated so that USAID/Afghanistan could address serious concerns over host government procurement integrity, as well as shortcomings in DABS’ management and oversight of construction activities.” SIGAR’s statements that the main reason was “DABS was no longer a financially viable partner,” and that USAID was concerned with them utility’s “human and financial operations,” is incorrect.

SIGAR
Comment 8

We believe that the above-quoted statement in the draft report misrepresents the findings of the USAID/E3 Energy Assessment report released in July 2018. The actual quote is as follows, “It is clear that the utility is not financially viable as an off-taker.” The context of this quote is a discussion about DABS’ ability to continue to purchase or “off-take” power from Afghanistan’s northern neighbors unless the Government of Afghanistan allows DABS to make full cost-recovery for the purchased energy. DABS is still a viable entity, and is taking steps to address its financial shortfalls, including through loss-reduction activities, as noted in the USAID/E3 Energy Assessment.

USAID recognizes that there are shortcomings in DABS’ corporate management and construction oversight, and has taken steps to address them, such as a corporate-management assessment by the U.S. Energy Association expected at the end of July 2019. USAID authorized the Asian Development Bank (ADB) to use undisbursed contributions to its Afghanistan Infrastructure Trust Fund (AITF) to provide additional staff support to DABS’ Project-Management Unit for the NEPS-SEPS Connector project.

7. SIGAR Statement, [Page ii, Paragraph 4]

The draft report states, “...USAID has not developed a contingency sustainment plan for its SEPS Completion II project that identifies how it will be sustained if DABS is unable to do so upon completion, as required by the FY 2013 NDAA.”

USAID Comment:

Section 1273 of the National Defense Authorization Act (NDAA) of Fiscal Year (FY) 2013 does not require a contingency sustainment plan. Rather, Section 1273(a)(2)(D) provides that “a description of any arrangements for the sustainment of the project following its completion [is only required] IF the host government lacks the capacity (in financial or human resource) to maintain the project.” (emphasis added). Where the assessment required under Section 1273(a)(2)(C) determines that a “host government has the capacity (in both financial and human resources) to maintain and use the project after completion” the requirements of Section 1273(a)(2)(D) are not triggered. We request that SIGAR remove the misstatement of the requirements under Section 1273(a)(2)(D) of the NDAA from page *ii* and any other page of the draft report where repeated. SIGAR might also wish to confer with its legal counsel on the requirements of Section 1273 of the NDAA, including when Section 1273(a)(2)(D) is triggered.

SIGAR Comment 9

8. SIGAR Statement, [Page ii, paragraph 5]

The draft report states, “It remains to be seen what impact these efforts will have on DABS’s capacity to sustain the Kajaki Dam and SEPS once they are complete.”

USAID Comment:

In its closing paragraph on page *ii*, SIGAR seems to have missed the point that the investment by USAID in refurbishing Kajaki Units 1 and 3 and installing Unit 2 created the conditions for a private company to enter into a Power-Purchase Agreement (PPA) with DABS. Under this PPA, the private firm will operate and maintain the Kajaki Power House, and invest its earnings from this enterprise in building a new power house to accommodate four additional turbines that will increase the capacity of the plant by an additional 100 MW. This is the first executed PPA in Afghanistan with an independent power producer. It demonstrates DABS’ initiative in using industry best practices to contract out the operation and maintenance of the Kajaki Dam Power House to a private firm with the expertise to do so, which will address the sustainability concern that SIGAR voices. Furthermore, DABS and its contractor, 77 Construction USA, have come up with an innovative means of financing the expansion, in part, of the capacity of Kajaki. Financing will still be needed to raise the spillway to increase the size of the reservoir to provide the head pressure to fully use the additional turbines.

SIGAR Comment 10

The PPA makes financial sense for DABS, since it can purchase power at a lower cost than its sale price. The PPA has a take-or-pay provision that requires DABS to pay for power that 77 Construction could deliver in the event the

transmission line goes down. Consequently, DABS has a financial interest in maintaining the SEPS transmission system to ensure it maximizes its benefit.

9. SIGAR Statement, [Page iii, WHAT SIGAR RECOMMENDS]

Recommendation 1 of the draft report is as follows: “Direct personnel responsible for assessing the extent to which USAID has met its strategic-level performance indicators concerning southern Afghanistan’s energy sector to adhere to ADS 201 requirements to collect and report baselines, targets, and results for each indicator, and evaluate the extent to which its projects related to the Kajaki Dam are contributing to USAID’s strategic objectives for its energy projects in Afghanistan.”

USAID Comment:

USAID concurs with the intent of this recommendation. Over the approximately ten-year period covered by the audit, USAID/Afghanistan has continuously adapted and improved its approach to monitoring and evaluation to address the challenges created by deteriorating security and high staff turnover in Afghanistan. In 2012, USAID began exploring new monitoring approaches, and, in 2014, adopted a multi-tiered monitoring (MTM) approach adapted from accepted third-party monitoring (TPM) practices and informed by audit findings and other lessons learned. The MTM approach triangulates data from multiple sources to track progress and measure the achievement of key performance results. This approach provides a continuous feedback loop of information that informs course correction in a dynamic, non-permissive environment.

USAID has also twice revised its Performance Monitoring Mission Order in response to changing monitoring conditions, to clarify the guidance in Automated Directives System (ADS) Chapter 201 in the Afghan context, and to guide the use of a newly developed reporting database, Afghan Info, partly designed to ensure reporting of baselines, targets and results as entered by implementing partners and other stakeholders. USAID is currently revising its internal project-design guidance to refine activity management roles and clearly delineate responsibility for adherence to ADS Chapter 201, particularly with regard to collecting indicator data. USAID has also enhanced trainings for Contracting/Agreement Officer’s Representatives (A/COR) at the USAID Mission in Kabul to train new personnel properly in data-collection and reporting requirements.

Now that the Kajaki installation is complete, USAID plans to evaluate the extent to which projects related to the Kajaki Dam contribute to USAID’s strategic objectives for its energy projects in Afghanistan. The Energy Access and Socio-Economic Baseline Survey will collect baseline data between

Arghandi and Ghazni by December 2019. Pre-power surveys along the Ghazni-to-Kandahar transmission route will commence after the Arghandi-to-Ghazni survey is complete. However, the final post-power survey will not commence until the Ghazni-to-Kandahar transmission line and substations have been completed and energized. Thereafter, the SEPS assessment will begin. Collectively, these efforts fulfill the intent of this recommendation.

10. SIGAR Statement, [Page *iii*, WHAT SIGAR RECOMMENDS]

Recommendation 3 of the draft report is as follows: “Work with DABS to complete and begin implementing the capacity development roadmap discussed in USAID’s July 2018 technical assessment by June 30, 2019.”

USAID Comment:

USAID concurs with this recommendation. However, before beginning the implementation of the capacity-development roadmap, USAID found it necessary to retain the services of the U. S. Energy Association (USEA) to conduct an assessment of the corporate governance of DABS to identify strategic areas of focus for future USAID assistance to improve the utility’s management and operations. USEA will complete this assessment on or about June 30, 2019. After reviewing the assessment, USAID can refine and begin implementing the capacity-development roadmap with DABS.

11. SIGAR Statement, [Page *iii*, WHAT SIGAR RECOMMENDS]

Recommendation 4 of the draft report is as follows: “Develop a contingency sustainment plan for the SEPS Completion II project that specifies how this project will be sustained should DABS be unable to develop the capacity needed to operate and maintain the projects.”

USAID Comment:

USAID does not concur with this recommendation, and requests that SIGAR withdraw it. There is no evidence that DABS has been unable to operate and maintain its national transmission system to date, and implementation of such a plan would be counter to the U.S. Government’s strategy and objectives in Afghanistan.

SIGAR Comment 9

USAID agrees that the Afghan Government is responsible for operating and maintaining infrastructure provided by the U.S. Government. DABS committed to operate and maintain the recently completed Arghandi-to-Ghazni transmission line and two substations. Over the past decade, DABS has more than adequately demonstrated its ability to operate and maintain over 4,200 km of transmission line and 69 substations that are part of its existing electric grid. Likewise, in October 2016, DABS completed installation of the third turbine

at Kajaki Dam and upgraded the dam's powerhouse-operating systems, which marked completion of its first on-budget project funded by USAID. Since then, DABS has operated and maintained the facility successfully, and is delivering increased power to Southern Afghanistan. Prior to turning over these projects to DABS, the utility's contractors were required to provide DABS staff with hands-on training and comprehensive plans for operations and maintenance. These plans included detailed installation, operating, service and maintenance instructions for the facilities being turned over, in sufficient detail for DABS to operate, maintain, dismantle, reassemble, adjust, service, and repair the facilities.

USAID feels strongly that it would be counterproductive to the U.S. goals of reinforcing the legitimacy of the Afghan Government and increasing Afghan progress on the Journey to Self-Reliance if the U.S. Government were to develop contingency sustainment plans for DABS. DABS and the Afghan Government are responsible for the sustainment of the overall power system in the country. This includes planning for, funding, and implementing sustainment plans. USAID and our interagency partners, DoD and the U.S. Department of State, as responsible stewards of American taxpayer dollars, and do not plan to fund these projects in perpetuity. USAID is concerned that if the U.S. Government provided such contingency plans to DABS, the Afghan Government might look upon them as a commitment to cover the associated costs. Moreover, such plans might serve as a perverse incentive for the Afghan Government to stop budgeting operations and maintenance for the electric grid as a whole, despite previous commitments to do so. Equally important, it would be a disincentive for the Afghan Government to engage with private operators and improve the business-enabling climate in Afghanistan's power sector. For example, if USAID had installed a contingency plan for operating the upgraded Kajaki power plant, it is unlikely the Afghan Government would have finalized a deal in November 2018 for a private company to take over the long-term operations and maintenance of the plant - the first such transaction in the country's power sector and a step in the right direction for the overall management of the utility. This counteract is a move that ultimately will be beneficial for both the sustainability of the Kajaki Dam and DABS' bottom line, as well as for private-sector investment in Afghanistan.

12. SIGAR Statement, [Page 1, Paragraph 4]

The draft report mentions a series of objectives for the audit.

USAID Comment:

SIGAR's objectives for Audit 115A changed substantially from those outlined in the entrance conference with USAID. It would be helpful and appropriate to include a brief explanation as to how and why Audit 115A evolved in such a way.

SIGAR Comment 11

13. SIGAR Statement, [Page 2, Paragraph 3]

"Since 2004, USAID and DoD have implemented 17 infrastructure projects to increase electric power generation capacity at the dam to 51.5 megawatts and improve the delivery of power to customers in Helmand and Kandahar provinces through SEPS."

USAID Comment:

USAID requests SIGAR to modify this statement to reflect the actual purpose of these projects is as follows: "Since 2004, USAID and DoD have implemented 17 contracts to increase electric-power generation capacity at the dam to 51.5 megawatts, provide short-term diesel power to Kandahar City in support of the U.S. Government's counter-insurgency plans, and improve the delivery of power to customers in Helmand and Kandahar Provinces through SEPS."

SIGAR Comment 12

14. SIGAR Statement, [Page 3, Figure 1]

"Figure 1 - Locations of USAID's and DoD's Infrastructure Projects to Increase Electric-Power Generation and Transmission from the Kajaki Dam."

USAID Comment:

Please revise the title of Figure 1 to read as follows: "Locations of USAID and DoD's Infrastructure Projects to Increase Electric-Power Generation and Transmission from the Kajaki Dam, Diesel Generators and the NEPS-SEPS Connector."

Additionally, we note that Figure 1 shows the proposed new transmission lines correctly, but does not reflect which substations are either being refurbished or built. The map needs to show a new substation and switchyard under construction at Kajaki, the reconstruction of an existing substation at Sangin North, the construction of a new substation at Sangin South, and the installation of a new line bay at Durai Junction and Breshna Kot substations.

SIGAR Comment 12

15. SIGAR Statement, [Page 5, Table 1]

"Table 1 - Description of USAID's and DoD's Infrastructure Projects to Increase Electric-Power Generation and Transmission from the Kajaki Dam."

USAID Comment:

Refer to USAID's previous response for Figure 1 above. Also, we request that SIGAR correct the title of the table to read as follows: "Table 1 - Description of USAID and DoD's Infrastructure Projects to Increase Electric-Power Generation and Transmission from the Kajaki Dam and Diesel Power Plants in Southern Afghanistan."

16. SIGAR Statement, [Page 7, Paragraph 1]

"USAID implemented two of its projects roughly 12 to 27 months after their original schedules; the third project is projected to start in early 2019. DoD implemented two of its projects on schedule and six roughly 3 to 34 months after their original schedules..."

USAID Comment:

It appears that SIGAR is confusing programmatic schedules, which are more notional, with actual construction schedules. As previously explained on Page 4 of this letter, a construction schedule does not begin until USAID or DoD has issued an NTP to a contractor. Using construction schedules as a metric, these projects performed to schedule far better than SIGAR suggests.

SIGAR Comment 5

17. SIGAR Statement, [Page 8, Paragraph 2]

"USAID's contractors had to evacuate the Kajaki Dam area numerous times from 2011 to 2012 when insurgent activity increased in Helmand Province, delaying the completion of the Kandahar Helmand Power Project."

USAID Comment:

On the contrary, between 2011 and 2012 enemy attacks in Sangin, the heart of the insurgency in Helmand, dropped by more than half, and so did deadly troop casualties. Additionally, USAID contractor personnel did not evacuate the Kajaki Dam "multiple times" during this period. The successful campaign by the U.S. Marines, which began in October 2011 to clear and hold the Sangin Valley, including Route 611, which leads to the dam, enabled a first Black & Veatch convoy to pass safely to the dam in December 2011, the first contractor convoy since 2006 to do so. USAID's prime contractor for the KHPP contract went on to execute at least five additional convoys to Kajaki 2012-2013, all of which reduced the amount of materials and supplies that would otherwise have to be flown in at higher cost.

SIGAR Comment 13

For the above reasons, we request that SIGAR delete the above-quoted sentence, as it is incorrect.

18. SIGAR Statement, [Page 9, Paragraph 1]

“In addition, from November 28, 2011, through July 4, 2012, the port in Quetta, Pakistan, closed, limiting the delivery of equipment made outside of Afghanistan.”

USAID Comment:

The reference to Quetta is incorrect. The correct port is Karachi. USAID requests SIGAR to correct this error in the final report.

SIGAR Comment 14

19. SIGAR Statement, [Page 9, Paragraph 5]

“USAID has collected and reported incomplete performance data for its strategic-level performance indicators concerning southern Afghanistan’s energy sector, which includes efforts to generate and transmit electric power from Kajaki Dam. As a result, the agency does not know the full extent to which its projects have supported expanded sustainable physical infrastructure and agriculture-led economic growth.”

USAID Comment:

USAID acknowledges that its implementers did not report on performance measures consistently, because of the unique and difficult operating environment in Afghanistan, changes in USAID internal policies over time, and frequent turnover of project staff. However, many high-level measures, such as the amount of energy produced, are also not applicable until after projects are completed; as USAID staff have explained throughout the course of this audit, this situation is typical for infrastructure projects. Although projects can have positive benefits prior to completion, such as the hiring of local workers, it is not possible to assess the primary impact of increasing electrical capacity until the projects are complete and electricity is available. For example, although all 36 milestones were complete for Kajaki Unit 2 in October 2016, the plant could not demonstrate actual performance at rated capacity until March 2017, when seasonal reservoir levels permitted the turbine to perform as intended; only at this point could Kajaki Unit 2 deliver its full intended output of 18.5 MW and associated benefits. Thus, the primary reason for not measuring the impact of our energy-sector projects in southern Afghanistan is that they are not yet complete. SIGAR omits this critical point from the report’s discussion on assessing impact.

SIGAR Comment 15

USAID also strongly suggests that SIGAR use the higher-level indicators provided in the detailed USAID and DoD Joint Statement regarding this audit submitted to SIGAR in October 2018 to help assess the effectiveness of our programs. USAID and DoD did not provide annual data on these indicators because they are often difficult to attain, given the costs of collection.

(Higher-level results might require interviews, as opposed to just counting the number of participants, for example). In addition, many of these indicator values are unlikely to change much from year to year; change would more likely be seen every five years.

20. SIGAR Statement, [Page 10, Paragraph 2]

“For each indicator, we reviewed whether USAID established a baseline and reported targets and results for all years in which the indicator was in use. Based on our analysis, we determined that USAID did not fully meet the requirements of ADS 203. Specifically, USAID did not establish the baselines for 7 of its 18 indicators, did not set targets for 11 of the indicators, and did not report results for 9 of the indicators.”

USAID Comment:

ADS Chapter 203 requires Missions to retain old indicators, including their final values, for reference in the records of Program-Monitoring Plans; additional reporting is not necessary.

SIGAR Comment 16

USAID provided and discussed with SIGAR a detailed explanation of the 18 mentioned indicators. USAID also gave SIGAR the same detailed information in the Energy Indicators Crosswalk table that listed each indicator, targets, baselines, and results. For instance, the information in this table provides explanations for why the Agency did not set baselines for seven indicators. An example of one of these indicators was, “Annual electricity produced or purchased in MWh by the national utility,” for which the Agency did not set a baseline for this indicator for 2006 to 2008, because the grid was isolated and predated the creation of DABS. The draft report does not consider such nuances.

21. SIGAR Statement, [Page 14, Paragraph 2]

“The data indicate that the dam’s average power generation output of about 41 megawatts in July 2018 exceeded the 26 megawatts it generated in 2004.”

SIGAR Comment 17

USAID Comment:

A key factor that has prevented Kajaki from using the full installed capacity of the power house has been a lack of water. Afghanistan has been in a drought condition for the past few years, which has significantly lowered the level of the Kajaki reservoir. SIGAR included a statement to note this in a footnote to Table 3, but the drought is a significant factor that affects the performance of the Kajaki Dam, and SIGAR should include it in the body of the audit text. The implication without this caveat is that the turbines installed by USAID are not able to generate power to their full capacity.

22. SIGAR Statement, [Page 17, Paragraph 2]

“Despite these challenges, the agencies determined that DABS might or could possess the capacity to sustain the four projects in the future should an ideal set of circumstances arise.”

USAID Comment:

The statement is not accurate. DABS has repeatedly demonstrated its ability to successfully repair, operate, and maintain the thousands of kilometers of high- and medium-voltage transmission lines throughout the country, including in many areas where the circumstances are less than ideal. For example, DABS was able to replace transmission towers destroyed by an avalanche in Salang Pass and restore service to Kabul. The utility repaired towers and transmission lines damaged by fighting in the North, and around Ghazni. In addition, USAID conducted multiple assessments of the risk factors in DABS’ financial systems, procurement procedures, and management and found them reduced to the point of acceptability for the proper management and accountability of U.S. taxpayer funds.

SIGAR Comment 18

We request that SIGAR rephrase the statement to reflect that, despite challenges, DABS does possess the capacity to sustain the four projects (the Kajaki Dam, NEPS-SEPS, DABS diesel-generation capacity, and KBS diesel-generation capacity) in the future.

23. SIGAR Statement, [Page 18, Paragraph 2]

“However, USAID based its assessment on the Arghandi to Ghazni transmission line, which is part of the North East Power System and therefore separate from the Kajaki Dam and SEPS.”

USAID Comment:

We first wish to emphasize that USAID followed all the Agency’s guidelines in place at the time. We also note that it appears that SIGAR is mixing timelines. The assessments done for Kajaki pre-dated the construction of the transmission line from Arghandi to Ghazni by several years. The assessments to which SIGAR seems to be referring date back to 2010 and 2011. DABS was on a very good trajectory at that time, and was resolving weaknesses in systems and policies highlighted by the assessments, and improving its financial accountability and profitability. (The Government of Afghanistan began phasing out subsidies for DABS in 2011 because of a financial crisis.) USAID has provided SIGAR those assessments required before USAID entrusted funds to on-budget projects.

SIGAR Comment 19

USAID requests SIGAR to revise the draft report to place the assessments of DABS in context, and to discuss them in chronological order, to avoid applying conditions that have occurred recently to the decisions made at the time.

24. SIGAR Statement, [Page 18, Paragraph 3]

“Despite all these known challenges to the future sustainability of the project...”

USAID Comment:

We do not understand this statement. SIGAR should explain the “known challenges,” and provide supporting documentation to enable USAID to respond to this statement. Alternatively, SIGAR should delete the statement.

SIGAR
Comment 20

25. SIGAR Statement, [Page 18, Paragraph 4]

“In April 2013, we reported that although DABS had made significant commercialization progress through increased revenues and decreased losses, the utility could not sustain itself without an annual Afghan government subsidy.”

USAID Comment:

The Afghan Ministry of Finance phased out subsidies to DABS between 2011 and 2014. In 2013, the Afghan Government gave DABS \$9 million as a subsidy, which was a negligible amount compared to the \$216 million DABS paid to purchase power from Afghanistan’s neighbors in the same year. DABS was sustaining itself.

SIGAR
Comment 21

26. SIGAR Statement, [Page 19, Paragraph 2]

“In October 2017, USAID deemed it necessary to further examine its approach to supporting Afghanistan’s energy sector. The agency made this determination because of weaknesses in DABS’s human and financial operations, specifically related to procurement inefficiencies, integrity, and shortcomings in the utility’s management and oversight of construction activities related to ongoing and planned power projects. USAID also paused funding more than \$300 million in on-budget assistance to DABS. The agency had committed \$55 million of this funding to the SEPS II Completion project.”

USAID Comment:

SIGAR is again judging the validity of the assessments of sustainability done in the 2010-2012 timeframe by using data from 2017. USAID agrees that political decisions made by the Government of Afghanistan in 2015 to replace all the senior management of DABS, and to require DABS to conduct procurements through the newly created National Procurement Authority, significantly impacted the progress the utility had been making, and crippled its

SIGAR
Comment 22

decision-making. These changes led USAID to reassess its on-budget model with the Afghan Government. Nonetheless, DABS has continued to maintain its transmission system, which, as the report correctly states, is materially different from its management of procurement and construction.

27. SIGAR Statement, [Page 20, Paragraph 1]

“...the Afghan government hired a private contractor to take over the operation and maintenance of the Kajaki Dam’s power plant in November 2018...”

USAID Comment:

DABS entered into a contract with 77 Construction USA to operate and maintain the Kajaki Dam’s power plant in November 2018. This is industry standard practice in the United States and elsewhere, to provide specialized expertise to operate and maintain key infrastructure. Rather than showing a lack of capability at the utility, the contract demonstrates that DABS is taking the initiative to manage its assets more economically and efficiently. DABS has operated Kajaki successfully for over two years through the mechanisms it has put in place, and also has operated and repaired the SEPS system over this same period.

SIGAR Comment 23

We request SIGAR to incorporate the above context in the report.

28. SIGAR Statement, [Page 20, paragraph 3]

“U.S. agencies have spent about \$775 million on infrastructure projects to improve the generation and transmission of electric power from the Kajaki Dam to Afghans in Helmand and Kandahar provinces.”

USAID Comment:

The correct statement is DABS has used U.S. funds for projects that increased reliable, lower-cost power in Southern Afghanistan, and the Kajaki Dam is just one contribution to the U.S. Government’s engagement in the country on energy. USAID has repeatedly provided SIGAR with the documents that state that USAID’s objectives for generating and transmitting power to Southern Afghanistan are part of a larger plan agreed upon by the Afghan Government and donors for installing a transmission system to tie together the separate islands of power in the country and thereby allow the transmission of power from current and future indigenous power projects and purchased power from Afghanistan’s northern neighbors to load centers. The transmission line from Kabul to Kandahar is one element in this plan, and will bring reliable, lower-cost power to the South by 2022 to meet the full demand of Kandahar and Helmand that Kajaki, diesel, and solar projects only satisfy in part.

SIGAR Comment 1

USAID requests SIGAR to remove this statement, or to revise it to reflect the correct purpose of these projects.

29. SIGAR Statement, [Page 21, Paragraph 1]

“Furthermore, even though USAID has now acknowledged DABS’s shortcomings, it has not developed a contingency sustainment plan, in accordance with the FY 2013 NDAA, that describes how its upcoming SEPS Completion II project will be sustained should DABS be unable to develop the capacity needed to operate and maintain the project after the actions in the roadmap are implemented. This puts the U.S. investment in the infrastructure projects to improve the delivery of electric power from the Kajaki Dam at risk of being wasted.”

USAID Comment:

Please see USAID’s comments above (Section 7) on Page *ii*, Paragraph 4, for a similar statement in the draft report about Section 1273 of the NDAA. To repeat, NDAA Section 1273 does not require a contingency sustainment plan. Rather, Section 1273(a)(2)(D) provides that “a description of any arrangements for the sustainment of the project following its completion [is only required] IF the host government lacks the capacity (in financial or human resource) to maintain the project.” (emphasis added). Where the assessment required under Section 1273(a)(2)(C) determines that a “host government has the capacity (in both financial and human resources) to maintain and use the project after completion” the requirements of Section 1273(a)(2)(D) are not triggered. We request that SIGAR remove the misstatement of the requirements under Section 1273(a)(2)(D) of the NDAA from page *ii* and any other page of the draft report where repeated. SIGAR might also wish to confer with its legal counsel on the requirements of Section 1273 of the NDAA, including when Section 1273(a)(2)(D) is triggered.

SIGAR Comment 8

cc: Embassy of the United States of America in Kabul
Office of the Secretary, U.S. Department of Defense

SIGAR's Response to Comments from the U.S. Agency for International Development (USAID) Mission for Afghanistan

SIGAR Comment 1. USAID states that we inflate the costs attributable to power generation at the Kajaki Dam, and uses the Kandahar Helmand Power Project as one example that included costs unrelated to the dam and the Southeast Power System (SEPS).

We disagree that these costs are unrelated to the dam and SEPS. First, the Kandahar Helmand Power Project's original scope of work for subcomponent 1.5, "Replacement of Diesel Generators at the Breshna Kot Substation," was directly related to SEPS and required the contractor to replace 14 diesel-fueled power generators at the Breshna Kot substation. Subsequently, USAID modified the subcomponent to reduce the number of diesel-fueled generators installed at the substation from 14 to 7. According to USAID's final report, under an agreement between USAID and DABS, five of the seven remaining generators were transferred to locations outside of southern Afghanistan. We acknowledged this change in scope in our appendix and also added a sentence explaining the transfer of the five generators.

During our exit conference in September 2018 when we discussed the preliminary findings of our audit, USAID officials said the diesel-fueled power generation activities implemented as part of the Kandahar Helmand Power Project and the Department of Defense's (DOD) Kandahar Bridging Solution were essential to the Kajaki Dam because they were intended to serve as an interim solution until low-cost, sustainable hydropower could replace some of the high-cost, diesel-fueled power generation. Furthermore, in December 2018, USAID said it implemented three additional projects between 2003 and 2008 to provide diesel-fueled generators, fuel, and maintenance in major urban areas of Kabul, Kandahar, Lashkar Gah, Nangarhar, and Qalat, and asked that we also include them in the report. We would have done so, but USAID could not determine how much was spent on these projects related to supplementing electric power in southern Afghanistan.

SIGAR Comment 2. USAID states that we misrepresent DOD's Kandahar Bridging Solution projects as an interim solution to provide power to Kandahar City until USAID could install and bring turbine generator unit 2 online at the Kajaki Dam. Instead, USAID states that the bridging solution was an integral component of the U.S. counterinsurgency campaign to "light up Kandahar."

We agree that the Kandahar Bridging Solution was an important part of the U.S. counterinsurgency strategy and added a reference to that in the report. However, we disagree that we have misrepresented the project by stating that it was also implemented because of delays in completing the work at the dam and SEPS. As we note in the report, DOD's letter of justification for the bridging solution indicates that it "provides an immediate electric power bridging strategy until long-term projects take effect such as the installation of the Kajaki Dam Turbine #2, transmission line repairs and upgrades, and Kandahar City distribution system upgrades."⁷⁸ Because neither USAID nor DOD gave us documentation to refute this, we include both purposes in the report.

SIGAR Comment 3. USAID states that the SEPS transmission lines and substations were not built exclusively to transmit power from the Kajaki Dam and that they are part of a larger plan to connect SEPS to northern power. We never stated that SEPS was built exclusively to deliver power from the dam. However, to make this clearer, we added text in the report to explain that SEPS is intended to transmit power imported to northern Afghanistan from Tajikistan, Turkmenistan, and Uzbekistan to the southern part of the country.

SIGAR Comment 4. USAID requests that we revise our description of the purpose of the 17 projects and their associated costs to include short-term diesel power. We revised our description of the 17 projects to include this.

SIGAR Comment 5. USAID states that we are confusing programmatic timelines with actual construction schedules and suggests that we use the notice-to-proceed date as the start date for each project. In fact, we

⁷⁸ U.S. Army Corps of Engineers, "Addendum to Letter of Justification for the Commander's Emergency Response Program (CERP) Kandahar City - Power Bridging Solution, Regional Command (South)," September 13, 2010, p. 1.

did use notice-to-proceed dates, or comparable dates, in our analysis of most of the projects' schedules.⁷⁹ In our Scope and Methodology (see appendix I), we describe how we conducted our analysis. Specifically, we state that we compared each project's original period of performance, defined by the planned start and end dates in the contract documents, to the actual period of performance.

We also note that the second phase of the Kandahar Bridging Solution was the one exception. In this case, we defined the original and actual schedules for this project according to Afghanistan Infrastructure Fund program reports because DOD issued a series of contracts with varying periods of performance for the second phase. Given USAID's concern, we added examples of the contract documents we reviewed to the Scope and Methodology.

SIGAR Comment 6. USAID states that the average power output for the Kajaki Dam in 2004 was approximately 15 megawatts, citing DABS's records at the dam. We revised the report accordingly.

SIGAR Comment 7. USAID states that although the Kajaki Dam is currently the largest source of power in southern Afghanistan, it cannot meet customer demand on its own. USAID notes that suppressed demand in Kandahar and Helmand provinces exceeds 200 megawatts and is growing annually. We agreed that the dam alone will not be able to meet customer demand in the provinces, given that its expected output is only 51.5 megawatts, and removed statements suggesting that from the report.

SIGAR Comment 8. USAID states that we incorrectly cite the agency's Energy Sector Assessment for Afghanistan by reporting that the main reason for the pause in on-budget assistance was that "DABS was no longer a financially viable partner," and that USAID was concerned with the utility's "human and financial operations." That is a misstatement of our report. Those statements refer to the findings and conclusions of USAID's assessments, not the agency's decision to pause funding to DABS. Instead, we state that USAID paused funding to DABS and initiated the assessment because of "weaknesses in DABS's human and financial operations, and shortcomings in its management and oversight of construction activities related to ongoing and planned power projects." Nonetheless, we revised the report to ensure that we reference USAID's findings and conclusions about DABS more clearly and with the proper context.

SIGAR Comment 9. Since USAID has concluded, "There is no reason to believe that DABS will not be able to operate and maintain the additional infrastructure along the Arghandi-Ghazni project footprint,"⁸⁰ we removed our statements that the agency has not developed a sustainment plan in accordance with Section 1273 of the National Defense Authorization Act for Fiscal Year 2013 from the report and withdrew the fourth recommendation. However, based on the facts discussed in the report, we continue to have concerns about DABS's capacity to maintain the Kajaki Dam and SEPS.

SIGAR Comment 10. USAID states that our summary's closing statement missed the point that the agency's investment in refurbishing turbine generator units 1 and 3 and installing unit 2 created the conditions for a private entity to enter in to a power purchase agreement with DABS. Contrary to USAID's statement, we highlight the power purchase agreement as a positive step DABS has taken to enhance power generation capacity at the dam. However, we maintain a healthy amount of skepticism and will continue to monitor how this affects DABS's capacity to sustain the Kajaki Dam in the future.

SIGAR Comment 11. USAID asserts that SIGAR's audit objectives changed substantially from those outlined in the entrance conference with USAID. We acknowledge that the wording and number of objectives presented then were different. However, those revisions did not change the scope of the audit; in fact, we actually reduced the scope.⁸¹ It is standard practice for the wording of audit objectives to change from the notification

⁷⁹ In some instances, such as USAID's subcontracts for its Rehabilitation of Economic Facilities and Services Program, the period of performance began with a "commencement date" instead of a notice-to-proceed date.

⁸⁰ USAID, "USAID Response: SIGAR 115—Audit of the Kajaki Dam Power Generation and Transmission Exit Conference – Statement of Facts," September 24, 2018, p.12-13.

⁸¹ The objectives in our notification letter, which we discussed with USAID officials during the entrance conference, were to (1) identify the projects the U.S. government has implemented since 2001, and any planned projects, to increase the

letter to the final report. Because of this, our notification letter to USAID states, “The objectives could be modified during the course of the work. We will keep you informed of any material changes in this regard.”⁸²

SIGAR Comment 12. Per USAID’s request, we added references to “diesel-fueled power generation” to the titles of figure 1 and table 1. USAID also stated that figure 1 needs to differentiate between substations being refurbished and substations being built.

Initially, figure 1 identified completed and incomplete substations based on documentation showing the transfer of completed substations to DABS. However, USAID and DOD officials said that even though DOD may have transferred a completed substation to DABS, USAID might still be performing work on the substation. To resolve this issue, we decided to not differentiate between completed and incomplete substations.

SIGAR Comment 13. USAID states that its contractor personnel did not evacuate the Kajaki Dam multiple times in 2011 and 2012, and that enemy attacks in the region had dropped by more than half during this time. We edited that statement to remove “numerous contractor evacuations.” However, we maintain that insecurity in the region had a significant impact and delayed work related to the dam in 2011 and 2012. According to USAID’s final reports for the Kandahar Helmand Power Project, the security situation in southern Afghanistan changed over the course of the project. USAID reported that Regional Command Southwest and U.S. Marines substantially succeeded in clearing the upper Sangin Valley in late 2011, which allowed USAID to send the first contractor convoy to Kajaki in several years.⁸³

However, USAID added that the region was affected by significant increases in anti-government activity in 2011 and 2012 as the Afghan government, with coalition support, increasingly imposed its control over the region. USAID listed a series of security incidents that caused forced evacuations and delays. For example, 18 of the 31 incidents involved insurgent ambushes on the route used by USAID’s subcontractor that required the subcontractor’s staff to temporarily seek cover. In July 2012, another incident occurred, forcing contractors to seek shelter. USAID further notes that security incidents at the dam and in Kandahar limited work and movement to and from the dam.

SIGAR Comment 14. USAID states that our reference to the Pakistani port of Quetta in our discussion of project delays is incorrect. We cited Quetta because it is referenced in three of USAID’s final closeout reports for its Kandahar Helmand Power Project.⁸⁴ One of the reports states:

supply, quantity, and distribution of electrical power from the Kajaki Dam, and their associated costs; (2) assess the extent to which the completed and ongoing projects related to the Kajaki Dam have achieved or are achieving their expected outcomes and broader U.S. objectives; (3) assess the extent to which U.S. agencies monitored and evaluated the progress and quality of the work performed to enhance the power generation capacity of the Kajaki Dam; (4) determine the extent to which the enhancement of the Kajaki Dam remains economically and strategically viable; and (5) assess the extent to which U.S. agencies and the Afghan government have planned and implemented efforts to operate, maintain, and sustain the Kajaki Dam over the long-term. Over the course of the audit, we modified the timeframe of the audit to begin in 2004, when USAID implemented its first project related to the Kajaki Dam for which it had sufficient documentation, and we eliminated the fourth objective.

⁸² SIGAR, “Notification Letter for SIGAR Audit 115A: U.S. Efforts to Increase the Supply, Quantity, and Distribution of Electric Power from the Kajaki Dam,” March 15, 2016, p. 1.

⁸³ USAID, *Closeout Report Kandahar Helmand Power Project (KHPP) Component 3 Program Support and Program Management*, July 31, 2015; and USAID, *Closeout Report Kandahar Helmand Power Project (KHPP) Component 2 Sub-Component 1: Build a New Substation at Durai Junction*, December 10, 2014.

⁸⁴ USAID, *Closeout Report Kandahar Helmand Power Project (KHPP) Component 2 Sub-Component 1: Build a New Substation at Durai Junction*, December 10, 2014; USAID, *Closeout Report Kandahar Helmand Power Project (KHPP) Component 1 Sub-Component 1 Replace Kandahar Breshna Kot Substation*, December 10, 2014; and USAID, *Closeout Report Kandahar Helmand Power Project (KHPP) Component 2 Sub-Component 2: Procure Equipment for Additional Substations*, September 5, 2014.

The closure of Pakistan's Port of Quetta from 28 November 2011 through 04 July 2012 impacted the delivery of the power transformer and circuit breakers, as well as other critical Substation components. With the port reopening, the containers were then held at Kandahar Customs.⁸⁵

Without additional documentation from USAID that supersedes these reports, we do not have sufficient evidence to change this statement.

SIGAR Comment 15. USAID agreed that it did not report on performance measures consistently. It explained that many high-level measures are not applicable until after the projects are completed, which is the primary reason for not measuring the impact of its energy sector projects.

We acknowledge the agency's position in the report. Nonetheless, USAID is required to include performance indicators that measure strategy in its mission performance management plans.⁸⁶ Further, we contend that USAID can assess whether its projects are making progress toward the agency's objectives even if SEPS is incomplete. Moreover, USAID can measure many of the performance indicators defined in its performance management plans over time—as it acknowledged in its comments—and the agency has consistently collected and reported data on some of these indicators.⁸⁷ Such ongoing reporting is useful in determining whether projects are achieving strategic objectives and whether changes are needed. According to ADS Chapter 203, a key principle of effective performance management includes making decisions on the basis of performance data; "USAID Missions/Offices should use performance information to assess progress in achieving results and to make management decisions on improving performance. Such mid-course corrections should also be support through ongoing self-review and reflection, through such standard methods as After Action Reviews." We have revised the title of the report and other relevant sections to make our position clearer.

USAID also states that we use the higher-level indicators given to us in USAID, DOD, and the Department of State's joint statement regarding this audit. We described the indicators and results reported in the joint statement.

SIGAR Comment 16. USAID states that we did not take into consideration additional information on its 18 performance indicators, including information the agency gave us in a "crosswalk" table that listed each indicator, targets, baselines, and results. We disagree. We incorporated information from the table into our analysis and figure 2 to the extent that it was subject to the requirements of ADS 203, which went into effect in 2008. USAID implemented its first mission performance management plan for Afghanistan to comply with these requirements in 2011.

We also requested information on relevant performance indicators from USAID's *2005-2010 USAID/Afghanistan Strategic Plan*. Some of these indicators included the number of people with increased access to modern energy services as a result of U.S. government assistance and the weighted average cost of electric energy supplied to the grid. However, in response to our request, USAID gave us a blank spreadsheet, and agency officials later explained they were not required to track these indicators.

SIGAR Comment 17. USAID states that a key factor that prevented the Kajaki Dam from using the power plant's full capacity has been a lack of water. The agency added that Afghanistan has been in a drought for the past few years, and that has significantly lowered the level of water in the dam's reservoir. USAID acknowledged that our footnote to figure 3 explains this, but said not having these statements in the body implies that the turbines the agency installed are not able to generate power to their full capacity.

⁸⁵ USAID, *Closeout Report Kandahar Helmand Power Project (KHPP) Component 2 Sub-Component 1: Build a New Substation at Durai Junction*, December 10, 2014, p. 16.

⁸⁶ USAID, ADS Chapter 203, "Assessing and Learning," September 1, 2008. In 2016, USAID revised the ADS and combined ADS 203 and three other chapters into ADS Chapter 201, "Program Cycle Operational Policy." We refer to ADS 203 in this report because it was still in effect when USAID prepared the 2015-2018 performance management plan for Afghanistan.

⁸⁷ Examples of the performance indicators are the number of megawatt hours supplied to customers, the perceived availability of electricity supply, and the number of kilometers of transmission and distribution lines installed and upgraded because of government assistance. See table 2 for the complete list.

In addition to that footnote, we also included a footnote stating that the amount of power generated at the dam also depends on the volume of water in the dam's reservoir, which varies not only because of droughts but also water mismanagement.⁸⁸ However, to ensure that the reader does not assume that power generation solely depends on the generators, we copied this language into the body of the report.

SIGAR Comment 18. USAID asserts that our statement concerning DABS's capacity to sustain projects in the future is not accurate. We edited the sentence to read, "Despite these challenges, the agencies determined that DABS might or could possess the capacity to sustain the four projects in the future based on the utility's current trajectory and data available at the time of each assessment."

We believe this change is fair and accurately reflects the official conclusions USAID reached in its sustainability assessments.

SIGAR Comment 19. USAID requests that we revise the draft report to place the assessments of DABS in context, and to discuss them in chronological order. We removed the sentence for clarity, even though USAID referenced the sustainability assessment for its Arghandi-Ghazni transmission line project—which is outside the scope of our audit—in its September 2018 technical comments after our exit conference.

SIGAR Comment 20. USAID states that it does not understand what we mean by "despite all these known challenges to the future sustainability of the project." Although we discussed the challenges USAID and DOD identified in their assessments before this statement, we deleted the phrase to remove any ambiguity.

SIGAR Comment 21. USAID notes that one of the reports we gave as an example of our prior concerns about DABS's capacity to sustain projects is moot because the Afghan government phased out subsidies to DABS by 2014. We deleted the reference to this report and replaced it with a description of an inquiry letter we sent to USAID, DOD, and the U.S. Embassy in Kabul in 2015.

SIGAR Comment 22. USAID states that we are judging the validity of the assessments done in the 2010-2012 timeframe by using data from 2017. We disagree. In the paragraph USAID cites, we do not suggest or imply that the prior assessments are not valid; we simply describe the actions USAID took in 2017 regarding its support to DABS.

SIGAR Comment 23. USAID requests that we incorporate more information about the contract DABS awarded in November 2018 to provide operation and maintenance of the Kajaki Dam's power plant. We did not suggest that this demonstrated a lack of capability at DABS as USAID indicates. Rather, we agree with USAID that it is a positive development and added a sentence acknowledging that signing the contract demonstrates that DABS is taking that initiative to manage its assets more economically and efficiently.

⁸⁸ In an October 2018 cable, the Department of State wrote that one of USAID's contractors reported that Afghan government officials authorized and implemented an uncontrolled release of water from the Kajaki Dam's reservoir in the summer of 2018 to help irrigate Helmand Province, and then blamed lower power plant production at the dam during the summer on the drought. However, USAID's contractor said there should have been ample water for both irrigation and power generation during this time if the water had not been released. See Department of State, "Afghanistan: U.S. Firm to Take the Helm at Kajaki Dam", October 2018.

APPENDIX IV - COMMENTS FROM THE OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE FOR ASIAN AND PACIFIC SECURITY AFFAIRS



ASIAN AND PACIFIC
SECURITY AFFAIRS

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
2700 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-2700

APR 24 2019

The Honorable John Sopko
Special Inspector General for Afghanistan Reconstruction
1550 Crystal Drive, 9th Floor
Arlington, VA 22202

Dear Mr. Sopko:

Thank you for the opportunity to review the Special Inspector General for Afghanistan Reconstruction (SIGAR) draft audit report, *"Afghanistan's Energy Sector: USAID and DOD Have Not Fully Assessed How the Kajaki Dam Electricity Projects Are Contributing to U.S. Strategic Objectives or Their Sustainability."*

As the Department of Defense (DoD) communicated to SIGAR throughout the audit, the overall U.S. Government effort to help the Afghan Government rehabilitate its electrical infrastructure in southern Afghanistan is not yet complete. Until the projects, which form an interconnected system, are complete, they cannot be fully assessed.

We are encouraged, however, that despite the projects not yet being complete, SIGAR found that "USAID's and DOD's infrastructure projects to increase electric power generation and transmission from the Kajaki Dam have made some progress in improving the generation and delivery of electric power from the Kajaki Dam."

DoD's efforts to help rehabilitate portions of Afghanistan's power grid were part of a unique, interagency effort authorized by Congress to help the Afghan Government improve the availability of power in southern Afghanistan. Reliable, affordable electricity promotes private sector development, improves the quality of public services, and helps the Afghan National Defense and Security Forces reduce its reliance on expensive diesel generator power.

DoD and our interagency partners faced many challenges and unanticipated events during the implementation of these projects, but have persisted in moving the projects forward toward successful completion. DoD's role in this effort will conclude following the expected completion of our last project later this year. In accordance with the President's South Asia Strategy, DoD will continue to focus on preventing terrorist attacks against the United States by implementing our Counterterrorism mission and assisting the ANDSF through our Train, Advise, and Assist mission.



We appreciate SIGAR's review of this difficult work. Enclosed are comments describing our concerns with the shortcomings of the draft report and DoD's response to SIGAR's recommendation.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C. F. Jackson', is positioned above the typed name.

Colin F. Jackson
Deputy Assistant Secretary of Defense
for Afghanistan, Pakistan and Central Asia

Enclosure:
Comments to SIGAR Draft Audit Report

Department of Defense Comments on SIGAR Draft Audit Report

Below are the Department of Defense (DoD) comments on SIGAR’s draft audit report, “*Afghanistan’s Energy Sector: USAID and DOD Have Not Fully Assessed How the Kajaki Dam Electricity Projects Are Contributing to U.S. Strategic Objectives or Their Sustainability.*” Included are general comments on the draft report and DoD’s response to the report’s recommendations.

Assessing Incomplete Projects

The draft report, including the title itself, points out that USAID and DoD have not fully assessed the electricity projects the agencies implemented in southern Afghanistan. As DoD and USAID have indicated to SIGAR throughout the audit, the overall effort to help the Afghan government rehabilitate its electrical infrastructure in southern Afghanistan is not yet complete. As the map in Figure 1 (page 3 of the draft report) clearly shows, segments of the Southeast Power System (SEPS) transmission lines are not yet complete and some of the substations are not yet complete. Until the transmission lines and substations, which form an interconnected electrical grid, are completed, they cannot be fully assessed.

SIGAR
Comment 1

The draft report also includes the following inaccurate passage: “In July 2018, we identified several performance indicators for all of DOD’s Kajaki Dam projects derived from Afghan Development Reports—official reports required for each activity funded with CERP—and congressional notification letters for the Afghanistan Infrastructure Fund, and asked DOD to provide us with performance data for each project. In response, DOD submitted a joint statement with State and USAID that did not include any of the data we requested.”

SIGAR
Comment 2

As DoD communicated to SIGAR during the course of this audit, not all of the indicators that SIGAR derived from historical documents, measured performance. In a subsequent meeting with USAID and DoD, SIGAR representatives acknowledged this and agreed to accept indicators provided by USAID and DoD; we later provided these indicators and associated data points in a joint statement to SIGAR, though we noted that our work was not yet finished and that the projects must be completed in order to fully realize their benefits.

Number and Purpose of U.S. Government Projects

The draft report states that USAID and DoD “implemented 17 infrastructure projects and spent about \$775 million to increase electric power generation capacity at the Kajaki Dam in Helmand Province to 51.5 megawatts, and improve the delivery of power to customers in Helmand and Kandahar provinces through the Southeast Power System (SEPS).” We believe this description inflates the number of projects the U.S. Government actually undertook. For example, when DoD notified Congress of its intent to rehabilitate SEPS in May 2011, SEPS was considered one large project. As SIGAR has documented in other audits and reports, the project was implemented in phases involving multiple contracts, but it remained a single effort aimed at helping the Afghan government rehabilitate its system. Despite this fact, the draft report counts each of six SEPS contracts awarded in this effort, including two contracts that were terminated,

SIGAR
Comment 3

as separate projects. Similarly, the draft SIGAR report lists the Kandahar Bridging Solution (KBS)¹ as two separate projects; one for the procurement of diesel generators and one for the procurement of fuel for the generators. DoD has no objections to the report listing the individual contracts as it does in Table 1 (page 4 of the draft report), but recommends referring to SEPS as a single project, not six, and to KBS as one project, not two. We believe a similar issue exists with the counting of projects implemented by USAID, but defer to USAID on this point.

We also believe that the report should more clearly state that not all of the projects described in the report are exclusively related to Kajaki Dam and, therefore, that the U.S. Government did not spend \$775 million only to increase power generation and transmission from the Kajaki Dam. In fact, none of the projects or project phases implemented by DoD were exclusively related to Kajaki Dam. DoD primarily focused on the rehabilitation of the SEPS transmission lines and substations. As SIGAR has documented in other reports, the Afghan government, with the assistance of the international community, has always planned to connect SEPS to the Northeast Power System (NEPS) to form a national power grid. This will enable SEPS to transmit power from Kajaki Dam and other sources, including imported power from Central Asia.

SIGAR
Comment 3

Most Contracts are Complete

The draft report incorrectly states and implies that more than a dozen projects are ongoing and are currently experiencing delays. For example, the first paragraph of the highlights page includes the following sentences: “SIGAR found that 13 of the 17 infrastructure projects USAID and DOD implemented to increase power generation and transmission from the Kajaki Dam were 3 to 40 months behind their original planned schedules.” and “The 13 infrastructure projects are delayed mainly because of insecurity in the areas surrounding the dam.”

SIGAR
Comment 4

As stated above, although there have been 17 *contracts* since 2004, there have not been 17 projects, and the contracts have not all been exclusively for the purpose of increasing power generation and transmission from the Kajaki Dam. More importantly, as SIGAR indicates later in the report, 12 of the 13 contracts are complete and, therefore, are not currently delayed. In fact, according to the draft report, all but two of the 17 contracts are complete. Afghanistan will not fully realize the benefits of the overall effort until the final portions of SEPS are finished, but the report should not give readers the impression that the U.S. Government has 13 ongoing and delayed projects.

Assessing Sustainability

In its project sustainability discussion, the draft report minimizes and inaccurately describes DoD’s and USAID’s efforts to assess Da Afghanistan Breshna Sherkat (DABS), Afghanistan’s national utility company that is ultimately responsible for operating and

SIGAR
Comment 5

¹ KBS is the transitional energy solution that the U.S. Army Corps of Engineers implemented to provide consistent, predictable electricity to parts of Kandahar City, including businesses in the Shorandam Industrial Park, on a short-term basis.

maintaining Afghanistan's power grid. The assessments SIGAR describes in the report required DoD and USAID to assess whether DABS could use and maintain the SEPS system after the agencies helped to rehabilitate it. The assessments were required to be completed before funds were obligated, meaning DoD and USAID had to forecast whether DABS could sustain the project long before the new parts of SEPS would be ready to use.

DoD first assessed DABS in 2013. In conducting the assessment, DoD took into account Afghanistan's then-current power grid, which was substantially larger than the segments DoD was rehabilitating. DoD also took into account the size of DABS' staff, which numbered in the thousands and was already maintaining Afghanistan's power grid. We also considered DABS' revenues, collections, losses, customer base, information technology systems, and subsidies provided by the Afghan Ministry of Finance. Finally, we also considered the technical assistance and capacity building programs that were being implemented by USAID and the Asian Development Bank.

We found that from 2010 to 2012, DABS grew its customer base by 21%, increased revenue by 55% to \$213 million, reduced its fuel subsidy from the Ministry of Finance by 53%, and made significant progress in management and service delivery. DABS also began financing operations and maintenance from its own revenue. In 2012, DABS used profits from the sale of imported power to fund improvements to distribution systems in three major cities and to upgrade transmission lines in another. We concluded that although DABS, which replaced Afghanistan's former national electric utility only four years earlier, faced challenges, it still made significant strides in addressing the complex set of challenges inherent in building and sustaining a critical infrastructure sector.

SIGAR
Comment 5

In 2015, DoD assessed DABS again and found similar trends. At that time, DABS was operating and maintaining \$4.8 billion in electrical infrastructure that included 4,000 kilometers of transmission lines, distribution lines, and substations. DABS' revenue continued to trend upward and DABS had become profitable without the Ministry of Finance subsidy that was phased out as DABS became increasingly self-sufficient. Further, the rehabilitation and expansion of Afghanistan's power grid would provide DABS opportunities to continue to grow its customer base and participate in regional energy initiatives with opportunities to further increase revenue by collecting transit fees for power that passed through the Afghan grid. We noted that DABS continued to face real challenges and that its success was not certain, but that it continued to make progress and demonstrated its capacity to operate and maintain its electrical infrastructure and keep power flowing to major population centers in Afghanistan.

In October 2017, more than three years after DoD awarded its last SEPS contract, USAID became aware of procurement irregularities at DABS. USAID temporarily paused its energy construction projects while it addressed this development, as well as shortcomings in DABS' management and oversight of construction activities. As USAID indicated to SIGAR, USAID's concerns with DABS that led to the 2017 pause appear to be related to DABS' 2015 replacement of its Chief Executive Officer and senior management team. A new CEO was appointed about the same time USAID paused its activities, and DABS has since appointed a new management team that is beginning to address these issues. Simultaneously, USAID completed an energy-sector technical assessment as described in SIGAR's draft report. As a result of this latest

assessment, USAID adjusted its approach to its energy programs while DABS works to address its shortcomings. USAID, however, remains confident in DABS' future ability to operate and maintain its electrical infrastructure, as it continues to do today.

Recommendations

The draft report includes four recommendations – three for the USAID Mission Director and the following recommendation for the Under Secretary of Defense for Policy.

Recommendation: Define the department's roles and responsibilities for collecting and reporting strategic-level performance data on its ongoing SEPS Completion Phase I – Sangin to Lashkar Gah project to USAID for the agency's planned survey to assess the impact of U.S. efforts to increase access to electric power in southern Afghanistan.

Concur with comment: The referenced segment of SEPS is one part of the overall SEPS project that was jointly implemented by USAID and DoD. As the agencies communicated to SIGAR, the data needed to assess the impact of the USG's effort to help the Afghan government rehabilitate its power grid in southern Afghanistan will come from DABS – Afghanistan's national power utility – and from surveys that USAID is planning to implement. DoD has no separate, additional data to provide. Given this and that DoD's role in implementing large-scale power projects in Afghanistan will soon conclude, we request SIGAR close the recommendation.

SIGAR's Response to Comments from the Office of the Assistant Secretary of Defense for Asian and Pacific Security Affairs

SIGAR Comment 1. The Department of Defense (DOD) states that until the transmission lines and substations that make up the Southeast Power System (SEPS) are complete, the U.S. Agency for International Development (USAID) and the department cannot fully assess them. USAID makes a similar statement in its comments (see SIGAR Comment 15).

We acknowledge the agencies' position in the report. However, we contend that they can assess whether their projects are making progress toward those objectives even if SEPS is incomplete. Although DOD did not have a requirement to collect and report performance data on its projects, USAID did per Automated Directives System (ADS) Chapter 203, "Assessing and Learning," which applied to the two performance management plans we assessed.⁸⁹ Moreover, USAID can measure many of the performance indicators defined in its performance management plans over time, and the agency has consistently collected and reported data on some of these indicators.⁹⁰ Such ongoing reporting is useful in determining whether projects are achieving strategic objectives and whether changes are needed. According to ADS Chapter 203, a key principle of effective performance management includes making decisions based on performance data; "USAID Missions/Offices should use performance information to assess progress in achieving results and to make management decisions on improving performance. Such mid-course corrections should also be supported through ongoing self-review and reflection, through such standard methods as After Action Reviews." We have revised the title of the report and other relevant sections to make our position clearer.

SIGAR Comment 2. According to DOD, we inaccurately reported that DOD's joint statement with State and USAID did not include any of the data we requested in July 2018. In that request, we specifically asked DOD for data on the strategic-level performance indicators we identified in the Afghanistan Infrastructure Fund congressional notification letters and the Commander's Emergency Response Program Afghan Development Reports that were related to DOD's SEPS projects, as noted in this report. DOD did not provide this information.

DOD officials said some indicators were not meant to be measured, such as improved economic indicators. According to DOD, it would be difficult to evaluate performance and what has been achieved so far because the projects were not yet complete; therefore, much of the requested data could not be supplied. DOD later submitted a joint statement with State and USAID that included five supplemental indicators used to track efforts in southern Afghanistan's energy sector with some performance data. We agreed to accept these data and incorporated them into our analysis at that time. In addition, we included more detail on these indicators and data in the report. However, we believe it is important to note that DOD did not provide the data we requested for indicators included in its own reports and congressional notifications.

SIGAR Comment 3. DOD states that we inflated the number of projects it and USAID undertook to increase power generation at the Kajaki Dam and improve the delivery of power through SEPS. DOD states that it considers SEPS to be one large project as it notified to Congress in May 2011, instead of six projects as defined in its contracts. The department also states that the Kandahar Bridging Solution should be one project, instead of two as described in this report.

We explained our methodology for counting projects to USAID and DOD officials multiple times during our audit, including during fieldwork and before and after our exit conference with them in September 2018, when we discussed our audit methodology and findings. As stated in table 1, USAID and DOD do not use the same definition of a project. For example, USAID appears to use "program," "project," and "line of effort"

⁸⁹ USAID, ADS Chapter 203, "Assessing and Learning," September 1, 2008. In 2016, USAID revised the ADS and combined ADS 203 and three other chapters into ADS Chapter 201, "Program Cycle Operational Policy." We refer to ADS 203 in this report because it was still in effect when USAID prepared the 2015-2018 performance management plan for Afghanistan.

⁹⁰ Examples of the performance indicators are the number of megawatt hours supplied to customers, the perceived availability of electricity supply, and the number of kilometers of transmission and distribution lines installed and upgraded because of government assistance. See table 2 for the complete list.

interchangeably in its comments on table 1. Because of this, we combined their definitions and describe a project as an effort with a defined beginning and end date, a defined scope and budget, and an identifiable purpose or set of objectives to accomplish a singular goal. In almost all cases, this meant that we considered the individual awards—contracts, subcontracts, and implementation letter—to be the projects while acknowledging that they were part of broader efforts. For example, the scopes of the SEPS contracts varied so much that we determined that it would be reasonable to consider each contract a project under the larger SEPS efforts.

In another example, DOD could not provide all supporting contracts for the second phase of its Kandahar Bridging Solution funded with Afghanistan Infrastructure Funds. Because DOD issued a series of contracts for this portion of the Kandahar Bridging Solution, each with varying periods of performance, we defined the original and actual schedules for this project according to Afghanistan Infrastructure Fund program reports. We consider this approach to be methodologically sound and to allow for consistent comparisons across USAID's and DOD's efforts given the differences in their terminology.

DOD also states that we should more clearly state that not all of the projects described in the report are exclusively related to the Kajaki Dam. We never stated that SEPS was built exclusively to deliver power from the dam. However, to make this clearer, we added text in the report to explain that SEPS is intended to transmit power imported to northern Afghanistan from Tajikistan, Turkmenistan, and Uzbekistan to the southern part of the country.

SIGAR Comment 4. DOD states that we incorrectly state and imply that more than a dozen projects are ongoing and are currently experiencing delays. Specifically, DOD notes that 12 of the 13 projects we described as being delayed are complete and, therefore, not currently delayed. We revised our report to state more clearly how many projects were closed after their originally scheduled completion dates.

SIGAR Comment 5. DOD states that we minimize and inaccurately describe the department's and USAID's efforts to assess Da Afghanistan Breshna Sherkat's (DABS) ability to use and maintain SEPS. Although we disagree with this assertion, we added more details to the report about the factors DOD considered and the findings and conclusions to give the reader more context on these assessments.

APPENDIX V - ACKNOWLEDGMENTS

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