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Eagle's Summit Revisited

Decision-Making in the Kajaki Dam Refurbishment Project

EXECUTIVE SUMMARY

The USAID-led effort to install an additional hydroelectric turbine at the Kajaki Dam power station in northern Helmand has been among the most costly development projects in Afghanistan since 2001, yet nearly eight years after the contract was signed for its installation, the turbine remains offline. Of particular note in the saga was a large-scale British-led military transport operation that brought parts for the turbine to the dam by force in summer 2008. This paper revisits that operation, seeking to explain why, despite widely recognized warning signs that the turbine would not be producing electricity for destination cities in the foreseeable future and at a time when insurgency was raging and British troops were spread thin in Helmand, the decision was made to devote enormous military resources to transporting the turbine to the dam. In exploring this decision-making process as a case study, I address broader questions about how wartime development aid is implemented in practice, particularly when multiple organizations with different interests and ways of doing things are involved.

The installation of a third turbine (referred to as Turbine Two because it was to sit between the existing turbines) appealed strongly to USAID's development specialists, who saw it as a discrete task which was technically possible and could be presented as a key contribution to the counterinsurgency effort. Over time, Turbine Two became a way for both the American aid agency

and the British military to show their mettle to a dominant US Department of Defense. The turbine thus took on significance beyond the actual 18.5 megawatts of electricity that it was to provide, especially bearing in mind that this would, in fact, put only a small dent in the ever-increasing demand for electricity from southern Afghanistan's cities. And so, this paper argues, the transport operation went forward not because it was in some objectively logical sense the best way to serve the war effort at the time, but because it served the particular interests of the organizations that championed it.

1. INTRODUCTION

In summer 2008, in what was hailed as the largest British-led 'route clearance operation'¹ since World War II, nearly 5,000 International Security and Assistance Force (ISAF) and Afghan troops transported eight 20-to-30 tonne components of a hydroelectric turbine some 180 km from Kandahar Air Field to the Kajaki (sometimes transliterated as Kajakai) Dam in Helmand province.² The brainchild

¹ With roadside explosive devices and ambushes among the most common means of insurgent attack in wars in Iraq and Afghanistan, operations to clear routes for convoys have become a routine preoccupation and necessity for forces waging counterinsurgency.

² Alastair Leithead, 'UK troops in Huge Turbine Mission', *BBC News*, 2 September 2008. Jeremy Page, 'Triumph for British forces in Boy's Own-Style Kajaki Mission', *The Times*, 4 September 2008.

of the United States Agency for International Development (USAID), the turbine's installation was to provide an estimated 1.7 million people with electricity and to fuel agriculture and industry in the region, while in the process winning hearts and minds for the Afghan government and its foreign sponsors.³ Four years later, those parts remain in storage beside the dam, the project having been halted a year after Turbine Two was delivered in recognition of the inability to bring the approximately 900 tonnes of concrete and aggregate (sand, gravel, crushed stone, etc.) needed to actually mount the turbine in the dam's power station.⁴

Efforts to install Turbine Two have recently been restarted, with USAID currently in the process of bringing in a new subcontract for the job. Delays, however, are already evident.⁵ On the occasion of these renewed efforts, it is worth revisiting the chain of events and decisions that led to the operation, dubbed 'Eagle's Summit', or 'Oqab Tsuka' in Pashto, that brought the turbine to Kajaki four years ago. The purpose of this study is not to tell a story of personal accomplishment or incompetence on the part of its individual implementers. Rather, I explore how structural factors – inter-organizational dynamics of competition as well as intra-organizational turnover and ideology – can help explain the timing and reasons for the decision to transport the turbine to the dam in 2008.

After outlining the methods and theoretical underpinnings of my research, I provide both an overview of relevant technical issues and a chronology of the project up until the turbine's installation was abandoned in late 2009. I situate the project's progress in the broader context of counterinsurgency efforts in southern Afghanistan.

³ Ron Synovitz, 'Afghanistan: Local Taliban Defeat Raises Hopes for Dam Project', *RFE/RL*, 12 January 2007.

⁴ Embassy Kabul, 'Kajaki Dam: More Energy Awaits Enhanced Security', 29 October 2009, REF: 08 KABUL 2546. Available at www.wikileaks.ch.

⁵ Interviews with sources, 1 September and 6 December 2012. In September, a USAID official told me that their conservative estimate for project completion was December 2014. However, USAID officials had told auditors from the Office of the Special Inspector General for Afghanistan Reconstruction earlier this year that Turbine Two would not realistically be installed before late 2015 or early 2016. Likewise, in its most recent quarterly campaign assessment issued to the ISAF Joint Command this month, ISAF Regional Command – South cited 2016 as a plausible date for the completion of the turbine's installation.

Ibid. SIGAR, 'Fiscal Year 2011 Afghanistan Infrastructure Fund Projects Are Behind Schedule and Lack Adequate Sustainment Plans', Audit-12-12, 30 July 2012, 10.

Section 3 consists of my explanations for why the decision was made when it was to transport the turbine to the dam, despite foreseeable obstacles in completing its installation or delivering additional electricity to destination cities and urgent calls for troops to be deployed in other parts of Helmand. I argue that decision-makers in both USAID and the British military perceived a need to prove their respective organization's competency with a large-headline project that aligned with the prevailing discourse equating development with counterinsurgency success. Additionally, the rapid turnover of British military units at the time made commanders loath to change plans to which they had already committed. In Section 4, I conclude with an update on the current state of the hydroelectric project and suggestions for how my arguments about Kajaki as a case study might be generalized and provide lessons about inter-organizational collaboration in comparable situations.

1.1 Methodology

In July through December of this year I conducted twenty-four interviews with current and former employees of USAID, the Helmand Provincial Reconstruction Team (PRT), the Afghan energy utility Da Afghanistan Breshna Sherkat (DABS) and private contracting firms that were involved in the Kajaki project, in addition to other officials from the US, UK and the provincial governments in Kandahar and Helmand.⁶ Interviews were conducted either in person or by phone, as many foreigners working on the project during the time under study have since left Afghanistan. Three interviews with Kandahar government officials were done with the help of a Pashto translator; all others I conducted alone in English or Persian. Some people were interviewed more than once or asked follow-up questions via email. All interviewees spoke with the assurance that their names would not be published, nor would any information from which they could be individually identified.

In addition to interviews, news and internal technical reports, contract and budget documentation related to the dam, and US State Department cables released by Wikileaks provided data on what different actors knew and were concerned with at different stages of the project, and on technical aspects of the dam and its

⁶ Despite my best efforts to make contacts through both official and unofficial channels, I was unable to interview anyone from the British military who was involved with Kajaki. This lacuna is evident in my analysis.

refurbishment. Accounts from journalists who have worked in the region, both published and gleaned from interviews, helped to fill in blanks about organizational cultures and, along with monographs and books concerned more generally with the Afghanistan war and international state-building project, placed the Kajaki project in broader context.

USAID, the British Ministry of Defence, DABS, and the firms Louis Berger Group, Black & Veatch, and the China Machine-Building International Corporation were given a draft of this report before its release and the opportunity to respond with comments or clarifications. USAID did provide feedback and I revised the report where appropriate.

1.2 The Organizational Sociological Perspective

This study uses an approach drawn from organizational sociology, which, rather than treating outcomes as just the result of the intentional actions of individuals, focuses on the social structures that shape those individuals' behaviour. The way the members of organizations are socialized to view the world in a particular way, the way organizations are internally structured – in the present case particularly in terms of the rate of turnover of members – and the broader regulatory and competitive environments in which organizations operate are all brought to the table when members sit down to make intentionally rational decisions.⁷

The organizational sociological perspective is useful in showing that, although in hindsight actions may be reinterpreted as inevitable rational steps toward a coherent goal, decisions cannot be abstracted from the social conditions under which they are made, or easily predicted as the only rational option available.⁸ Current USAID officials might describe the decision to transport Turbine Two to the dam as simply a logical step in the larger linear process of building up southern Afghanistan's energy infrastructure, but that fails to explain the particular timing of the operation or why it was prioritized over other options, and gives only an incomplete view of the operation's significance to its participants at the time. Also,

one should not assume goals to be singular – indeed counterinsurgency (COIN) and developmental goals have often called for different approaches and timetables. Goals might be better viewed as the products of bargaining and competition among groups with different outlooks and interests.⁹

Of particular interest for this paper is the 'garbage can' model, which describes organizational behaviour under conditions of 'organized anarchy',¹⁰ wherein the goals of various participants are not centralized or uniform, processes are ad hoc rather than pursued following a pre-set formula (as would, for example, an assembly line) and the participation and level of effort devoted by different actors is variable over time.¹¹ Development efforts in international conflict zones are a prime example of organized anarchy. They require the collaboration of civilian developmental organizations (in this case both public and private sector), armed forces (in this case, from multiple nations) and local state apparatuses (each of which have different worldviews and priorities). Moreover, the unpredictability of violent insurgency necessitates an ad hoc approach. The garbage can model is so named because it envisions problems as

... convenient receptacles for people to toss in solutions that happen to interest them, or for interests that are not being met at the time. The can, with its problems, becomes an opportunity or resource. Depending on the number of cans around, the mixes of problems in them, and the amount of time people have, they stay with the particular can or leave it for another. The problem, then, gets detached from those that originally posed it, may develop a life of its own, or get transformed into quite another problem.¹²

Organizations both conceptualize and try to solve problems according to their existing repertoires of

⁷ Charles Perrow, *Complex Organizations: A Critical Essay*, New York, Random House 1986, 121–8. Diane Vaughan, 'Theorizing the Dark Side', unpublished paper, Columbia University Department of Sociology, 2010.

⁸ Robert Jervis, *System Effects: Complexity in Political and Social Life*, Princeton, Princeton University Press 1997, 5–17.

⁹ Perrow, *Complex Organizations*, 133–4 [see FN 7].

¹⁰ In the sociological literature, 'organized anarchy' is generally used to refer to processes within individual organizations possessing discussed characteristics. I instead use organized anarchy here to characterize the interrelation of the changing set of organizations involved in the project over time, whose mutual subordination to states ostensibly working towards the same goals did not prevent them from acting according to perceived corporate interests or exercising a degree of autonomy in deciding how or whether they would participate in the project.

¹¹ Michael D. Cohen et al., 'A Garbage Can Model of Organizational Choice', *Administrative Science Quarterly* 17/1 (1972), 1–25.

¹² Perrow, *Complex Organizations*, 135 [see FN 7].

action, choosing solutions not through a purely rational weighing of all possible options but by doing things the way they know best and the way they have been socialized to believe is best. This point will become significant when discussing the appeal of Kajaki as a technical and sustainable solution. The relevance of the second half of the quotation, that problems can become detached from their original owners and meanings, will be apparent in the discussion of the changing significance of the turbine operation as the British military came to champion the plan.

2. A HISTORY OF THE HYDROELECTRIC PROJECT

The Kajaki Dam was built in the 1950s by the American firm Morrison-Knudsen on contract for Afghanistan's then-royal government, with two 16.5-megawatt (MW) hydroelectric turbines subsequently installed by USAID in 1975, along with 110 volt (v) transmission lines and substations that distributed their energy to the region. The dam's power station has space between the two existing turbines (One and Three) for a third (Turbine Two), which was not installed before the US withdrew its aid to Afghanistan in 1979 following the communist coup and subsequent Soviet military intervention.¹³

Afghan engineers continued to operate and maintain the power station but by the 'mujahedin period' of civil war in the early 1990s, the electric grid had fallen into disrepair. Transmission lines from the dam to Durai Junction substation (see Figure 1) were looted and what electricity the dam – now operating far below capacity – produced reached only its immediate surrounding area. After the Taliban came to power in southern Afghanistan, one Mullah Abdul Samat Khojandi was appointed energy and agriculture chief for Kandahar and Helmand; he restored the transmission lines to Lashkar Gah, the capital of Helmand province, and to Kandahar. The Taliban however lacked the proper parts and expertise, installing 120 mm² conductor cable from Kajaki to Durai Junction, despite the fact that the 150 mm² cables running the second leg (from the substation

to Lashkar Gah and Kandahar) necessitated cable of at least equal cross sectional area, ideally 180–200 mm², for the first leg (from the dam to the substation). The transmission lines were incapable of carrying the electrical load of the two existing turbines if operating at full capacity, but this was not an issue at the time, as by the time of the Taliban's ouster in late 2001 the power station was generating only a few megawatts of electricity, mainly for local consumption.¹⁴

On 5 August 2001, the Taliban's Islamic Emirate of Afghanistan had signed a contract with the China Machine-Building International Corporation (CMIC) to design, manufacture, deliver and install a third turbine (referred to as 'Unit 3' in the CMIC contract and 'Turbine Two' after 2001), at the projected total expense of USD 3,494,000 excluding the costs of local labour and transportation from Karachi to Kajaki – a staggeringly low sum compared to what USAID would later invest in the project.¹⁵

Regime change precluded the implementation of this contract. Aside from repairs in early 2002 to transmission lines damaged by airstrikes in November 2001,¹⁶ the first steps toward a hydroelectric development project at Kajaki were visits to assess the dam's condition by the United Nations Office for Project Services (UNOPS) in June 2003 and then by Louis Berger Group (LBG), a US-based infrastructure firm that would go on to implement much of USAID's contracted work on the Kajaki hydroelectric project,¹⁷ four months later.¹⁸ Subcontractors working for LBG arrived to

¹⁴ Interviews with sources, 22 August 2012. Richard B. Scott, 'Edited Consultancy Report', Central Asia Development Group Cotton & Alternative Crops Pilot Project, 6 June 2002, 9–10.

¹⁵ 'Contract for Kajaki Power Station Unit 3# [sic] Project in Afghanistan', between the Islamic Emirate of Afghanistan Ministry of Water & Power and the China Machine-Building International Corporation, Kabul, Contract No. 01AFCMICYS001C, 5 August 2001.

¹⁶ US Trade & Development Agency, 'Project Resource Guide – Afghanistan: Rebuilding a Nation', Power Sector Profile No. 3, Chicago, June 2003, 10.

¹⁷ A reader from USAID pointed out that referring to the post-2001 Kajaki hydroelectric project in the singular may give the misperception that the various different contracts and processes that I describe under this umbrella term have been part of a single continuous official program that has dragged on for a decade. As I will subsequently detail, there have, in fact, been a number of discrete smaller projects. Nevertheless, it seems reasonable to bundle all these efforts together terminologically, given they all share a common end goal – using the dam to provide more reliable electricity to the region. Email correspondence, 20 December 2012.

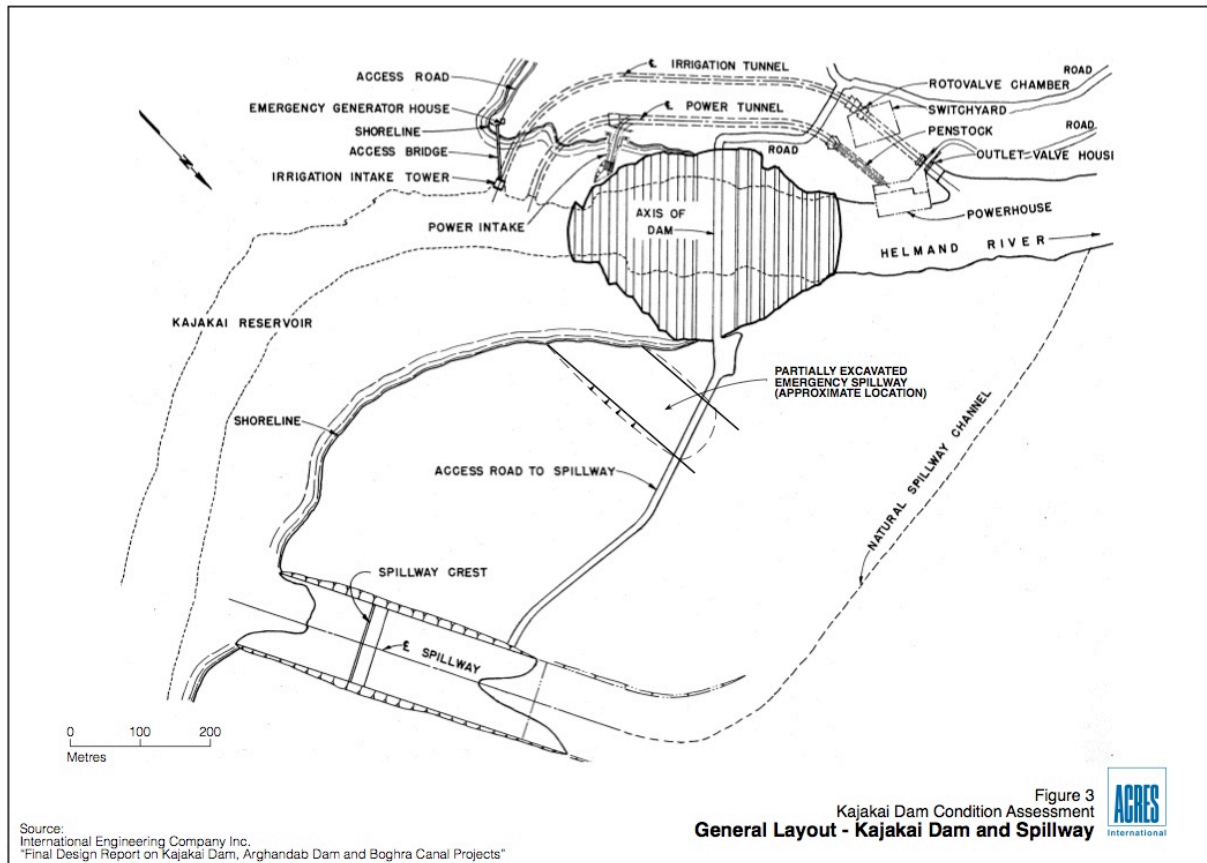
¹⁸ Robert A. Joyet, 'Kajakai Project Geotechnical Work', Advanced Engineering Associates International, Inc.

¹³ Rajiv Chandrasekaran, *Little America: The War Within the War for Afghanistan*, New York, Alfred A. Knopf, 2012, 24–7 & 278–9. Nick Cullather, 'Damming Afghanistan: Modernization in a Buffer State', *The Journal of American History* 89/2 (September 2002), 515. Interview with source, 22 August 2012. Acres International Ltd. for Louis Berger Group Inc., 'Kajakai Hydroelectric Project Condition Assessment Dam Safety Assessment Report', April 2004, 2–5.

find Turbine One inoperative and partly dismantled and Turbine Three functioning but overheating.¹⁹ According to an Afghan engineer working at Kajaki at the time, Turbine One was in bad shape and in need of frequent repairs but never broke down completely, producing about 4 MW before it was refurbished, while Turbine Three was capable of generating 11–13 MW.²⁰ In its first report, LBG also estimated that it would take 25 months and USD 18 million to install Turbine Two and make the necessary

Turbine One was first on the agenda for the Southeast Power System (SEPS), new shorthand for the Kajaki hydroelectric station, transmission lines to Lashkar Gah and Kandahar, and substations along the way. In December 2003 USAID signed with LBG, which in turn subcontracted the work to the German joint venture Voith-Siemens to rehabilitate the unit. It is important to note that the various elements of the Kajaki hydroelectric project have been 'off-budget' from the start (2003), meaning that financing for each of the

Figure 1
Kajakai Dam and Spillway



Source: Acres International Ltd. for Louis Berger Group Inc., 'Kajakai Hydroelectric Project Condition Assessment Dam Safety Assessment Report', April 2004

upgrades to the facility's mechanical and electrical systems.²¹

contracts relating to the project has circumvented the Afghan government.²² According to

report for USAID – Afghanistan Energy Assistance Program, Washington DC, August 2006. Spc. Jim Wagner, 'Getting Power to People a High Order in Afghanistan', *Freedom Watch*, 23 June 2003.

¹⁹ Acres International Ltd. for Louis Berger Group, 'Kajaki Hydroelectric Generating Station Mechanical and Electric Equipment and Accessories Condition Assessment Report', November 2003, 1–1.

²⁰ Interview with source, 22 August 2012.

²¹ Acres International, 'Kajaki Hydroelectric Generating Station', 60–1 [see FN 13].

²² Since 2001, most aid from foreign governments to Afghanistan has been 'off-budget,' with the first ever 'on-budget' effort in the power sector set to begin in 2013. 'On-budget' funding is channelled through the Afghan Ministry of Finance and has in many cases been avoided because of concerns about Afghan capacity, efficiency, and corruption, and because of the greater financial and programmatic control that 'off-budget' aid offers the donor. Email correspondence, 20 December 2012. 'Evaluating U.S. Foreign Assistance to Afghanistan,' majority staff report prepared for the use of the United States Senate Committee on Foreign Relations, S. PRT. 112-21, 8 June 2011, 18-19.

interviewees, neither the Afghan Ministry of Energy – which officially has administrative control over the facility – nor the local administrations in Kandahar or Helmand have played a significant role in the technical planning or implementation of the project, although USAID and its contractors have closely coordinated their work on site with the Afghan energy utility, DABS, and its predecessor, Da Afghanistan Breshna Moassessa, which operates the hydroelectric facilities day-to-day. The refurbishment of Kajaki nonetheless was and is a USAID project, supported by the White House and State Department.²³

In 2004, USAID and LBG prepared a contract for the manufacture and installation of the missing Turbine Two. The issuing of the contract was delayed because Voith-Siemens's bid that summer was deemed prohibitively expensive at USD 20 million (excluding some important and expensive items), causing USAID to look for a 'second-tier' manufacturer.²⁴ CMIC (the Taleban-era Chinese contractor) was brought back in, signing on 26 January 2005 to replace Voith-Siemens as LBG's subcontractor for Turbine Two and to refurbish Turbine Three; it was given notice to proceed with fabricating parts in July. The contract called for both turbines to be up and running by June 2007.²⁵

In January 2006, Voith-Siemens, which had retained the contract for the refurbishment of Turbine One, finished its work ahead of schedule and the unit was brought online,²⁶ just as it was becoming clear that security would henceforth be a major problem for the Kajaki project.

²³ Interviews with sources, 16 July, 8 August, 22 August, 26 August and 1 September 2012. Glenn Zorpette, 'Re-engineering Afghanistan' *IEEE Spectrum*, October 2011.

²⁴ Louis Berger Group Inc. for USAID/Afghanistan Rehabilitation of Economic Facilities and Services (REFS) Program, 'Biweekly Report: Summary of LBG Activities under USAID', 7 September 2004.

²⁵ 'Excerpt from Report by Afghan Radio on 26 January', *BBC Monitoring* translation of *Radio Afghanistan* report, 26 January 2005. LBG/B&V answers to McClatchy Newspapers National Correspondent questions, 14 October 2009. Questions posed for the article: Marisa Taylor, 'Costs of Afghanistan Projects Soar, Benefits Exaggerated', *McClatchy*, 25 October 2009. United States Agency for International Development, 'Civil, Erection, Installation, Testing and Commissioning of a Chinese Manufactured 18.5 MW, 50 Hz, Vertical Shaft, Francis Type Hydroelectric Turbine-Generator at Kajaki, Afghanistan', Solicitation Number: 306-09-0531, 24 June 2009.

²⁶ USAID Office of Inspector General, 'Audit of Critical Power Sector Activities under USAID/Afghanistan's Rehabilitation of Economic Facilities and Services Program', Audit Report No. 5-306-07-004-P, 21 May 2007, 4.

2.1 Spillway Gates

Refurbishing the existing turbines and installing a third were not the only ways to improve the dam. In fact, before the Turbine Two project began in earnest, an initiative was started to install gates that would regulate the amount of water flowing through a spillway from the reservoir to the Helmand River. Spillway gates would raise the level of the reservoir by 10–15 meters and increase its volume from a peak of about 1.7 billion cubic meters to 2.7 billion cubic meters²⁷ by trapping more of the water flowing during the spring for use in both power generation and agriculture during the drier summer and fall months. Construction of these gates had been planned from the start and Japanese-made gate components were even delivered to the dam in the late 1970s, but left uninstalled when the US pulled out of the country. The lower water level during the dry months means there is less 'hydraulic head' pressurizing the water that flows through the turbines, and so in late summer and through winter, there has generally been insufficient pressure to operate even the two existing turbines at full capacity.²⁸ In January 2012, for instance, the power plant was producing only about 24 out of its potential 32 MW because with water being diverted for irrigation, there was not enough pressure to run Turbines One and Three at full power.²⁹ Installing spillway gates was also a necessary pre-requisite for the construction of a second, higher-capacity power station, which USAID viewed as a long-term goal.³⁰

In its initial November 2003 assessment of the dam's condition, LBG's subcontractor noted that the main components for the gate were on site and in generally good condition; the subcontractor recommended that the components be cleaned and maintained and that the spillway gates be incorporated into the final design for the dam refurbishment project.³¹ Plans for the installation

²⁷ Acres International, 'Kajakai Hydroelectric Project Condition Assessment', 2–8 [see FN 13]. Robert A. Joyet, 'Kajakai Project Geotechnical Work', Advanced Engineering Associates International, Inc. for USAID – Afghanistan Energy Assistance Program, Washington DC, August 2006.

²⁸ Asian Development Bank, 'Report and Recommendation of the President to the Board of Directors on the Proposed Loan and Technical Assistance to the Republic of Afghanistan for the Kajakai Gates Project in Afghanistan', 12 November 1974, 1–4. Interview with source, 22 August 2012.

²⁹ Zainullah Stanikzai, 'Helmandis Fret Over Frequent Power Outages', *Pajhwok News Agency*, 31 January 2012.

³⁰ Interview with source, 1 September 2012.

³¹ Acres International, 'Kajaki Hydroelectric Generating Station', 2–7 [see FN 19].

of the spillway gates continued to move forward; however, one stumbling block was that the reservoir was lined with villages that would be flooded when the water level rose. USAID and the World Bank, which was at the time providing project funding, insisted that villagers be relocated according to World Bank standards for involuntary displacement: 'Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation. . .'³² and villages couldn't simply be moved back to the new edge of the reservoir, because in many places that would mean being pushed up onto hillsides less suitable for agriculture.

This proved much more difficult than expected, as the subcontractor³³ responsible for conducting a sociological survey of the villages around the dam – travelling by boat and counting and taking GPS coordinates of households and determining how they could be suitably relocated – soon stumbled onto the complexities of local tribal rivalries³⁴ and eventually resorted to a never-completed colour-coded jigsaw puzzle of which groups were compatible or semi-compatible with which others. Determining who had a 'legitimate' claim to what land was all the more difficult because many of the groups had either been resettled to the area by the pre-communist Afghan government or had come to the area after being displaced by civil war or living as refugees abroad.³⁵ Finding suitable land for relocation (with access to water and soil that was neither saline nor riddled with unexploded ordnance) was also easier said than done and highly political. Even the logistics of visiting the more far-flung villages became an obstacle, as the lake was too shallow for the available boats to navigate and overland routes were unpaved,

unmarked and increasingly dangerous. By the fall of 2005, Sangin district – through which Route 611 to Lashkar Gah and Kandahar passes – was largely in Taleban hands, and after an attack on one of their convoys in late summer, expatriate staff were allowed to travel between Kandahar and the dam only by helicopter.³⁶

The contract for assessments preceding spillway gate installation was incomplete and not renewed in 2006, and to the best of my knowledge no progress has since been made on the spillway gates. A current USAID official mentioned that the issue is still occasionally raised, but despite, 'a lot of talk and conjecture and wishful thinking,' no funding has been allocated or definite plans made on the matter.³⁷

2.2 Deteriorating Security

At the beginning of 2006, the British, with the 16 Air Assault Brigade of 3,500 (fewer than a thousand of them combat troops), became the main foreign military force in Helmand, replacing the Americans, who after the fall of the Taleban, had kept only a token presence of Special Forces and then, in 2004, had added about two hundred National Guardsmen for a Provincial Reconstruction Team.³⁸ Despite UK Defence Secretary John Reid's memorable assertion that, 'we would be perfectly happy to leave in three years' time without firing one shot because our mission is to protect reconstruction,' violence across southern Afghanistan escalated dramatically that year, with the Taleban in control of most of Helmand and nearly overrunning the small British garrisons scattered across the towns of Now Zad, Sangin, Musa Qala and at the small Forward Operating Base, Zeebrugge, at the Kajaki dam.³⁹

³² World Bank Operational Manual OP 4.12 – Involuntary Resettlement, December 2001. Available at <http://go.worldbank.org/96LQB2JT50>.

³³ UNOPS was USAID's implementing partner for this project, and contracted the sociological and environmental assessments to the New Zealand firm Maunsell Ltd., which in turn brought Altai Consulting in to help with the sociological survey. Interview with source, 31 July 2012.

³⁴ Members of the first local survey team trained were arrested en masse before the project even began: Altai Consulting had inadvertently recruited from an Alizai sub-tribe at odds with then-Helmand Governor Sher Mohammad Akhundzada, and was forced to start from scratch with a new team. Ibid.

³⁵ Ibid. Sir Sherard Cowper-Coles, *Cables from Kabul: The Inside Story of the West's Afghanistan Campaign*, London, HarperPress, 2011, 47.

³⁶ Interviews with sources, 31 July and 20 August 2012. Maunsell/AECOM, 'Kajakai Environmental & Sociological Assessment – Combined Fourth/Fifth Report', for UNOPS, August/September 2005. Mark Moyer, 'The Third Way of COIN: Defeating the Taliban in Sangin', *Orbis Operations*, July 2011.

³⁷ Interview with source, 1 September 2012. See also discussion of raising the reservoir level as a possible future enhancement awaiting improved security in the following source: Embassy Kabul, 'Kajaki Dam' [see FN 4].

³⁸ David Rohde, 'Little America: An Afghan Town, an American Dream, and the Folly of For-Profit War', *Reuters*, 1 June 2012.

³⁹ Frank Ledwidge, *Losing Small Wars: British Military Failure in Iraq and Afghanistan*, New Haven, Yale University Press 2011, 65 and 72–8. Con Coughlin, 'General David Richards: Afghan Campaign Was Woeful', *The Telegraph*, 27 January 2012.

LBG last successfully travelled to the dam by road in May 2006, and by June 2006 the dam was under sustained siege by the Taliban. LBG evacuated its staff shortly thereafter, suspending its operations at the dam altogether (CMIC had not yet arrived). Approximately USD 15 million had been spent by that point on rehabilitating the power plant.⁴⁰ In late August 2006, US Ambassador Ronald Neumann visited the dam, with a subsequent State Department cable noting, 'The [Taliban] exercise full control outside the strong points that were visited, which protect the dam. The small force located at the dam has no capacity to project force or patrol.'⁴¹

The last act of the UK's 16 Air Assault was to make a deal brokered by the then Helmand Governor Mohammad Daud with residents of Musa Qala to withdraw from the town when their unit rotated out on 16 October in exchange for assurances that the Taliban would be kept out. The American ambassador, military establishment and succeeding Helmand governor came to view the move as a 'surrender' and a disastrous blunder after the Taliban took full control of the town in early February of the following year.⁴²

January and February 2007 saw heavy fighting in northern Helmand and short-lived claims that security had improved enough for reconstruction to continue.⁴³ In February, LBG tried one last time

— believing that the road was safer after military operations — to send a convoy of supplies and equipment overland to the dam, up Route 611, as part of an effort to re-establish a base camp for itself at Kajaki. It was ambushed by an estimated 200 insurgents and escaped with three employees killed. LBG subsequently gave up trying to set up a base.⁴⁴ According to State Department cables from March 2007, Helmand's new governor, Assadullah Wafa, responded to requests from the head of the USAID mission that he convince tribes along Route 611 to allow construction of the road to Kajaki to

Figure 2
Map of Kandahar-Hilmand Power Project circa 2012



Source: Courtesy of the Afghanistan Mission of USAID

move forward by pushing hard for military operations as a necessary prerequisite to any development work: 'In his opinion,' stated the cable, 'until more pressure was brought to bear in some districts like Sangin, influential elders would not be inclined to align their interests with those of the [Government of Afghanistan], e.g., on the Kajaki energy and infrastructure project.'⁴⁵

⁴⁰ USAID OIG, 'Audit of Critical Power Sector Activities', 2 [see FN 26].

⁴¹ Embassy Kabul 'Helmand Governor on Tribal Warfare Security, Need for Additional Assistance', REF: 06 KABUL 3935, 3 September 2006.

⁴² Embassy Kabul, 'PRT/Lashkar Gah – Governor Defends Deal with Musa Qala', 14 November 2006, REF: 06 KABUL 5487. Embassy Kabul, 'New Helmand Governor: Saying the Right Things', 19 December 2006, REF: 06 KABUL 5900. 'Last Year's Mistake Not to Be Repeated in Musa Qala, Wafa', *Pajhwok Afghan News*, 11 December 2007. Ledwidge, *Losing Small Wars*, 82–3 [see FN 37].

⁴³ Synovitz, 'Afghanistan: Local Taliban' [see FN 3]. Saeed Ali Achakzai, 'Hundreds of Taliban Massing to Attack Dam – Official', *Reuters*, 12 February 2007. 'NATO Says

Taliban Attack on Kajaki Dam Thwarted', *RFE/RL*, 13 February 2007.

⁴⁴ 'Comments from the Louis Berger Group on the Account of the Kajaki Hydroelectric Plant Reconstruction in IEEE Spectrum's "Re-Engineering Afghanistan," by Glenn Zorpette', IEEE Spectrum, October 2011. Available at <http://spectrum.ieee.org/energy/the-smarter-grid/reengineering-afghanistan/louis-berger-group>.

⁴⁵ Embassy Kabul, 'Taliban and Al Qaeda Focusing on Helmand', 1 March 2007, REF: 07 KABUL 679. Embassy Kabul, 'PRT/Lakshar Gah – Governor: Security Limits

Starting in early 2007, the British military launched 'clearance' operations in northern Helmand every few months, with territory repeatedly won and then ceded back to insurgents.⁴⁶ But by September more British troops and private security personnel had at least been stationed at the dam and had created a security bubble of about 6 kilometres in diameter around it.⁴⁷ It was safe enough that LBG and CMIC technical staff returned the next month – now traveling and resupplying solely by air – to begin the work of disassembling Turbine Three. The Taliban more or less remained in positions a few hundred yards away from the site through the time Turbine Two was transported to the dam, launching occasional mortar and rocket attacks.⁴⁸ The estimate for the date of completion of both turbine projects had, by this point, been (still very optimistically) pushed forward to 30 June 2008.⁴⁹

2.3 Eagle's Summit

CMIC representatives told USAID and LBG that Turbine Two parts would leave their factory in China in mid-April 2007 and arrive in Karachi, Pakistan by the end of June. USAID had already dispatched LBG to try to negotiate with local communities for their permission to transport turbine parts through their territory and had started talking with ISAF commanders about the need for a convoy to deliver Turbine Two parts.⁵⁰ This sparked a high-level debate on the subject.⁵¹ According to a British diplomat privy to meetings of what was called the 'war cabinet' – Afghan

President Hamid Karzai, the US and UK ambassadors, ISAF's commander (at the time, Gen. Dan McNeill) and a shifting cast of Afghan ministers and presidential advisers – US Ambassador Bill Wood was enthusiastic about USAID's plans and pushed for a transport operation that summer. The diplomat said that Afghan government officials did not take a strong stance one way or the other but appeared sceptical, and the move was opposed by British Ambassador Sir Sherard Cowper-Coles, who seemed to succeed in convincing his American counterpart that it would be a diversion of resources that they could not afford.⁵¹

It was a bit of a moot point. The shipment of the largest turbine parts from Karachi was delayed and they were redirected to Kabul instead of Kandahar.⁵² By the time the parts arrived that autumn, the British 12 Mechanized Brigade was about to rotate out of the country and there would be no way to plan and conduct a large-scale operation before winter set in.⁵³ A US State Department cable reported on 2 October 2007 that,

[The Kajaki Dam Rehabilitation] project is now 15 months behind schedule. Materials for rehabilitation of the existing turbines⁵⁴ have arrived in country and will be transported to the site once the security situation allow [*sic*]. Despite discussions with local tribal chiefs resulting in an agreement to provide a secure window of time for trucks to carry materials to the Kajaki site, the shipment did not occur.⁵⁵

Tribal Outreach Efforts', 28 March 2007, REF: 07 KABUL 1023. USAID management comments in response to USAID OIG, 'Audit of Critical Power Sector Activities', 11 [see FN 26].

Embassy Kabul, 'PRT Lakshar Gah: Helmand Semi-annual Review', REF: 07 KABUL 2468, 31 July 2007.

⁴⁶ 'Helmand Residents Cast Doubt on Success of NATO Operations', *Institute for War and Peace Reporting*, 21 June 2007. Ron Synovitz, 'Afghanistan: Joint Push Aimed at Recapturing Southern Town', *RFE/RL*, 7 December 2007.

⁴⁷ Carlotta Gall, 'Building a Dam in a Bid to End Afghan Instability', *New York Times*, 18 September 2008.

⁴⁸ Interview with source, 1 September 2012. 'Comments from the Louis Berger Group' [see FN 44]. Synovitz, 'Afghanistan: Joint Push' [see FN 46]. British troops did manage to reduce the threat to the personnel at Kajaki by taking high ground around the dam in December 2007. Interview with source, 26 July 2012.

⁴⁹ USAID Office of Inspector General, 'Audit of USAID/Afghanistan's Power Sector Activities under its Afghanistan Infrastructure Rehabilitation Program', Audit Report No. 5-306-10-002-P, 10 November 2009, 16.

⁵⁰ USAID OIG, 'Audit of USAID/Afghanistan's Power Sector Activities', 17 [see FN 49]. Interview with source, 5 September 2012.

⁵¹ Interview with source, 29 August 2012. Cowper-Coles, *Cables from Kabul*, 90 [see FN 35].

⁵² A USAID official working on the project at the time said the LBG mismanaged this delivery, which was among factors that led to the request by USAID's infrastructure office that LBG's head of party be replaced. It cost USAID approximately an additional USD 7.5 million to transport the turbine parts from Kabul to Kandahar. Interview with source, 1 September 2012.

⁵³ Two documents from 2009 – the solicitation USAID issued to find a replacement for CMIC and a USAID Office of Inspector General audit – stated that parts for Turbine Two arrived in Afghanistan back in June 2006, but they must be either confusing Turbine Two with Turbine Three or referring to minor components. USAID, 'Civil, Erection, Installation, Testing' [see FN 25]. USAID OIG, 'Audit of USAID/Afghanistan's Power Sector Activities', 9 [see FN 49].

⁵⁴ This cable's author seems to be confusing Turbines One and Two: Turbine One was already refurbished and running by this time and new parts were being brought in only for the existing *Turbine* (singular) Three and for the *new* Turbine Two.

⁵⁵ Embassy Kabul, 'AF: Update on Key USAID Power Projects', 2 October 2007, REF: 07 KABUL 3363.

Prospects of a turbine transport operation were raised again the next year, and the US government now found itself with a new ally. On the civilian side, British officials, including Ambassador Cowper-Coles and Hugh Powell, the British head of the Lashkar Gah PRT, still opposed the move as too risky and resource-intensive, but the Americans managed to win over 16 Air Assault Brigade, newly redeployed to Helmand that March, whose officers became enthusiastic about conducting the operation.⁵⁶

In June 2008, with the grudging acceptance of the British foreign ministry, ISAF committed itself to a transport operation from Kandahar Air Field, where the parts had been moved from Kabul. 16 Air Assault spent the next three months in preparation. Under discussion was not only the logistics of moving turbine parts, but also the transport of cement and aggregate for the turbine's foundations and the provision of security on the route up to Kajaki to allow the rehabilitation of transmission lines. According to an Afghan engineer working at the dam, the British military wanted to bring the cement and aggregate up in one big convoy, but the Chinese advised them it would have to be split into multiple shipments. The type of cement needed has a typical shelf life of 6–8 months – which the Afghan engineer told me is shorter in Kajaki's climate – and given that Turbine Two's installation would take many months and, for lack of space in the power station, couldn't even be commenced until Turbine Three was reassembled, there was no point in bringing it all up to the dam together with the parts.⁵⁷ As early as November 2007, a British reporter back from a tour of the dam had written that both Turbine Two parts and 300 tonnes of cement were waiting in storage, but I do not have further information about what became of that cement or how far along British plans to transport cement and aggregate to the dam got.⁵⁸ At any rate, the question of cement and aggregate was ultimately set aside for another day and the decision made to transport only the turbine parts to the dam.

As for Route 611 to Kajaki, the British military simply did not have the capacity to hold it. Route 611 leads to Kajaki from Durai Junction on the Ring Road that connects the country's major cities, winding to the east of the Helmand River through

steep valleys ideal for ambush. In summer 2008, it was in rough condition and had not been rehabilitated for the turbine move. USAID had planned to divide road construction work into several strips progressing from Durai Junction to Kajaki, but after the first contract for roadwork northward from the junction was issued in 2007 for about USD 8 million, the local contractor began receiving death threats and complained about being unable to recruit local labour because everyone expected attacks. This led USAID to terminate the contract after about six months without any work having been done, despite which about USD 5 million in costs were accrued.⁵⁹ Transmission line refurbishment along the route was meant to succeed road construction and so was a long way off.

A 3 July military simulation estimated that transporting the turbine up Route 611 would cost the British fifty dead and many more wounded. Then a reconnaissance team from 16 Air Assault found a second route up to Kajaki, a path – dubbed Route Harriet – further east through the desert which was not on their maps but was frequented by locals who wanted to avoid Route 611's roadside explosives and Taleban tolls.⁶⁰

And so, on 27 August 2008, the British-led convoy, a hundred vehicles with mostly American air support that was called in no less than 55 times, departed from Kandahar and took five days to reach the dam.⁶¹ After escorting the parts from Kandahar city, Canadian forces simultaneously led a decoy convoy up the expected path of Route 611, and were in fact the only ISAF forces to sustain casualties. News reports estimated more than 200 insurgents killed in the fighting. It was by all accounts a well-executed and successful mission, with all turbine parts delivered intact.⁶²

⁵⁹ Interview with source, 1 September 2012. United States Government Accountability Office, 'Afghanistan Reconstruction: Progress made in Constructing Roads, but Assessments for Determining Impact and a Sustainable Maintenance Program Are Needed', Report to Congressional Committees, GAO-08-689, July 2008, 21–2. Synovitz, 'Afghanistan: Joint Push' [see FN 46].

⁶⁰ Kiley, *Desperate Glory*, 175 and 187–91 [see FN 56]. The UN had actually used this same route as early as 2005, but apparently nobody informed the British military of its existence. Email correspondence, 6 December 2012.

⁶¹ Lt. Col. Gregg Bottemiller, 'Airpower Integral to Kajaki Dam Turbine Delivery,' *Air Force Print News Today*, 25 September 2008.

⁶² Terri Judd, 'Operation Eagle's Summit: The inside Story of a Daring Foray into Taliban Territory,' *The Independent*, 3 September 2008. Leithead, 'UK Troops in

⁵⁶ Sam Kiley, *Desperate Glory*, New York, Bloomsbury Publishing 2009, 184. Interview with source, 29 August 2012.

⁵⁷ Interviews with sources, 22 August and 1 September 2012.

⁵⁸ Matthew Hickley, 'Life at the Kajaki Dam Hydroelectric Power Station', *Daily Mail*, 30 November 2007.

2.4 Project Failure

In summer 2008, USAID tried to move forward once again with refurbishing the transmission lines, commissioning an aerial survey and searching for a contractor to implement repairs.⁶³ In tandem with Eagle's Summit, in August and September USAID requested a proposal to rehabilitate the transmission lines from the dam, once again in the hope that the different pieces of the Southeast Power System (SEPS) project would now come together by September 2009.⁶⁴ A local contractor, Afghan Electrical Power Corporation, placed a bid but then pulled out of the contract.⁶⁵ The work was never completed and the job of refurbishing the transmission lines and some of the substations along the way to Lashkar Gah and Kandahar was eventually handed over to the US Army Corps of Engineers.⁶⁶

In November 2008, with Turbine Three still in pieces and Turbine Two in crates, the Chinese contractors evacuated Kajaki, claiming, to the scepticism of LBG employees and State Department officials, that they had received credible kidnapping threats from the Taleban.⁶⁷ How they expected the Taleban to kidnap them from within the fortified dam complex which was protected by 150 private security personnel and 250 British soldiers is unclear;⁶⁸ nonetheless, citing the threat allowed CMIC to exercise the *force majeure* clause of their contract, conveniently freeing them from contractual liabilities and obligations.⁶⁹ An embassy cable from late that

month recounted efforts to bring the Chinese back to install Turbine Two, the installation schedule having once again been quietly shifted forward:

LBG/B&V JV is optimistic that CMIC will return in time to complete the installation of the new (third) turbine (for which CMIC is the vendor) on schedule by December 2009, but is making contingency plans to complete the work without CMIC if necessary.⁷⁰

But CMIC was not persuaded to return, despite an appeal by Ambassador Wood to his Chinese counterpart.⁷¹ Nothing became of contingency plans for Turbine Two, though LBG, together with personnel from the Afghan energy utility DABS, took over from CMIC to reassemble Turbine Three, transporting necessary parts from LBG's base camp to the southwest of Kajaki using Russian-piloted MI-26 helicopters at great expense and getting Turbine Three back online at nearly full capacity in late July 2009.⁷² Turbines One and Three were now producing about 32 MW, more electricity than the transmission lines were capable of carrying without rehabilitation.⁷³

Finally, in October 2009, despite talk that summer about another military convoy to bring in cement and aggregate,⁷⁴ USAID decided to shut the project down indefinitely. As a cable from the US embassy explained:

Unfortunately, implementing the next phase – a two-year, USD 170 million project to install a third on-site turbine and construct necessary transmission lines – requires improved security at the dam and in the area. Neither ISAF nor GIRA [the government of the Islamic Republic of Afghanistan] can commit to providing the required security until at least 2011, if then. Meanwhile, USAID's contract security for the parts stored on site is costing USD 1 million per month. Therefore, USAID will take immediate steps to mothball the

Huge Turbine Mission' [see FN 2]. Page, 'Triumph for British Forces' [see FN 2].

⁶³ Embassy Kabul, 'AF: Update on USG Energy Projects', REF: 08 KABUL 1481, 16 June 2008.

⁶⁴ Embassy Kabul, 'Update on USG and other Energy Projects', REF: 08 KABUL 2546, 17 September 2008. The same cable estimates a '30–40% loss of the power' generated by Turbine One, though it is unclear whether this is due to the state of the transmission lines alone, or also factors in electricity siphoned by communities along the lines' path.

⁶⁵ Interview with source, 7 August 2012.

⁶⁶ Interview with source, 1 September 2012. Karla Marshall, 'Corps of Engineers to Improve Access to Water, Power in Southern Afghanistan', *US Army Corps of Engineers News Archive*, 26 June 2012.

⁶⁷ Embassy Kabul, 'Are the Chinese Reliable Partners for Afghan Reconstruction?' REF: 09 KABUL 782, 30 March 2009.

⁶⁸ Embassy Kabul, 'Afghanistan: Update on Energy Projects – Fuel Shortage and other Setbacks Dominate Recent News', REF: 08 KABUL 3085, 30 November 2008.

⁶⁹ Zorpette, 'Re-engineering Afghanistan' [see FN 23].

Force majeure clauses are routinely written into contracts in many countries, and free both contracting parties from liability if extraordinary circumstances, such

as natural disaster or threats to security, prevent the fulfilment of contractual obligations.

⁷⁰ Embassy Kabul, 'Afghanistan: Update on Energy Projects' [see FN 69].

⁷¹ Ibid.

⁷² Interview with source, 22 August 2012. USAID OIG, 'Audit of USAID/Afghanistan's Power Sector Activities', 17 [see FN 49].

⁷³ Aislinn Laing, 'British "Have Gained the Upper Hand" in Fight for Afghanistan's Kajaki Dam', *Telegraph*, 8 January 2010.

⁷⁴ USAID OIG, 'Audit of USAID/Afghanistan's Power Sector Activities', 18 [see FN 49].

parts and entrust their protection to the GIRoA site manager.⁷⁵

Some of the parts for Turbine Two were housed in warehouses that LBG built that year, while others could be safely stored outside. The latter, huge pieces of metal machinery left sitting in a dirt lot, served as the ideal imagery for successive journalists who visited to write about the project's expense and failure.⁷⁶

3. WHY TURBINE TWO? WHY SUMMER 2008?

Basic chronology established, I will now move on to offer several explanations for why Turbine Two was transported to the dam in summer 2008, despite numerous factors weighing against the chances of the project's ultimate success, and against the diversion of resources for such a large-scale military operation.

It is important to remember that this mission occurred well before the 'surge' that followed Barack Obama's inauguration as US president, and that the operation was a major diversion of troops who were already spread thin. At the time, Gen. David McKiernan, who replaced Dan McNeill that June as ISAF commander, was calling on the White House to deploy 30,000 more troops – nearly double what the US had in Afghanistan at the time – most of them to reinforce British and Canadian troops in the south.⁷⁷ Less than a month after Eagle's Summit, 16 Air Assault's Brig. Gen. Mark Carlton-Smith told a reporter that 'we could probably easily consume in Helmand another brigade' of British forces, in effect calling for a doubling of troop strength, the first time a British military commander in Afghanistan had publicly requested reinforcements.⁷⁸

⁷⁵ Ibid, 19. Embassy Kabul, 'Kajaki Dam: More Energy Awaits Enhanced Security' [see FN 4]. This figure of USD1 million per month may have covered not only the additional security provided for the engineering contractors on site, but also support staff salaries and helicopter resupply.

⁷⁶ Email correspondence, 20 December 2012. Mark Urban, 'What Went Wrong with Afghanistan Kajaki Power Plant?' *BBC News*, 27 June 2011. Michael M. Phillips, 'Afghan Dam Saga Reflects U.S. Travails', *Wall Street Journal*, 28 May 2012. Bernard Smith, 'Uncertain Future for Afghan Dam Project', *Al Jazeera English*, 5 June 2012.

⁷⁷ Rajiv Chandrasekaran, 'Pentagon Worries Led to Command Change', *Washington Post*, 17 August 2009.

⁷⁸ Thomas Harding, 'Double Force in Helmand, Says British Commander', *The Telegraph*, 24 September 2008.

In summer 2008, the counterinsurgency in Helmand was in dire straits. The Taliban were governing the towns of Marja and Nad Ali, both within 30 km of the provincial capital. The small British garrisons in other district centres in Helmand were barely hanging on, regularly resorting to air strike to push insurgents away from their compounds. Lashkar Gah itself would come under attack in October. Helmand's new Governor Gulab Mangal told members of the Helmand PRT that a counter-offensive in central Helmand was far more important than the turbine operation.⁷⁹

Whereas the security situation was growing desperate, there was – as has been previously noted – little practical urgency for getting Turbine Two parts to Kajaki. The turbine could not be installed until 300 tonnes of cement and 600 tonnes of aggregate had been delivered, which could not be done without enormous difficulty and expense unless Route 611 became safe and passable, and even then electricity generated by Turbine Two could not be distributed until transmission lines had been refurbished. Also, although the original plan was to complete Turbine Three refurbishment while Turbine Two was being built and delivered, it was not until 28 March 2008 that CMIC personnel began disassembling Turbine Three, with necessary parts delivered by helicopter airlift.⁸⁰ When Eagle's Summit was launched in August 2008, the turbine was still in pieces and at least seven months from completion.⁸¹ Moreover, there was simply not enough space in the power station hall to work on Turbines Two and Three simultaneously. Yet according to one Afghan

⁷⁹ Mangal believed with good reason that the former governor, Sher Mohammad Akhundzada, was working to destabilize the province to create a pretext for Karzai to fire Mangal and reinstate him, as indeed Karzai tried to do later that year until the British prime minister intervened. Tom Coghlan 'The Taliban in Helmand: An Oral History', in *Decoding the Taliban: Insight from the Afghan Field*, ed. Antonio Giustozzi, London, Hurst, 2009, 141. Chandrasekaran, *Little America*, 79–80 [see FN 13]. Interviews with sources, 20 August and 6 December 2012.

⁸⁰ Embassy Kabul, 'AF: Update on USG Energy Projects', REF: 08 KABUL 578, 6 March 2008. USAID Office of Inspector General, 'Audit of USAID/Afghanistan's Power Sector Activities' 17 [see FN 49].

⁸¹ Embassy Kabul, 'AF: Update on USG and other Energy Projects', REF: 08 KABUL 246, 17 September 2008. The above-cited OIG audit noted that 'The [USAID] mission asked CMIC to accelerate the schedule, but CMIC refused. The mission also pointed to periods of inactivity, such as during the summer of 2008 when the mission made visits to the dam and found workers sitting idly and watching the Beijing Olympics.' USAID Office of Inspector General, 'Audit of USAID/Afghanistan's Power Sector Activities', 17 [see FN 49].

engineer, the transportation of some of the parts needed for Turbine Three, which had been in storage at another LBG base in Helmand since June 2006, began to be delivered to the dam in the early months of 2008. Despite this, before long their delivery was delayed as smaller parts for Turbine Two were prioritized for helicopter delivery.⁸²

I will argue that despite these factors in favour of alternative uses of resources, (1) the installation of Turbine Two was an attractive project because it played to the strengths of the organizations involved and could be pointed to as a landmark accomplishment in sustainable development and expanding governance; (2) both USAID and the British military perceived themselves as needing to prove their abilities in the face of a dominant US Department of Defense; and (3) six-month rotations for British military units created a trend in which each successive brigade launched its own signature operation, and commanders were loath to give up plans they had invested time in planning.

3.1 The Promise of Development

It is instructive to look at what made the installation of Turbine Two so attractive to USAID—and the American government more generally—in the first place.

Writing of the American damming project in the 1940s–1970s, historian Nick Cullather notes, 'Planners presented the Helmand project as applied science, as a rationalization of nature and social order, but they also trafficked in dreams. Because of its scale and longevity, the Helmand venture assumed roles in a succession of modernizing myths.'⁸³ To both the Americans building and the Afghan government commissioning them, dams symbolized not only technical modernization but also the projection of state power. Believing that conflict stemmed from scarcity, modernizers had faith that technical solutions that increased agricultural and industrial productivity could remove the root causes of social and political strife both local and international. Such was their faith in the universal applicability of their technologies that despite questionable economic gains and signs early on that the irrigation schemes made possible by the Helmand valley dams and canals were actually contributing

to salination and waterlogging,⁸⁴ the Afghans and Americans involved brushed aside the need for soil and drainage studies and pushed forward with Kajaki and other smaller dams.⁸⁵

After the fall of the Taleban, Kajaki became part of a similarly idealistic new modernization project aimed at building a state legitimated through the services it provided its people. Kajaki's potential seized the imagination of international developers: interviewees present at the dam in 2005 described the atmosphere as extremely optimistic, with expatriate workers even talking tongue-in-cheek about putting in a landing strip and turning Kajaki into a resort town complete with water sports attractions.⁸⁶

Whereas America's Cold War-era Helmand development scheme had been aimed in part at countering Soviet influence,⁸⁷ the Kajaki project increasingly became understood as a tool for winning the population over from the Taleban, both as the insurgency grew and as 'population-centred' counterinsurgency doctrine came into vogue, with the publication of Gen. David Petraeus's *Counterinsurgency: Field Manual 3-24* in 2006 as a notable landmark.⁸⁸

As the Taleban regained control of much of Helmand and, by some reports, did a better job of governing than the Afghan state,⁸⁹ the symbolic

⁸⁴ Afghan sources interviewed all viewed the original Helmand Valley project very positively, telling me that it had allowed agriculture to thrive where previously there had been only desert. Interviews with sources, 22 and 23 August 2012.

⁸⁵ Cullather, 'Damming Afghanistan', 521–526 [see FN 13]. Chandrasekaran, *Little America*, 25–26 [see FN 13].

⁸⁶ Interviews with sources, 31 July and 20 August 2012.

⁸⁷ Cullather, 'Damming Afghanistan', 27–31 [see FN 13].

⁸⁸ For studies questioning the assumed link between development projects and 'winning hearts and minds', see the following Tufts University studies: Stuart Gordon, 'Winning Hearts and Minds? Examining the Relationship between Aid and Security in Afghanistan's Helmand Province', Feinstein International Center, April 2011. Paul Fishstein and Andrew Wilder, 'Winning Hearts and Minds? Examining the Relationship between Aid and Security in Afghanistan', Feinstein International Center, January 2012. Also, on investment in energy infrastructure as counterproductively raising expectation that can't be met and putting money and power in the wrong hands: Susan Sachs, 'Kandahar's Electrical System in Shambles, Despite Years of Foreign Aid', *Globe and Mail*, 11 June 2011.

⁸⁹ Coghlan, 'The Taliban in Helmand,' 128, 140, and 148–150. [see FN 79]; Antonio Giustozzi, 'Hearts, Minds, and the Barrel of a Gun: The Taliban's Shadow Government', *Prism* 3/2 (March 2012), 73–78. A December 2009 US State Department cable acknowledged that 'at the district level...Taliban service delivery does pose a

⁸² Interview with source, 22 August 2012. Embassy Kabul, 'AF: Update on USG Energy Projects' [see FN 81]. Embassy Kabul: 'PRT Lashkar Gah: Helmand Semi-annual Review' [see FN 45].

⁸³ Cullather, 'Damming Afghanistan', 515 [see FN 13].

value ascribed to bringing a gigantic hunk of machinery into the heart of Taleban country grew in that it seemed it would show the population that the British and Americans would provide services that the insurgents could not.⁹⁰ 'The opposition said it would never happen but it did,' 16 Air Assault Lt. Col. Rufus MacNeil told a journalist on the occasion of the operation, 'If you want a mark in the sand for Afghan reconstruction, then this is it.'⁹¹ In another interview upon returning to the UK, MacNeil elaborated, 'It's also a symbol. It says, "We're not here to pick a fight. This is what we're here to do. We're here to help the Afghan government make the place better." And I think if you wanted a really visible sign that we're serious about that then this is it.'

And as one former USAID official told me of the Kajaki project, it was popular in Washington, with the US Department of Defense, and with USAID, in part 'because it could be measured.'⁹² Numbers like 18.5 MW and 1.7 million future recipients could be quoted to show tangible progress, and they were repeated – and sometimes rounded up – over and over again to the media.

The belief that installing Turbine Two would aid the counterinsurgency and state-building effort was complicated by evidence that the Taleban were benefiting materially and symbolically from the electricity from Kajaki. From 2006 on, it was the Taleban who extended power to rural villages in Helmand by siphoning electricity from the main transmission lines from Kajaki via cables strung atop bamboo poles, and charged monthly fixed-rate electrical bills to residents. This, although only a minor revenue source (estimated at USD 4 million by the provincial government in 2010), provided a demonstration of Taleban authority and goodwill along precisely the lines of 'hearts and minds' counterinsurgency efforts.⁹³ Electricity also powered irrigation pumps to allow greater poppy cultivation in the province, which American and

British officials were at the time saying benefited the Taleban both directly as a revenue source and indirectly by fuelling corruption that decreased the legitimacy of the Karzai government.⁹⁴

The Taleban allowed Afghan hydroelectric workers to travel freely in and out of the Kajaki site and do repairs on the transmission lines and, on the few occasions when their rocket or mortar attacks did damage to dam facilities, they were quick to apologize, saying that they intended to target the *foreigners* working at Kajaki and not the dam or power station themselves.⁹⁵ The Taleban's resistance to efforts to install Turbine Two was never about an opposition to increasing the supply of electricity, but simply to the fact that their enemies were the ones doing it. As a Taleban spokesman told an American journalist in 2011, 'We will never let the Americans do anything here, whether installing the turbines [*sic*] or any other project. . . . The Americans have their own aims behind every project. . . . This is why we say that no U.S. projects are acceptable.'⁹⁶

3.2 Sustainability

Interviewees told me that improved security and electricity have generally been the top requests made by Kandaharis and Helmandis made to the US and UK governments.⁹⁷ By 2007 electricity was coming to be viewed as a kind of 'magic bullet' which is going to make everything better', in the words of one interviewee who worked with the British government in Helmand from 2006 to 2008.⁹⁸ Just as there had been a certain 'development myopia' in the first iteration of the Helmand Valley project by which 'planners

serious challenge, notably on the justice and security fronts...' Embassy Kabul, 'Taliban Shadow Governance in Helmand Province,' REF: 09 KABUL 4040, 17 December 2009.

⁹⁰ As US State Department official who worked extensively in the south summarized, 'by 2007–2008 Kajaki is seen as . . . an important part of the stabilization effort, a development project, good governance project. So its importance was really expanded. . . .' Interview with source, 30 August 2012.

⁹¹ Judd, 'Operation Eagle's Summit' [see FN 62].

⁹² Interview with source, 25 August 2012.

⁹³ Yaroslav Trofimov, 'U.S. Rebuilds Power Plant, Taliban Reap a Windfall', *Wall Street Journal*, 13 July 2010. Carlotta Gall, 'Deep in Taliban Territory, a Push for Electricity', *New York Times*, 8 November 2008.

⁹⁴ Gretchen Peter, 'How Opium Profits the Taliban', United States Institute of Peace, August 2009, 4 and 19–20. Ahmed Rashid, *Descent into Chaos: The U.S. and the Disaster in Pakistan, Afghanistan, and Central Asia*, New York, Penguin 2008, 329–30.

⁹⁵ On the few occasions when insurgents sabotaged transmission lines, it generally related to local disputes about the distribution of electricity. In summer 2011, for instance, insurgents operating out of Musa Qala cut transmission lines and briefly took the chief Afghan engineer at the dam captive because they suspected that a technical failure at the Tangi substation, through which electricity to Musa Qala flows, was a conspiracy to deprive their town of electricity. Interviews with sources, 22 August and 1 September 2012. Ben Brody, 'Watershed of Waste: Afghanistan's Doomed Dam', *GlobalPost*, 11 October 2011.

⁹⁶ Jean MacKenzie, 'Watershed of Waste: Afghanistan's Kajaki Dam and USAID', *GlobalPost*, 11 October 2010.

⁹⁷ Interviews with sources, 22 August 2012. See also Sachs, 'Kandahar's Electrical System' [see FN 88].

⁹⁸ Interview with source, 20 August 2012.

subordinated complex social and political problems within the more manageable engineering problem of overcoming water constraints', providing electricity took on oversized importance as something that America *could do*, an apolitical solution.⁹⁹

USAID liked hydropower in particular because of its perceived sustainability and long-term promise. USAID's employees were trained to think in terms of long-term capacity building and giving the people the tools to help themselves.¹⁰⁰ They regularly discussed project planning in terms of five- or ten-year timelines. This had, from the beginning of the American intervention in Afghanistan, been a point of friction between USAID, on the one hand, and the White House and Pentagon, on the other. The latter tended to support 'quick impact' projects like building health clinics and roads that could be completed in a year or two in a bid to win goodwill – and, as the insurgency gained strength, to win hearts and minds away from the Taliban and other groups.¹⁰¹ USAID, however, pushed for longer-term projects, for instance to increase agricultural productivity.¹⁰² USAID also had a strongly free market bent that expressed itself in a distaste for handouts and subsidies and in support for projects like electricity generation that would foster the private sector.¹⁰³

Yet USAID found itself focusing its energy sector efforts in Afghanistan on short-term projects with little provision for long-term sustainability. At the

same time that Eagle's Summit was being planned, USAID contractor Black & Veatch (B&V) was scrambling to complete a 100 MW diesel-burning power plant in Tarakhil near Kabul. The White House had, through the Kabul embassy, heavily pressured USAID to do the project and do it quickly, believing it would help Karzai get re-elected in the 2009 presidential election.¹⁰⁴ Diesel is an enormously expensive fuel with which to operate a power plant and has to be trucked in from neighbouring countries. Since the plant was finally inaugurated in August 2009 at the cost of over USD 250 million, it has – predictably – seen little use because of its operating costs: electricity from the plant costs at least six times as much as that delivered from hydroelectric sources in Uzbekistan and Turkmenistan.¹⁰⁵

In Kandahar too, USAID built a 14 MW power plant – actually 14 diesel generator blocks strung together – in 2003. USAID also brought in and operated diesel generators in Lashkar Gah, Musa Qala, Tirin Kot in Uruzgan Province, and Ghazni, and by 2005, USAID was spending about USD 100 million annually on diesel in Afghanistan.¹⁰⁶ By 2008 – as plans for Eagle's Summit were moving forward – the Kandahar generators were badly in need of an overhaul, producing only about 5 MW of electricity, and USAID paid for an Afghan Ministry of Energy and Water project that brought another five generators from Kabul to Kandahar for an additional 9 MW. From the start, USAID officials knew that such diesel generators were extremely expensive to fuel¹⁰⁷ and had short life spans. Diesel was intended as a temporary bridging

⁹⁹ Cullather, 'Damming Afghanistan', 536 [see FN 13].

¹⁰⁰ How successful capacity building has actually been in the Afghan and other contexts is less relevant here than the salience of capacity building discourse in organizational culture.

¹⁰¹ The 'quick impact' approach to infrastructure has been broadly criticized as leading to poorly executed projects with little accountability or consideration for sustainability. See for example: Ashley Jackson, 'Quick Impact, Quick Collapse', Oxfam International, 26 January 2010 and International Crisis Group, 'Aid and Conflict in Afghanistan', Asia Report No. 210, 4 August 2011.

¹⁰² Rajiv Chandrasekaran, 'U.S. Pursues a New Way to Rebuild in Afghanistan', *Washington Post*, 19 June 2009. Interviews with sources, 5 September 2012

¹⁰³ Interviews with sources, 8 August and 20 August 2012. Chandrasekaran, *Little America*, 99–101 [see FN 13]. Rohde, 'Little America' [see FN 38]. In spring 2008, for instance, a USAID official was quoted by an AP reporter as explaining, 'Afghanistan's future stability depends in large part on growth of the private sector and jobs. The Kajaki Dam is a critical element in our support for Afghanistan because it will provide the electricity to drive private-sector growth in Helmand and Kandahar.' Jason Straziuse, 'Taliban Slow Electricity Dam in Afghanistan Seen as Key to Farmers, NATO's Plans', *South Florida Sun—Sentinel*, 26 April 2008.

¹⁰⁴ Interview, 1 September 2012. USAID OIG, 'Audit of USAID/Afghanistan's Power Sector Activities', 8 [see FN 49]. Political motivations have been used similarly to explain the timing of Operation Eagle's Summit [see Kiley, *Desperate Glory*, 204, [see FN 56], an argument that I bracket and set aside without dismissing for no better reason than that I'm more interested in organizational structure as cause.

¹⁰⁵ USAID's answers to McClatchy Newspapers National Correspondent questions, 30 August 2009. Questions posed for the article: Taylor, 'Costs of Afghanistan Projects Soar' [see FN 25]. Zorpette, 'Re-engineering Afghanistan' [see FN 23]. Interview, 30 August 2012.

¹⁰⁶ According to a USAID official working on infrastructure at the time, after installing the diesel generators in Kandahar in 2003, USAID was not paying for the fuel or significantly involved until they began to break down in early 2008. 1 September 2012.

¹⁰⁷ The projected cost for the 2013 fiscal year to the US of the Kandahar diesel plants is equivalent to about two-thirds of the Afghan national electrical utility DABS's entire annual revenue. Yaroslav Trofimov, 'Afghans Fear U.S. Pullout Will Unplug Key Projects', *Wall Street Journal*, 9 August 2012.

solution (indeed the diesel plant system has since been given the title 'Kandahar Bridging Solution', the need for an official name ironically reflecting its longevity) until more energy came from Kajaki or until Kandahar was linked to the country's northern electrical grid (USAID officials are now hoping to do the latter by 2016).¹⁰⁸ USAID's press release on the occasion of the second diesel plant's inauguration in December 2008 noted,

While the addition of the new power plant will go a long way toward meeting Kandahar's short-term power needs, the city's long-term power source has long been the Kajakai hydro power plant, which is currently being refurbished and expanded with USAID financing.¹⁰⁹

I have no information about internal debates that occurred over the diesel plants installed before Eagle's Summit; however, in 2010 USAID, backed by Ambassador Karl Eikenberry, strongly opposed a plan by the US military – which was in the process of taking over from the Canadians in Kandahar – to spend USD 200 million installing yet another set of generators for the city. While the military argued it had only a small window of opportunity to win over Kandahar's population, making a short-term boost in electrical generation essential, USAID argued that the military should instead devote more resources in Helmand to making it possible for the Kajaki project to resume. In the end, Gen. Petraeus intervened to authorize the use of the Commander's Emergency Response Program (more on that below) to fund the new generators, circumventing USAID.¹¹⁰

Of course, in practical terms the contribution of Turbine Two to the energy grid would be fairly minor, even with transmission lines fixed. Turbine Two would not provide as much electricity as the diesel plants were producing in Kandahar – where in 2008 most neighbourhoods were getting only a

few hours of electricity every other day¹¹¹ – and so would not actually do much to wean the city off diesel. Existing demand in Kandahar and Helmand far outstripped what Kajaki could provide without a second, larger power station, and providing more electricity would predictably increase demand.¹¹² The power produced by Turbine Two each year – if it reached its destination – would of course be worth tens of millions of dollars of diesel fuel, but it is questionable whether reducing spending was a significant concern, anyway. Eagle's Summit occurred before Congress doubled USAID's budget and pressure mounted on USAID to sustain a high 'burn rate', with success measured by amount of money spent; but, even in 2008 USAID was by no means facing a budget crisis. One USAID official working on infrastructure in 2007–08 told me that he never felt any pressure to reduce spending: his bosses understood that it was a conflict zone and costs could run high.¹¹³

It was and it was not really about electricity. In the language of the garbage can model, Kajaki, for the military, had become a receptacle for the counterinsurgency doctrine it wanted to put into practice. It became detached from its ostensible original purpose of providing electricity to the extent that the operation moved forward as a priority in 2008 even though the British military leadership was well aware that electricity from Turbine Two would not actually reach their recipients in the near future. For USAID, the receptacle/problem of electricity was filled with Turbine Two because it appealed to their values of sustainability and free enterprise, and played to their strengths as a technical rather than socio-political solution.

It is worth remembering that, even as the Turbine Two project became a top priority, the spillway gates project was abandoned.¹¹⁴ Though costing a fraction of the cost of installing Turbine Two and easier to accomplish from a logistical perspective –

¹⁰⁸ USAID Afghanistan Infrastructure and Rehabilitation Program, 'New 9 MW Diesel Power Plant for Kandahar', 1 December 2008, available at <https://www.irp-af.com/?pname=open&id=175&type=html>. USAID Afghanistan Infrastructure and Rehabilitation Program, 'Diesel Thermal Power Plant Operations and Maintenance', <https://www.irp-af.com/?pname=open&id=415&type=html&c=5> accessed 6 October 2012. Trofimov, 'Afghans Fear' [see FN 107]. Interviews with sources, 7 August and 5 September 2012.

¹⁰⁹ USAID Afghanistan Infrastructure and Rehabilitation Program, 'New 9 MW' [see FN 108].

¹¹⁰ Interview with source, 15 August 2012. Rajiv Chandrasekaran, 'U.S. Military, Diplomats at Odds over How to Resolve Kandahar's Electricity Woes', *Washington Post*, 23 April 2010. Trofimov, 'Afghans Fear' [see FN 107].

¹¹¹ 'Restoring an Afghan Dam in a Taliban Stronghold', *NPR Morning Edition* (radio transcript), 24 April 2008.

¹¹² USAID/Afghanistan, 'Fact Sheet: Kandahar Helmand Power Project (KHPP)', June 2011. Chandrasekaran, *Little America*, 291–3 [see FN 13].

¹¹³ Scott Dempsey, 'Is Spending the Strategy?' *Small Wars Journal*, 4 May 2011. Accessible at www.smallwarsjournal.com/jrnl/art/is-spending-the-strategy. Interviews with sources, 30 August and 1 September 2012. Chandrasekaran, *Little America*, 183 [see FN 13].

¹¹⁴ In April 2008, USAID officials did tell a reporter that they still planned to install the spillway gates after Turbine Two was in place. Jason Straziuso, 'Taliban Slow Electricity Dam in Afghanistan Seen as Key to Farmers, NATO's Plans', *South Florida Sun – Sentinel*, 26 April 2008.

many of the parts for the installation planned in the 1970s were on site and still useable, though a large amount of aggregate would still have needed to be brought in¹¹⁵ – the spillways gates constituted a more unavoidably political and social matter because raising the reservoir necessitated managing the displacement of villages along its shore. Turbine Two could be viewed through a more purely technical lens as simply a matter of getting materials in and installed without getting bogged down in scarcely understood local politics.¹¹⁶

USAID's employees were better trained and better positioned to deal with technological complexities than with deep social interventions. Security restrictions significantly limited their ability to see what was going on outside their Kabul compound or heavily guarded enclaves like the dam complex. As one agency official conceded to a reporter in 2009, 'We're all sitting in this bubble. . . . We have no idea what's happening out in the rest of the country.'¹¹⁷ Turbine Two's installation, unlike the spillway gates or for that matter the transmission lines, was something that could be planned remotely without extensive meetings with local tribes or controversial deal-making.

3.3 One Thing at a Time

Monthly meetings were held in Kandahar in 2008 to plan the transportation of Turbine Two parts to Kajaki, with people attending from each of the organizations involved: USAID, contractors and the armed forces and embassies of Britain, the US and Canada.¹¹⁸ I found little evidence of a lack of communication between technical experts and political and military decision-makers. All parties were aware that the turbine could not be installed

without the delivery of cement and aggregate, which, in turn, was not possible without the securing of a road that they were incapable at the time of securing, and that the transmission lines were incapable of bearing the added energy load of a third turbine.¹¹⁹

As Sam Kiley, a journalist embedded with 16 Air Assault at the time, recounted, they were well aware that Turbine Two would not – except perhaps as a symbol of the Afghan state's presence in Helmand and of Anglo-American will – be contributing to winning hearts and minds in the near future:

The turbine isn't expected to generate any power for a year or two because it still has to be fitted into the generating hall at the dam. And while the Taleban holds most of the territory in Helmand it will be impossible to upgrade the distribution network to either carry the additional load, or to reach new customers. The turbine itself cost GBP 3.4 million and many more millions have been spent getting it to Kajaki. Still the British are proud. They were set a task – and they pulled it off.¹²⁰

Another journalist working in the region at the time emphasized that the British military 'viewed it as an operation to do one thing.' In part this was because they would be leaving a month later and other elements of the project would necessarily have to fall to their successors anyway.¹²¹

Turbine Two's delivery could also be viewed as its own distinct mission because, quite simply, it was possible without any of the other elements of the SEPS project – road construction, transmission line refurbishment and the delivery of cement and aggregate to the dam – coming into place. A useful distinction from the sociological literature is between loose and tight coupling. Tightly coupled systems are ones whose various parts and processes display a high degree of interdependence – if one part breaks, the others will not work; loosely coupled systems are characterized by relative independence among

¹¹⁵ Interview with source, 5 September 2012. United States Government Accountability Office, 'Afghanistan Development: U.S. Efforts to Support Afghan Water Sector Increasing, but Improvement Needed in Planning and Coordination', Report to Congressional Addressees, GAO-11-138, November 2010. The GAO report estimated that it would cost a total of USD 15 million to install the spillway gates. A current USAID official interviewed gave me the much higher estimate of USD 75 million. Interview with source, 1 September 2012.

¹¹⁶ This comparison is not intended to suggest that the spillway gates and Turbine Two were interchangeable solutions equivalent in their benefits or addressing the same problem. Installing spillway gates would not increase the maximum electrical output beyond that already possible, but would allow maximum output in drier seasons to be more consistently achieved.

¹¹⁷ Chandrasekaran, 'U.S. Pursues a New Way' [see FN 102].

¹¹⁸ Interview with source, 5 September 2012.

¹¹⁹ Interviews with sources, 29 August and 5 September 2012. Afghan government officials from Kandahar and Helmand interviewed had, by comparison, little detailed information about the project or the technical obstacles that it faced, but none of them were involved in planning Eagle's Summit, or even notified beforehand that the operation would be conducted. A senior Afghan engineer working at the dam recounted learning about the operation only from news reports after it had begun. Interviews with sources, 22 and 23 August 2012.

¹²⁰ Kiley, *Desperate Glory*, 206 [see FN 56].

¹²¹ Interview with source, 26 July 2012.

sub-processes.¹²² An electrical grid like SEPS is a tightly coupled system:¹²³ if any one major sub-process fails, be it the intake of water to the power station, the turbines, the transmission lines, or the substations, it immediately affects the others and prevents the delivery of electricity. The *delivery* of Turbine Two, however, was only loosely coupled to the rest of the system. It did not have to be brought to the dam simultaneously or in sequence with other work on SEPS.

And so SEPS could be and was conceptually and contractually divided up into a series of incompletely linked jobs. When one job was not completed – i.e., road construction – it stopped some jobs – like the transmission line refurbishment – but not others – like Turbine Two's delivery. Hence interviewees talked about *worrying about one thing at a time* and considering SEPS in separate phases. Concerns about the inability to secure the road, a necessary prerequisite for Turbine Two to be installed and deliver electricity, were deferred until 2009, when Turbine Three's refurbishment was completed and there was little more for the dam workers to do without the cement and aggregate that could not be delivered.¹²⁴

3.4 Organizational Inferiority Complexes

When they took over Helmand in 2006, in the words of *Washington Post* writer Rajiv Chandrasekaran,

British commanders planned to show the Americans, who were playing whack-a-mole with the Taliban in other parts of the country, how the pros executed counterinsurgency. In early 2006, before David Petraeus released his COIN manual and became the strategy's new leading evangelist, the Brits claimed unrivalled expertise in countering insurgencies.¹²⁵

British officers were fond of lecturing their American counterparts on the lessons of Malaya and Northern Ireland and prided themselves on having a more nuanced approach than the US

military, which they tended to view as ham-fisted and overly concerned with body counts rather than 'winning hearts and minds'.

Iraq, like Afghanistan, had been divided by province among allies, and the British were in charge of Basra in the south, which was meant to showcase a less confrontational 'British' approach to counterinsurgency. The details of the campaign are not relevant here, but by summer 2007 British forces were holed up in the city's palace, more-or-less under siege, to the disdain of their allies. In August 2007, a *Telegraph* article entitled 'British Forces Useless in Basra, Say Officials' quoted an unnamed senior American military officer as saying, 'The short version is that the Brits have lost Basra. . . . Quite frankly what they're doing right now is not any value-added. They're just sitting there. They're not involved.' A Washington-based think tank scholar added, 'Basra has gone far towards revising the common American image of British soldiers as perhaps the world's best at counter-insurgency.'¹²⁶ By December, British forces had withdrawn from the city to an airport base, leaving it divided among rival Shiite militias. The Iraqi National Army launched an operation the next spring that largely succeeded in retaking the city, but Basra remained an embarrassment for the British military – a black eye of which its troops in Afghanistan were very much conscious in 2008.¹²⁷ As one interviewee who spent several years working in Helmand recounted, 'The first thing that any incoming commander of Task Force Helmand said [was], "This is not going to be another Basra."¹²⁸

British journalist Sam Kiley was embedded with 16 Air Assault in Helmand during the summer of the operation and his writing reflects the brigade's preoccupation – if not anxiety – about their prestige in the eyes of their ally:

Until recently American officials and military officers had been rather awestruck by the British Army. Its regular infantry units often beat American Special Forces groups in military endurance competitions. The sheer weight of martial tradition and pomp in an army which pre-dated America was intimidating. But since the British had been elbowed aside by the Iraqi Army, and their

¹²² Perrow, *Complex Organizations*, 148 [see FN 7].

¹²³ In my use of the term *system*, I'm adhering to Robert Jervis's definition: 'We are dealing with a system when (a) a set of units or elements is interconnected so that changes in some elements or their relations produce changes in other parts of the system, and (b) the entire system exhibits properties and behaviors that are different from those of the parts.' Jervis, *System Effects*, 6 [see FN 8].

¹²⁴ Interviews with sources, 26 July, 1 September, and 5 September 2012.

¹²⁵ Chandrasekaran, *Little America*, 48 [see FN 13].

¹²⁶ Tim Shipman, 'British forces Useless in Basra, Say Officials', *Telegraph*, 19 August 2007.

¹²⁷ David H. Ucko, 'Lessons from Basra: The Future of British Counter-Insurgency', *Survival: Global Politics and Strategy* 52/4 (2010), 131–58, 131 and 143–6. Ledwidge, *Losing Small Wars*, 45–55 [see FN 39]. Chandrasekaran, *Little America*, 48 [see FN 13].

¹²⁸ Interview with source, 6 December 2012.

American advisers, in taking Basra back from Shi'a militants in March, and since British troops had been forced to negotiate a retreat from Musa Qal'ah [sic] in the face of a relentless Taliban onslaught in the summer of 2006, Britain's martial reputation had been badly damaged. Many American officers continued to admire the fighting energies of the ordinary, and badly equipped, British soldier. But they questioned the commitment of the British government to the Afghan war . . .¹²⁹

It is not trivial that 16 Air Assault had been the very unit that had withdrawn from Musa Qala in late 2006. The brigade had new leadership, with Brigadier Mark Carlton-Smith replacing Ed Butler since 16 Air Assault's first deployment in Helmand in 2006; but the brigade's previous performance, which had drawn considerable criticism from the Americans, nonetheless hung overhead, making the brigade all the more anxious to demonstrate its competence.¹³⁰

Britain's civilian leaders might have been resistant, but as a logistical challenge it presented a unique opportunity for 16 Air Assault to prove themselves to their allies. Kiley quotes Carlton-Smith as telling his men charged with planning the turbine operation,

Gentlemen . . . The Americans are coming! We risk being put in the corner, sidelined and forgotten. The Americans think we're wet and present only problems. I am not here to listen to how a mission is not possible. I want you all to take on board that it is our job to carry out the tasks we are set – not go on about how we can't do things. I want a complete refocus on finding solutions not problems.¹³¹

In a presentation given at a meeting among UK civilian and military officials and a US State Department officer before Eagle's Summit, for example, *maintaining the image of the British Army with the American Army* was prominent among points the British military gave for the operation's importance.¹³²

The 'garbage can' of the second turbine, then, became a receptacle for a solution that served the British military's interest in redemption. Even though, without cement and aggregate, delivery of the turbine would amount to just so many pieces of metal, whether in Kandahar Air Field or beside

the dam, the operation became an achievement in itself.

USAID was also under pressure to perform. Whereas USAID officials – many of them with engineering backgrounds, though not necessarily in the fields in which they were working – were accustomed to working on development projects that were expected to take years to have an impact, they were now being asked to produce quick results.¹³³

At the time, USAID still had a degree of autonomy: contracts needed only the approval of the head of the USAID mission to go forward.¹³⁴ Yet they still felt pressure to justify projects to the embassy and to the military as serving rapid stabilization functions, which was not necessarily the case with long-term development projects.¹³⁵ Additionally, the US government was increasingly turning to the Department of Defense to carry out development projects thought to be stabilizing. This was particularly evident with the expansion of the Commanders Emergency Response Program (CERP) in Iraq and Afghanistan.

CERP was originally intended as a way to decentralize and streamline small-scale funding, allowing brigade commanders more flexibility in quickly disbursing money for urgent projects that they thought would create goodwill and help counterinsurgency efforts on the ground. By 2008, though, the US Department of Defense was increasingly using CERP funding for larger-scale projects in road building, construction and energy, encroaching on USAID's traditional domain.¹³⁶ CERP obligations in the electricity sector, for

¹³³ One USAID official in Afghanistan from 2006 to 2008, for example, recalled that the military and embassy were pushing more and more for roads as a fast and tangible way to show the Afghan people that they were there to help. Interview with source, 1 September 2012.

¹³⁴ This would change considerably after 2008, when the State Department asserted greater authority over USAID in 'Critical Priority Countries.' From then on, newly appointed Special Envoy for Afghanistan and Pakistan Richard Holbrooke's personal approval was needed for all new contracts and contract modifications. Interview with source, 1 September 2012.

¹³⁵ Interview with source, 20 October 2012.

¹³⁶ Testimony by Special Inspector General for Afghanistan Reconstruction Arnold Fields on Recurring Problems in Afghan Reconstruction before the Commission on Wartime Contracting, 24 January 2011. Gregory Johnson, Vijaya Ramachandran, and Julie Walz, 'The Commanders Emergency Response Program in Afghanistan: Refining U.S. Military Capabilities in Stability and In-Conflict Development Activities', Center for Global Development, Working Paper 265, September 2011, 6–10 and 17–9.

¹²⁹ Kiley, *Desperate Glory*, 176–7 [see FN 56].

¹³⁰ Interviews with sources, 26 July 2012 and 20 August 2012.

¹³¹ Sam Kiley, *Desperate Glory*, 175 [see FN 56].

¹³² Interview with source, 30 August 2012.

example, increased from approximately USD 1.5 million in 2005 to USD 13 million in 2008 and rose even more dramatically in other areas normally within USAID's purview, such as agriculture and education.¹³⁷ It would be CERP that would in 2010 pay about USD 200 million for the installation of two additional 10 MW diesel plants for Kandahar City.¹³⁸

Budget allocations for CERP in Afghanistan had shot up from USD 39.7 million in 2004 to USD 479.9 million in 2008, surpassing allocations to USAID from 2005 on. Allocations for USAID program support had actually declined steadily from 2004 to 2007 before more than tripling in the 2008 fiscal year (US federal government fiscal years begin in October of the previous calendar year) to USD 317 million. USAID obligations (expenses incurred from projects that they were obligated to pay) hovered around USD 1.5 billion from 2006 to 2008.¹³⁹

My argument is not that competition was a squabble over money. By and large, USAID officials were genuinely motivated by the desire to help Afghans. The competition stemmed from their belief that they could do the job better than the military and resentment at the Department of Defense's encroachment. As with the relationship between the British military and the Americans, the significance of prestige and the drive to demonstrate one's own organization's abilities in influencing behaviour should not be underplayed.

Asked whether USAID was in a relationship of competition with the US Department of Defense in 2006–08, one interviewee who was with the British government at the time and has worked a good deal with USAID replied, 'It was more that they were being beaten up.'¹⁴⁰ The military was increasingly being seen as more capable of carrying out development work in the more violent areas that were being prioritized and USAID was under enormous pressure from the US military and from Congress to demonstrate that they were

contributing to 'stabilization' with their projects, as measured by hard, quantifiable metrics like dollars spent and megawatts produced.¹⁴¹

It is worth noting that the dominance of the military establishment extended to sheer numbers. Despite the fact that the US military was criticized for lacking sufficient numbers of *properly trained* personnel to manage and oversee CERP projects,¹⁴² the number of Department of Defense personnel, including brigade and unit commanders and support staff, involved in development activities came to far outnumber USAID officials. The agency's total workforce in Afghanistan, including direct hires and American and foreign contractors, went from only 100 in 2004 to 262 in 2009. Despite this increase, at interagency meetings and in Provincial Reconstruction Teams, USAID officials could expect to be surrounded by representatives from the military pushing for the its own vision for development aid.¹⁴³

USAID officials interviewed generally played down the significance of inter-organizational competition, but would nonetheless contrast their own approach with that of the military, which they viewed as short sighted and lacking in continuity. They pointed in particular to the turnover of military units, which led successive commanders to change existing plans unnecessarily or come up with their own pet projects.¹⁴⁴ One USAID official

¹⁴¹ Dempsey, 'Is Spending the Strategy?' [see FN 113]. Interview with source, 25 August 2012.

¹⁴² United States Government Accountability Office, 'Actions Needed to Improve Oversight and Interagency Coordination for the Commander's Emergency Response Program in Afghanistan,' Report to Congressional Committees, GAO-09-615, May 2009.

¹⁴³ The number of USAID and State Department employees in Afghanistan later increased substantially with the 'civilian surge' first outlined in March 2009. United States Government Accountability Office, 'Foreign Assistance: USAID Needs to Improve Its Strategic Planning to Address Current and Future Workforce Needs,' Report to Congressional Committees, GAO-10-496, June 2010, 16; Johnson et al., 'The Commanders Emergency Response Program in Afghanistan...' [see FN 136], 7. Email correspondence, 20 December 2012.

¹⁴⁴ American military tours of duty were 12 months in Afghanistan in the early years, and increased to 15 months from 2007 until late 2008. USAID officials typically served for one-year tours. The agency has been criticized for similar problems with staff turnover disrupting the continuity of institutional knowledge, namely with regard to road reconstruction and agricultural development. Charles Michael Johnson Jr. on behalf of the United States Government Accountability Office, 'AFGHANISTAN DEVELOPMENT: USAID Continues to Face Challenges in Managing and

¹³⁷ Special Inspector General for Afghanistan Reconstruction, 'Quarterly Report to the United States Congress', 30 April 2009, 37–9.

¹³⁸ Special Inspector General for Afghanistan Reconstruction, 'Quarterly Report to the United States Congress', 30 January 2011, 92–3. Chandrasekaran, 'U.S. Military, Diplomats' [see FN 110].

¹³⁹ Special Inspector General for Afghanistan Reconstruction, 'Quarterly Report to the United States Congress', 30 October 2008, 39–43. U.S. Overseas Loans and Grants (Greenbook), 'United States Economic Assistance Funded by the U.S. Agency for International Development, FY2001 to FY2010.' Available at <http://gbk.eads.usaidallnet.gov>.

¹⁴⁰ Interview with source, 20 August 2008.

recalled with annoyance having successive military officers from ISAF, the Department of Defense, and the Army Corps of Engineers demand briefings from project managers, to the point of interfering with office work: 'The military guys wanted to come in and be instant experts on foreign assistance and construction activities.'¹⁴⁵

Demonstrating a direct link between the decision to transport Turbine Two to Kajaki and the increase in US military involvement in development projects is difficult, but I nonetheless contend that the environment of inter-organizational competition significantly contributed to a sense of urgency and pressure on USAID to pursue projects that would produce high profile and quantifiable results.

3.5 Operational Momentum

Although USAID consistently pushed for progress on Kajaki in the years preceding the operation, it was ultimately up to the British military that Eagle's Summit was conducted when it was. One USAID official working on the project at the time went so far as to claim that, in fact, his organization had in summer 2008 given serious thought to mothballing the project until security improved:

There was talk about [putting the project on hold] all the time. So okay we kept telling the military, 'When you get the area secure let us know and we'll, you know, go back in there and start back up. They didn't want us to [halt the project] because it made everybody look bad. It made the military look bad, of course it made USAID look bad either way, because we couldn't get anything done.'¹⁴⁶

Overseeing U.S. Development Assistance Programs,' Testimony before the Subcommittee on State, Foreign Operations, and Related Programs, Committee on Appropriations, GAO-10-932T, 15 July 2010, 4-5.

In the case of Kajaki, however, it is important to note that the principal USAID officials who were involved in the project between 2006 and 2009 with whom I spoke had stayed on for two to three years each, wanting to see their projects through. Also, USAID staff rotated out as individuals and not as units, meaning that accumulated knowledge could be better passed on to newcomers by those already experienced with projects, and thus USAID was not 're-inventing the wheel' every few months, as both British and American military units have been accused of doing. Nancy A. Youssef, 'Army Will Cut Length of Combat Tours to 9 Months', *McClatchy*, 5 August 2011. Interviews with sources, 1 September and 5 September 2012.

¹⁴⁵ Interview with source, 1 September 2012.

¹⁴⁶ Interview with source, 5 September 2012.

British forces were rotated out as units every six months. With mobilization and de-mobilization factored in, this meant a period of only four to five months active in the field. As the British Ambassador at the time, Sir Sherard Cowper-Coles, recalls in his memoir,

In almost every case, each brigadier did what he could be only expected to do, as he enjoyed what had to be the highlight of his professional career as a soldier: commanding a brigade at war. He planned and launched a major kinetic operation. . . . Many consisted of little more than, in one Helmand brigade commander's memorable phrase, 'mowing the lawn'.¹⁴⁷

Such major operations, because they required months of planning, predictably took place in February through March and August through September before tours ended; for the turbine, road conditions would be a problem in February and March, so August and September was really the only open logistical window for Eagle's Summit.¹⁴⁸

It is worth remembering that conditions in Helmand got much worse in summer 2008, that the Taliban had overrun Marja and Nad Ali and were threatening Lashkar Gah itself, and that the British were, by their own estimation and that of ISAF Commander Gen. David McKiernan, badly short of manpower in Helmand. Yet they had already invested heavily in Eagle's Summit – according to a BBC report just after the operation, 60 British officers had spent four months war-gaming beforehand¹⁴⁹ – and so 16 Air Assault's leaders were loath to scrap their plans. According to a US government official in Helmand at the time, in meetings preceding the operation, British officers played down the gravity of the military balance in Helmand and insisted that, together with the Afghan police and army, they were sufficiently strong in the province and could divert troops to the Kajaki operation.¹⁵⁰ After the operation, British officials in Helmand privately conceded that withdrawing troops from elsewhere in the province to support the turbine operation had forced them to concede areas where they

¹⁴⁷ Cowper-Coles, *Cables from Kabul*, 63–4 [see FN 35].

Leading a high-profile operation could also certainly help a commander's career. Brig. Mark Carlton-Smith, who led 16 Air Assault in the operation, has since been promoted to Major General and appointed Director of British Special Forces.

¹⁴⁸ Interview with source, 30 August 2012.

¹⁴⁹ Leithead, 'UK troops in Huge Turbine Mission' [see FN 2].

¹⁵⁰ Interview with source, 30 August 2012.

previously had influence, and to set aside other priorities.¹⁵¹ As one official commented,

Kajaki was a huge distraction for our work in Gereshk. The operation to move the turbine up through the Gereshk AO [area of operations] meant the military were more focused on that. They could have balanced resources, but of course supporting a turbine delivery was a much more tangible outcome they could understand rather than trying to support a complicated political settlement!¹⁵²

3.6 Nobody to Rock the Boat?

A further hypothesis that for lack of data I cannot confidently address is that the private firms who would actually be implementing the project had little incentive to rock the boat because of the way contracts were structured. LBG and B&V's contracts through the Afghanistan Infrastructure and Rehabilitation Program have largely been 'cost-plus', meaning that the firms are compensated for project expenses and then paid a set percentage of those expenses. Obviously, this creates an economic incentive for projects to be as costly as possible.¹⁵³ Wartime conditions also mean that contractors and subcontractors are able to exercise *force majeure* clauses in their contracts to get out of obligations to complete work without penalty, as CMIC did in November 2008. CMIC warned the British that they could not install the turbines without successive deliveries of cement and aggregate that the British couldn't guarantee, and according to LBG's CEO Fred Berger at a closed-doors panel discussion at the Washington law firm Crowell and Moring in December 2010, LBG had thought the operation a gross blunder.¹⁵⁴ Yet neither firm put the brakes on the operation,

¹⁵¹ Interview with source, 6 December 2012.

¹⁵² Email correspondence, 11 December 2012.

¹⁵³ Zorpette, 'Re-Engineering Afghanistan' [see FN 23]. Center for Strategic and International Studies, 'Defense Industrial Initiatives Current Issues: Cost-Plus Contracts.' Accessed 27 October 2012. Available at http://csis.org/files/media/csis/pubs/081016_diig_cost_plus.pdf. LBG has been accused not only of intentionally running up costs, but also of overbilling the US government for costs it did incur. In November 2010, two senior LBG employees pleaded guilty to their roles in a scheme to bill USAID approximately USD 1.40 for every USD 1 the firm actually spent, and LBG's former CEO was indicted for fraud as part of the same investigation in October 2011. United States Attorney's Office – District of New Jersey, 'Former Louis Berger Group, Inc. CEO Surrenders to Face Indictment Charging Fraudulent Billing Scheme for Iraq, Afghanistan Reconstruction Contracts', Press Release, 20 October 2011.

¹⁵⁴ Interview with source, 20 August 2012.

or as far as I have learned, attempted to do so. In other cases in Afghanistan, large private contracting firms have been accused of not reporting problems with projects – which USAID has little ability to monitor independently – to avoid jeopardizing the receipt of future government contracts.¹⁵⁵

The perverse incentive to go along with bad projects, rather than advise government agencies to cut their losses and give up those projects, was particularly strong for contractors providing security. Most of the Kajaki project's expenses were in fact for security and the transportation of equipment, supplies and personnel whose cost was inflated by security measures. Until at least the end of the Rehabilitation of Economic Facilities and Services program in 2007, LBG subcontracted dam security in a cost-plus arrangement to a Texas-based firm called US Protections and Investigations (USPI), which hired local policemen (who stayed in uniform even when working as private guards) and earned handsome profits by inflating expense reports submitted to USAID through LBG. In 2009, USPI's husband and wife co-owners pleaded guilty to defrauding the US government of millions of dollars through this scheme.¹⁵⁶

It is still a weak counterfactual argument to claim that had the project's actual implementers had more to lose or been members of the same organizations making policy decisions, those decisions would necessarily have been made differently. I include the argument here more than anything as an invitation for further research.

4. CONCLUSION

4.1 Propositions and Invitations for Further Inquiry

This report's scope has been rather limited, in that I have not looked at the actual effects of development interventions on Afghan society or the agency of those on the receiving end of development to use it in ways not intended or foreseen by implementers.¹⁵⁷ By focusing instead

¹⁵⁵ Chandrasekaran, 'U.S. Pursues a New Way' [see FN 102]; Marisa Taylor and Dion Nissenbaum, 'U.S. Keeps Funneling Money to Troubled Afghan Projects', *McClatchy*, 12 January 2012.

¹⁵⁶ US Department of Justice Office of Public Affairs, 'Husband and Wife Co-Owners of Subcontracting Company Plead Guilty to Contract Fraud Related to Afghanistan Rebuilding', *Justice News*, 9 September 2009.

¹⁵⁷ A 2012 report by Sarah Han on legal aid in Afghanistan provides an interesting case study to this effect on the outcomes of regulatory reform being

on how time horizons shaped by organizational structure, ideology and competition within and among organizations influence their behaviour, I mean to underline the importance of understanding organizational processes and how changes in the social structure of organizations might lead them to perform in more desirable ways, rather than just evaluating outcomes and then attributing success or failure to individual policymakers doing their jobs well or badly.

My suggestions for how this case study might be generalized to provide lessons for analogous cases in which multiple organizations with different goals and limitations work together are fairly straightforward:

- Organizations favour projects and specific approaches to projects that – to return to the garbage can model – serve as receptacles for multiple solutions they have an interest in seeing carried out based on belief (in this case that, despite evidence of more ambiguous effects, development was intrinsically causally linked to counterinsurgency success), repertoires of action (for USAID, of thinking in terms of technical problems and sustainable solutions) and the corporate interests of their organizations.
- Having multiple organizations do the same job (i.e., having both the British and American military doing counterinsurgency; both the US Department of Defense and USAID doing development) leads to competition and pressure to perform in a highly visible way in the short term.
- Rapid turnover of subunits of organizations (i.e., British brigades in Helmand) tends to shorten the time horizons of leaders, so that different leaders focus on their own pet projects with the fallacious assumption that their successors will pick up where they left off.¹⁵⁸ Circumstances under which large and

implemented in conditions of organized anarchy with multiple international actors – here the World Bank, International Development Law Organizations and the aid agencies of various donor countries – intervening inconsistently and with little coordination or understanding of how their interventions would fit in with existing practices or be used instrumentally by groups in ongoing power struggles. Sarah Han, 'Legal Aid in Afghanistan: Context, Challenges and the Future', *Afghanistan Analysts Network*, AAN Briefing paper 01/2012, April 2012, www.aan-afghanistan.org/uploads/legalaid.pdf.

¹⁵⁸ The problems of discontinuity between British military deployments and 're-inventing the wheel' have been identified for several years and to a degree addressed. The British military now has a small number

long-term projects are worked on and then handed off to successors may increase both the attractiveness and the risk of dividing them up into steps or phases that might be implemented separately but that depend on each other for overall success, and of focusing myopically on getting the phase at hand done whatever the cost despite doubts that other phases could be completed.

4.2 Since Eagle's Summit

The shift to military-led infrastructure development has continued in the implementation of the Southeast Power System. As mentioned above, the US Army Corps of Engineers installed two 10 MW diesel generators in Kandahar in 2010–11. The Corps has also taken responsibility for refurbishing transmission lines and substations and issued a new 18-month contract for the transmission lines on 1 July 2012. It recently also put out a solicitation for a contract to refurbish the intake tunnel for both the irrigation channels and power station at Kajaki.¹⁵⁹

In December 2011 and after a visit to the dam by USAID Administrator Rajiv Shah, the US National Security Council directed the State Department and USAID to proceed with the installation of Turbine Two, at the planned cost of approximately USD 75 million.¹⁶⁰ It is part of a larger USD 266 million contract solely sourced to Black & Veatch, LBG's joint venture partner, in December 2010.¹⁶¹ Additional technical assessments, preparatory engineering work, and the process of signing with a

of designated 'continuity posts' – mainly at headquarters – lasting nine or twelve months, but brigades, including their commanding officers, continue to rotate out as units every six months. Cowper-Coles, *Cables from Kabul*, 62–5 [see FN 35]. Hannah Godfrey, 'Afghan Tour of Duty Could Double to 12 Months for Some British Army Units', *The Guardian*, 31 July 2011. UK Ministry of Defence, 'Commander Task Force Helmand Reports on HERRICK 16 Progress', *Military Operations News*, 23 October 2012.

¹⁵⁹ Interview with source, 1 September 2012. Federal Business Opportunities, 'Y – Kajaki Dam – Irrigation Tunnel Works at Helmand Province, Afghanistan', US Army Corps of Engineers Solicitation No W5J9LE-13-R-0002, 8 October 2012. Marshall, 'Corps of Engineers' [see FN 66].

¹⁶⁰ Ibid. MacKenzie, 'Watershed of Waste' [see FN 96]. A GAO report from November 2010 estimated the remaining costs of installation of Turbine Two to be USD 170 million. US Government Accountability Office, 'Afghanistan Development: U.S. Efforts to Support', 63 [see FN 115].

¹⁶¹ Taylor and Nissenbaum, 'U.S. Keeps Funneling Money' [see FN 155].

new subcontract through Black & Veatch for Turbine Two has taken the better part of 2012, reportedly because of difficulty in weeding out subcontract applicants suspected of ties to the Taliban. USAID officials are now saying work on the turbine will begin in March 2013.¹⁶²

By the accounts of USAID and Afghan government officials, the road to Kajaki from the Durai Junction was secured by US Marines and became passable in October 2011. It has been paved up to Sangin and otherwise improved as far as the dam in the past year by the US Army Corps of Engineers. USAID successfully sent its first convoy of supplies since 2006 to the dam in late December 2011.¹⁶³

However, more than a thousand of those American Marines have been withdrawn from Kajaki district

alone in the past several months and though in theory the Afghan National Security Forces have been replacing US forces to keep the entirety of Route 611 picketed, it is unclear whether Afghan security forces will be able to protect the road and transmission line work along it.¹⁶⁴ Security both along the route and around the dam has already deteriorated. Just weeks before the publication of this report, there was an attack on a USAID contractor's convoy in Kajaki, with one driver reported killed.¹⁶⁵ USAID may have, for a second time, missed its window to deliver the supplies and equipment it needs to complete the Kajaki project.

¹⁶² Interview with source, 1 September 2012. Email correspondence, 3 December 2012. Heidi Vogt, 'Final Push to Finish Afghanistan's Kajaki Dam Comes Amid Security Worries, Muddled US Strategy,' *Associated Press*, 5 January 2013.

¹⁶³ Interviews with sources, 22 August and 1 September 2012. Jon Boone, 'US Cuts British-Backed Afghan Hydropower Project in Doubt', *The Guardian*, 12 December 2011. Dan Lamothe, 'Taliban Tests Afghans as Kajaki Handoff Looms', *Marine Times*, 6 May 2012.

¹⁶⁴ Trofimov, 'Afghans Fear U.S. Pullout' [see FN 107].

¹⁶⁵ Interview with source, 6 December 2012. Email correspondence, 6 December 2012. Vogt, 'Final Push...' [see FN 162].

Box 1**Kajaki Dam Timeline**

1953	Kajaki Dam completed		Rehabilitation Program (AIRP), which will succeed REFS. Henceforth B&V handles most energy sector work, but LBG retains the Kajaki project
1975	Hydroelectric power station completed with 33 MW capacity		
August 2001	Taleban government signs with CMIC to installed a third turbine	October 2006	British leave Musa Qala; 3 Commando Brigade replaces 16 Air Assault
Late 2001	Taleban ousted		
September 2002	USAID launches its Rehabilitation of Economic Facilities and Services (REFS) program, under which the Kajaki project falls	December 2006	Assadullah Wafa appointed governor of Helmand to replace Daud
November 2003	First USAID-funded diesel plant comes online in Kandahar, providing 14 MW of electricity	April 2007	12 Mechanized Brigade replaces 3 Commando; Bill Wood succeeds Ronald Neumann as US ambassador; CMIC completes manufacture of Turbine Two parts and ships them to Pakistan
December 2003	USAID contracts LBG to refurbish Turbines 1 and 3. LBG subcontracts work to Voith-Siemens	October 2007	LBG staff return to dam to begin Turbine Three refurbishment together with CMIC; 52 Infantry Brigade replaces 12 Mechanized in Helmand
October 2004	US military establishes first presence in Helmand: a reconstruction office in Lashkar Gah		
January 2005	CMIC signs on to install Turbine Two and refurbish Turbine Three	March 2008	Gulab Mangal replaces Wafa as governor of Helmand
May-September 2005	Survey of communities around reservoir attempted in preparation for spillway gate installation	April 2008	USAID pays for five additional diesel generators to be trucked from Kabul to Kandahar; 16 Air Assault Brigade returns to Helmand, replacing 52 Infantry
December 2005	Mohammad Daud replaces Sher Mohammad Akhundzada as governor of Helmand		
January 2006	Turbine 1 refurbishment complete	August-September 2008	Operation Oqab Tsuka successfully transports turbine to dam
March-April 2006	16 Air Assault deploys in Helmand and faces a large-scale Taleban offensive	October 2008	16 Air Assault rotated out of Afghanistan
June 2006	LBG evacuates Kajaki	November 2008	CMIC staff evacuate Kajaki, citing kidnapping threat
August 2006	Black & Veatch (B&V) joins LBG in joint venture to implement USAID's Afghanistan Infrastructure and	October 2009	USAID suspends Turbine Two project

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