



SIGAR

Office of the Special Inspector General
for Afghanistan Reconstruction

April 17, 2015

The Honorable P. Michael McKinley
U.S. Ambassador to Afghanistan

The Honorable Christine E. Wormuth
Under Secretary of Defense for Policy

General John F. Campbell, Jr.
Commander, U.S. Forces–Afghanistan and
Commander, Resolute Support

Mr. William Hammink
USAID Mission Director for Afghanistan

Dear Gentlemen and Madam:

I am writing to inquire about the status of the U.S. government's efforts to develop a reliable and sustainable source of electric power for Kandahar City after September 30, 2015.¹ SIGAR inquired about a similar matter in June 2014 and noted its concerns with the inadequate response provided at that time.²

During a recent visit to Afghanistan in February 2015, my staff and I discussed this subject with Department of Defense, Department of State, and U.S. Agency for International Development (USAID) officials. We received an update on the installation of an additional turbine for the Kajaki Dam Unit 2 Project.³ We also heard about plans to end the Kandahar Bridging Solution by September 30, 2015, including discussion of whether a reliable source of electric power would be available if the new turbine is not operational by March 2016.⁴ The discussions left many of our questions unanswered, and we are unconvinced that there are plans in place to ensure there is a reliable and sustainable power source for this strategically important city.

Given the necessity of electric power to Kandahar City's economic development and stability, it is important that a solution be successfully implemented by September 30, 2015, or potentially thousands of homes and businesses will no longer have access to a reliable source of electricity. This could dampen economic growth and negate some of the U.S. government's counterinsurgency and reconstruction efforts in a region that has been prone to instability.

¹ Kandahar City, the spiritual birthplace of the Taliban insurgency, is Afghanistan's second largest city and the center for education, healthcare, manufacturing, and transportation in southern Afghanistan.

² SIGAR 14-87-SP, *Inquiry Letter: Kandahar Bridging Solution*, July 30, 2014.

³ The installation of the turbine generator is part of USAID's Kandahar Helmand Power Project, which aims to increase the supply, quantity, and distribution of electrical power. This project is part of a broader effort under the U.S.-funded Afghanistan Infrastructure Fund to improve the Southeast Power System and connect it with other electrical grids in the country.

⁴ The Kandahar Bridging Solution is a U.S.-funded effort that has provided fuel for two 10-megawatt diesel generators since 2011 and has served as a temporary electricity solution to Kandahar City.

To help SIGAR understand how the United States intends to ensure electrical power for Kandahar City, please provide responses to the following questions, with supporting documentation:

1. Will the United States continue to fund the Kandahar Bridging Solution after September 30, 2015? If so, please provide an updated description of those plans, including the amount of fuel and funding needed, by month, for the estimated duration of this extended effort.
2. Will the installation of the additional turbine for Kajaki Dam Unit 2 be completed and operational by March 2016?
 - a. If not, please provide the revised timelines for the additional turbine to be installed and operational.
3. USAID officials in Afghanistan told SIGAR that USAID intends to solicit bids within the next few months on a contract for a solar power system. Does the United States have plans to support the construction of a solar power system to generate electricity for Kandahar City? If so, please answer the following:
 - a. Has a feasibility study or assessment evaluating the viability of a solar power system to generate electricity for Kandahar City been conducted since the May 2010 study administered by USAID's Afghanistan Clean Energy Program?⁵ If so, please provide copies of any studies or assessments, including system specifications (e.g., array size, total energy generation capacity, total acreage required) and life cycle cost information (e.g., capital costs, operation and maintenance costs, replacement costs, other costs).
 - b. What sites in or near Kandahar City are being considered as potential locations for this solar power system? Please provide Global Position System or Military Grid Reference System coordinates and explain the extent to which land ownership and property rights issues have been resolved for these potential sites.
 - c. What will be the source of funding for construction of the solar power system? Please identify the funding source and the name of the U.S. agency that will provide and administer these funds.
 - d. What are the estimated dates for starting and completing construction of this solar power system? Please explain how the U.S. will monitor the progress of the project given the security environment in the Kandahar region and the increasingly limited number of U.S. personnel in Afghanistan.

⁵ USAID, *Afghanistan Clean Energy Program: Kandahar City Utility Interconnected 10MW Photovoltaic Power System Feasibility Assessment*, May 2010.

- e. What Afghan government entities will be responsible for operating, maintaining, and sustaining this solar power system? To what extent do those entities have the required financial management and human resources capacity to sustain this system? Please provide copies of any capacity assessments of responsible Afghan government entities conducted since January 2013.
4. What other alternatives, if any, are under consideration for ensuring that reliable and sustainable electric power is provided to Kandahar City? Please provide a detailed description of these alternatives, including their feasibility, projected costs, and construction start and completion dates.

I am submitting this request pursuant to my authority under Public Law No. 110-181, as amended, and the Inspector General Act of 1978, as amended. Please provide the requested information by May 15, 2015. Should you or your staff have any questions about this request, please contact Mr. Jack Mitchell, Director of Special Projects, at [REDACTED] or [REDACTED].

Thank you in advance for your cooperation in this matter. I look forward to your response.

Sincerely,



John F. Sopko
Special Inspector General
for Afghanistan Reconstruction



United States Department of State

Washington, D.C. 20520

www.state.gov

May 15, 2015

Mr. Jack Mitchell
Director of Special Projects
Office of the Special Inspector General
for Afghanistan Reconstruction (SIGAR)
1550 Crystal Drive, Suite 900
Arlington, VA 22202

Dear Mr. Mitchell:

This letter responds to the Special Inspector General's April 17 letter about the U.S. Government's efforts to promote reliable and sustainable electric power for Kandahar city.

U.S. diplomatic and development professionals have long focused on Kandahar as a strategically important locale and recognize that a reliable and, more importantly, sustainable source of electric power is important to the city's economic growth and stability. That is why the United States made a decision to provide a short-term power bridge for Kandahar at the height of our counterinsurgency operations. That program, however, was never intended to provide the basis for an indefinite power supply for Kandahar nor was it intended to extend beyond 2015, irrespective of Afghanistan's and Kandahar's political situation.

The United States, therefore, carefully designed the program to transition from a counterinsurgency imperative toward sustainable management by the Afghan government. Over the last two years, the United States has ceded control of power facilities in Kandahar to Afghanistan's national public utility, Da Afghanistan Breshna Sherkat (DABS), and gradually reduced subsidies for diesel power generation as DABS transitions away from fuel subsidies and allows normal economic forces to determine the market price of electricity. At the same time, we have worked closely with DABS to develop market-based strategies to more sustainably manage the power grid. Furthermore, the United States has continued its support for power infrastructure projects that when completed will result in an integrated national power grid that provides affordable, reliable power to millions of Afghans.

We have never harbored illusions about the ease of this transition nor did we guarantee an unchanged level of available electricity for all customers. However, we have coordinated our efforts with the Afghan government to ensure that—to the greatest extent possible—the needs of the people of Kandahar are met.

This is the most prudent, sustainable course of action, calibrated to balance our responsibility to taxpayers with our strategic interests in Afghanistan. The United States cannot afford to spend hundreds of millions of dollars required to provide indefinite subsidies for diesel power generation.

In terms of the United States' broader engagement in the region, USAID and the Department of Defense (DoD) have been working for more than 10 years to help the Afghan government improve electricity availability for southern Afghanistan, including Kandahar city, to promote security and stability, public confidence in the Afghan government, economic development, industrial output, and improved quality of life. By 2009, USAID helped facilitate electricity access by fully rehabilitating two turbines at the Kajaki power station, which provided additional electricity for 80,000 households in Kandahar and Helmand, and by rehabilitating existing generators in Kandahar City. In 2011, the United States identified delivery of electricity to Kandahar as a top counterinsurgency objective and a critical complement to the surge in U.S. forces. To that end, DoD commenced providing fuel to generators to enable the Afghan government, through DABS, to provide increased electricity to Kandahar. These efforts were supported by funds from the Afghanistan Infrastructure Fund (AIF), funds which from the outset were intended to be temporary and which are no longer appropriated by Congress.

Post-2015, the Afghan government's short- and long-term solutions to provide reliable and sustainable electricity to Kandahar City include purchase of diesel fuel, completion of the Kajaki hydropower dam through the installation of the final turbine, connection of the northern electricity grid (NEPS) into Kandahar, and the addition of modest but scalable solar generation into the system. To buttress these projects, USAID has also provided training and technical assistance to DABS to improve its revenue generation strategies and cost-recovery capacity. USAID will continue to support DABS in these efforts, but ultimately the responsibility for Kandahar's electric power supply lies with the Afghan government

Below please find responses to the four questions in SIGAR's letter.

1. Will the United States continue to fund the Kandahar Bridging Solution after September 30, 2015? If so, please provide an updated description of those plans, including the amount of fuel and funding needed, by month, for the estimated duration of this extended effort.

The United States has no plans to continue to fund the Kandahar Bridging Solution after September 30, 2015. The Afghan government has not asked for any assistance beyond the agreed upon end date for fuel subsidies. The two DoD-built power plants were transferred to DABS in December 2013. DABS, local, and provincial governments have the ability to operate and maintain these plants, as well as distribute, meter, and generate revenue from these plants. To assist DABS with the planned transition, and per the transfer agreement negotiated with the Afghan government and DABS, United States Forces-Afghanistan (USFOR-A) provided spare parts, consumable materials for operations and maintenance, operator training, and technical assistance in addition to a gradually declining fuel subsidy that extends through September 2015.

2. Will the installation of the additional turbine for Kajaki Dam Unit 2 be completed and operational by March 2016?

a. If not, please provide the revised timelines for the additional turbine to be installed and operational.

The revised completion date for the additional turbine is May 2016 (Attachment 1). The date was revised due to the recent Afghan National Security Forces offensive against the Taliban in the area surrounding the Kajaki site.

3. USAID officials in Afghanistan told SIGAR that USAID intends to solicit bids within the next few months on a contract for a solar power system. Does the United States have plans to support the construction of a solar power system to generate electricity for Kandahar City?

Consistent with its approach of encouraging private investment in Afghanistan, USAID is facilitating a public-private partnership to support the building and operation of at least one solar power plant up to 10 MW in size based on the technical capacity of the current grid configuration

Through a process known as a reverse auction, independent power producers will bid down the price at which they would sell power to DABS. The successful bidder will enter into a power purchase agreement with DABS detailing the cost per kilowatt hour and amount of power to be provided. The cost for developing, constructing, operating, and maintaining the solar power plant will be borne by the private sector power producer. USAID will provide producers funding to reduce the cost of power sold to DABS below the bidders' price cap. This model was successful in India, Turkey and many other countries.

USAID will assist the Afghan government by providing technical consulting services on the auction process. USAID will help to ensure that Afghan government representatives have the appropriate skills and capacity to evaluate the private sector proposals, identify the private sector developer, decide on approvals and licenses, and negotiate the terms of the private sector arrangement.

If so, please answer the following:

a. Has a feasibility study or assessment evaluating the viability of a solar power system to generate electricity for Kandahar City been conducted since the May 2010 study administered by USAID's Afghanistan Clean Energy Program? If so, please provide copies of any studies or assessments, including system specifications (e.g., array size, total energy generation capacity, total acreage required) and life cycle cost information (e.g., capital costs, operation and maintenance costs, replacement costs, other costs).

A feasibility study was conducted in June 2014, by Tetra Tech (Attachment 2). The study provides a high-level feasibility evaluation to determine if a photovoltaic (PV) power plant in Kandahar could replace 30 percent of diesel-based electricity production to provide fuel cost savings over time.

The study noted that to replace 30 percent of diesel generation with PV generation, the PV system would need to produce 35,036,208 kWh per year. Preliminary estimates indicate that a PV system capable of producing 35,036,208 kWh per year would require a significant amount of land area and investment well beyond the USAID amount. Several small sites were

recommended to allow incremental decreases in diesel production as each of the PV sites is built and brought online.

b. What sites in or near Kandahar City are being considered as potential locations for this solar power system? Please provide Global Position System or Military Grid Reference System coordinates and explain the extent to which land ownership and property rights issues have been resolved for these potential sites.

Maps displaying the current site location are available for viewing at the Mission. For security reasons, these maps and Global Position System coordinates are not public.

The current land transfer agreement is with the President of the Government of Afghanistan. Upon receipt of his signature, the required land will be transferred.

c. What will be the source of funding for construction of the solar power system? Please identify the funding source and the name of the U.S. agency that will provide and administer these funds.

As noted above, USAID will provide funding to “buy down” the electricity cost and will also provide technical assistance to DABS to develop the competitive procurement for renewable energy. USAID will provide these funds from existing resources in the Strategic Objective Agreement with the Afghan government.

d. What are the estimated dates for starting and completing construction of this solar power system? Please explain how the U.S. will monitor the progress of the project given the security environment in the Kandahar region and the increasingly limited number of U.S. personnel in Afghanistan.

USAID’s discussions with DABS have indicated a solicitation should be in place by August 2015. Based on this timeline and barring any unforeseen impediments, the estimated date for starting construction is December 2015 and completion of the solar power system by August 2016.

The private sector developer and the Afghan government will have the responsibility to monitor progress, depending of the terms of the power purchase agreement. However, USAID will monitor progress of the USAID-funded portions using the five-tiered monitoring approach that is applied to all projects. Infrastructure projects in particular make extensive use of tier five, third-party monitors. USAID uses dedicated quality assurance contracts for these third-party services and intends to continue to use this approach going forward.

e. What Afghan government entities will be responsible for operating, maintaining, and sustaining this solar power system? To what extent do those entities have the required financial management and human resources capacity to sustain this system? Please provide copies of any capacity assessments of responsible Afghan government entities conducted since January 2013.

The private sector entity that successfully bids on this project will construct, operate and maintain the solar system throughout the term of a power purchase agreement to be negotiated

with DABS. USAID intends to provide extensive training and capacity building to DABS for managing power purchase agreements with independent power producers so that the Afghan government can replicate this model for future projects. Technical assistance for financial management, including the optimal rate structure for the solar power system shall be provided under the DABS Corporate Management Support contract. This optimal structure will be affordable to DABS and provide an adequate rate-of-return to the investors in the solar project.

4. What other alternatives, if any, are under consideration for ensuring that reliable and sustainable electric power is provided to Kandahar City? Please provide a detailed description of these alternatives, including their feasibility, projected costs, and construction start and completion dates.

The United States government sustainable power initiative for Kandahar City includes the installation of a third turbine (Unit #2) at Kajaki Dam, rehabilitation of the transmission lines between Kajaki Dam and Kandahar City, and installation of the transmission line connecting the Northeast and Southeast Power Systems. Long term, Kandahar should have access to power from Kajaki, the solar grid, the diesel generators, hydropower from Kabul, and imported gas generated power from the north. All of these efforts will contribute to more reliable electric power supplies for Kandahar, but ultimately the Afghan government is responsible for ensuring reliable and sustainable power for Kandahar City.

The Afghan government and DABS have recently agreed to provide diesel fuel to support the basic operations of the Shorindam Industrial park beginning October 2015 until the third turbine at Kajaki is fully operational (Attachment 3).

We appreciate SIGAR's attention to this important issue.

Sincerely,



Jonathan Carpenter
Deputy Special Representative
for Afghanistan and Pakistan

Attachments:

- 1 – Installation of Turbine Generator Unit #2 at Kajaki Dam Hydropower Plant
- 2 – Feasibility Study
- 3 – Kandahar fuel procurement letter and translation

cc:

Mr. Alfonso E. Lenhardt
Acting Administrator, U.S. Agency for International Development

Donald L. “Larry” Sampler
Assistant to the Administrator for Afghanistan and Pakistan Affairs