

## AFGHANISTAN ENERGY INFORMATION CENTER CLOSE-OUT REPORT

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**ATTACHMENTS**

Attachment 1: AEIC Catalog of Information

Attachment 2: AEIC Maps on Demand

Attachment 3: AEIC Categories including Drawings

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## **1.0 Project Strategic Impact**

In order to implement USAID's strategic plan for the electric energy sector in Afghanistan, a solid information baseline of current conditions in the electric sector was essential. Additionally the development of the information baseline had to be accomplished in a manner that allowed continued tracking of all implementing activity. This "live" and evolving baseline was directed to assist USAID in: (1) determining the current status of the electric sector in order to prioritize potential project action, (2) measuring the impact of its actions and, (3) determine needs for further development over time.

Under the Task Order directing the Afghanistan Energy Assistance Program (AEAP), USAID required the development of the Afghanistan Energy Information Center (AEIC) to meet its information needs. The creation and articulation of the strategy driving electric sector development began with very limited information on actual current conditions in Afghanistan's electric sector. The available collation and synthesizing of information was extremely limited. The identification of available data was weak and the gaps in available data which would have to be filled were wide.

The strategic value of the AEIC was found in its potential to provide a more complete and validated information baseline. Given this baseline, the results and the value of tactical program actions could be measured. Although very slow in development given the lack of consistent and available validated information, the AEIC, through data development, collection and assessment has evolved to the point where it does provide the basis for information collation and dissemination in assisting the strategic objectives of USAID

## **2.0 Project Description and Objectives**

**2.1 Project Description:** The establishment of an Afghanistan Energy information Center (AEIC) had two main functions: first, the collection and consolidation in one accessible location of quality controlled quantitative and qualitative energy sector information and secondly, ongoing maintenance of additions to the information base in a manner found amenable and reliable by all entities with a vested interest in the use and application of reliable energy sector information. AEIC was conceived to maximize the efforts of all stakeholders in the energy sector and ensure that a validated and shared information base existed which would help to ensure: (1) assistance projects are efficient and well designed; (2) no duplications occur; (3) opportunities are created for coordination and synergies among the various projects and donors. AEAP expected the AEIC to provide:

- Clear and up-to-date information.
- Materials in both Dari and English.
- Rapid and user friendly access to information.
- The ability to easily provide information feedback, contribution and updates.
- Continual database development and the technology required for database installation. To provide exhaustive, updated, accurate information on the Energy Sector in Afghanistan, driven by a comprehensive process of data collection, verification and translation.
- To provide access to the Afghan energy community to international and local information related to various topics within the energy sector.
- To provide benchmark input for future efforts directed at rehabilitating and developing Afghanistan's energy sector resources and infrastructure.
- To be a focal point and a place of exchange of information and ideas, and to boost the efforts of the Afghan energy community.

The AEIC exists on behalf of USAID and operates as per USAID's strategic vision. The AEIC is also responsible to counterparties at various levels in MEW and DABM, according to a brief statement of principles with specific goals, which is agreed upon with GoA. Within the parameters set by USAID, AEIC has a policy of open sharing with international donors and their consultants who are active in the energy sector in Afghanistan.

The management of the AEIC initially recognized two (2) paths that could be taken in its development. The first was to have significant up front involvement of multiple entities from the Government of

Afghanistan and various international and Donor agencies in the formation of the AEIC. The second was to maintain a low profile of development until the AEIC had been reasonably formed and to then use its information availability to attract interest and further incorporate the information being developed by other entities. The second path was determined the most feasible and was the path followed in Project development.

**2.2 Project Objectives:** The primary objective of the AEIC was to provide a centralized energy information facility to serve as an access and analysis point which would be available to USAID and all donors. This objective included the requirement to:

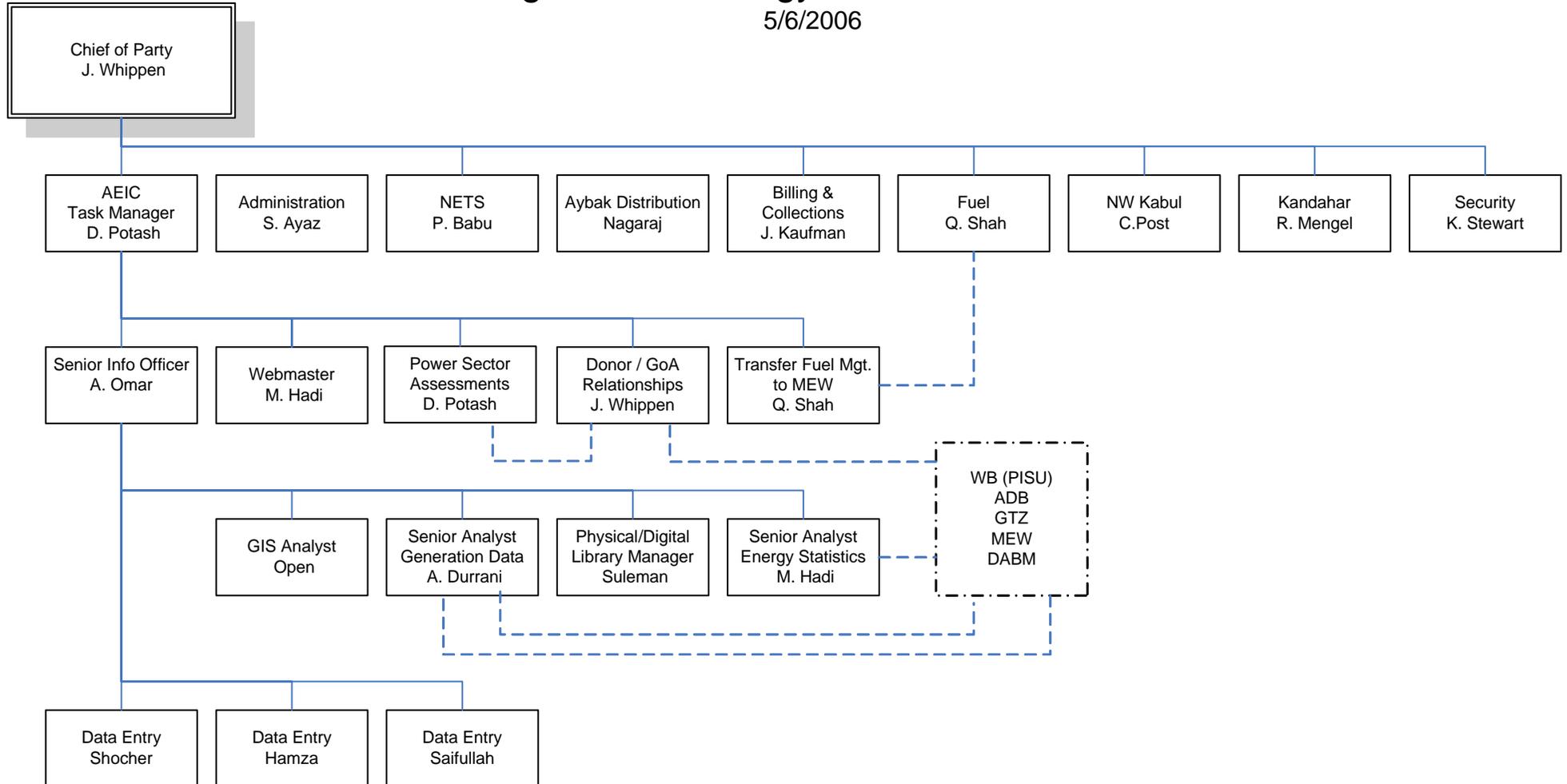
- Identify key data and information requirements consistent with the needs and demands of the Afghanistan Energy Assistance Program.
- Methodically identify available data and information and validate the reliability of the data and information
- Identify gaps in data and information, prioritize acquisition of the data and information relevant to ongoing and planned USAID activity and implement the action required to fill the gaps.
- Establish a core coordination group that covers key energy areas country-wide for regular information development, exchange, coordination and collaboration.
- Establish a professional, modern, user friendly supporting infrastructure for the effective and efficient operation of the Afghanistan Energy Information Center.
- Develop and maintain the ability to scan, store, and print documents on demand. Collect and maintain a library of technical drawings and information about power plants. Collect and maintain a library of reports on energy developments in Afghanistan.
- Develop and manage dynamic contact information for energy sector stakeholders, including USAID, other donors, Government of Afghanistan (GoA), and other relevant parties.
- Develop and incorporate access of available data and information onto a public web site under Afghanistan Energy Information Center.net.
- Forecast future energy needs and keep historical energy data, including studying regionally-focused energy security
- Be a reference source for the information about power plants and imports
- Promote energy efficiency, track energy technologies and support renewable energy
- Provide market support to existing, new and emerging renewable technologies
- Support public understanding regarding energy and its interaction with the economy and the environment
- Transfer international best practices to local experts and to GoA

The AEIC is staffed by AEAI and is closely coordinated with relevant experts at Ministry of Energy and DABM. It is headed by an Afghan National reporting to an ex-pat Institutional Strengthening Task Manager

An organization chart of the Institutional Strengthening Function is on the following page, and schedule following thereafter.

# ORGANIZATION CHART

specific to  
 Afghanistan Energy Information Center  
 5/6/2006



**2.3 Progress to Date:** The AEIC, although fairly slow in start-up, has progressed with increasing speed over the past year and a half. The following provides a summary overview of developmental progress and results.

- Beginning in September 2004, efforts initiated with the collection of electric sector information and data inclusive of Power plants, transmission and distribution systems and substations. All planned rehabilitation, studies and new projects of USAID, other donors, and GoA. **(Please reference Attachment 1: AEIC Catalog of Information)**
- Activities were initially focused on identifying data and information sources, building relationships with document holders and gatekeepers in GoA Ministries and with other contractors, international banking institutions, and donor organizations.
- In cooperation with and by the actions of the US Army Corp of Engineers (USACE), Geographical Information System (GIS) data reflecting the location of electric infrastructure was developed and mapped. Initially the infrastructure mapping activity and expertise required to apply GIS (through Arcview) was shared with IRD. **(Please reference Attachment 2: AEIC Maps on Demand)**
- As mapping activity continued, (1) data validation continued by re-assessing the condition of all existing electric infrastructure (generation site, transmission lines and distribution systems), (2) planned and funded additions to electric infrastructure by all participating donors and the GoA and, (3) planned but unfunded electric infrastructure by all donors and the GoA.
- In early 2005 the AEIC Project was pushed further and somewhat faster ahead through the following actions:
  - A Request for Proposals (RFP) was developed to (1) create the Document Index Database (DID), and (2) provide basic library startup functions and staff augmentation. The DID provides the database architecture system for document record keeping and the library function of the project. **(Please reference Attachment 3: AEIC Categories including Drawings)**
  - A senior technical advisor was hired to assess and support the technical aspects of the AEIC development effort and guide the RFP implementation.
  - A full time Information Officer was hired to provide day-to-day operations support and coordination for the project. This individual began working directly with key subject matter experts to collect, scan, and index and store documents.
  - An extensive data and document collection effort was undertaken and as built construction documents for such AEAP generation projects as Kajakai HPP (2,000 drawings cleaned, scanned, posted to Montgomery Watson Harza web site and stored electronically), Darunta HPP (1,800 drawings cleaned, scanned and stored electronically). Drawings are also held in the AEIC in hard copy.
  - At this time the AEIC was fully supporting the efforts of several key technical specialist in the preparation, scanning and storing (on IRD servers) of significant system design documentation. In addition, the binding and indexing (manual) of the existing record set was initiated (and continues through the end of the project).

- Removable media (CDs) were also produced and provided to the relevant technical experts for their use at their desks (AEAP staff offices had been relocated away from the IRD office where the AEIC was located).
- Active coordination of data formatting and collection effort between the AEIC and the Project Implementation Support Unit (PSIU) at the Ministry of Energy and Water (MEW) was conducted from the period of May through September of 2005 to ensure that the DID could be used by both the AEAP and PSIU. The PSIU already had an intranet set up at MEW and had a significant set of documents already collected in hard copy and electronic form. This coordination effort was initiated to enable cooperation and collaboration for document exchange between the PSIU and AEIC.
- Dedicated computer servers for the AEIC were procured when the DID was ready to be installed at the AEIC library and with the relocation of the AEIC to the AEAP Office Annex. At this time additional scanning, printing and computer hardware was also purchased for the relocated AEIC
- During fall, 2005 the interim staffing from the development contractor was replaced with full time AEAP staff to scan, index, process and output the AEIC documents. The augmented staff assisted in the Capacity Building function to be fulfilled by the development of the AEIC which was to train and develop local capacity in energy information management
- Movement of existing and addition of new index and document record information to the AEIC DID is progressing and will continue as long as new documents are collected for the AEIC. Hard and electronic copies of documents also continue to be collected and stored for retrieval and use by the appropriate experts. The AEIC document collection effort is a continuing process as new projects are designed, studied, proposed and constructed.
- Information on all existing hard assets (power generation, substations, transmission systems, distribution systems) has been collated into specific area data books and data files.
- All AEAP reporting has been consolidated into AEIC to insure ease of access and data base integration of all ongoing program activity
- All ongoing and planned rehabilitations, studies, new projects – scopes of work and implementation schedules and plans are being incorporated into the AEIC to facilitate efficient coordination/management of USAID, other donor and GOA activities. On a strategic level, working with the GoA ministerial level and with donors, the purpose is to surface and discuss interlocking issues in the power sector: tariffs, financing, and reform. On a tactical level, working at the professional staff level at MEW and DABM, the purpose is to introduce and train people in detailed financial modeling, project scheduling, and any other relevant planning tools for the power sector.
- The data collection and validation effort was focused in late 2005 and early 2006 into the development of the Afghanistan Power Sector Model which is housed in the AEIC. The Power Sector Model development forced the clarification and prioritization of power sector data development, validation and application to those project areas which are the focus of the AEAP.

- The Power Sector Model has been utilized to integrate all available information on USAID, donor and GoA projects applicable in the North East Power System and South East Power System areas and provide a tool to enhance discussion and coordination of these programs. The mission of the Power Sector Model is to achieve a comprehensive, detailed, and integrated model to capture data about the electric power system in Afghanistan, to analyze and understand the data, and to make useful forecasts for Donors and GoA. This is needed for strategic decision-making, optimizing sector operations, least-cost planning, and for justifying investments in the sector. The objectives of the task are to track power flow and cash flow, to understand the cost of delivering electric power, the cost structure and sensitivity to various power generation alternatives, and to plan for least cost reliable power service to customers. **(Please reference Attachment 4: Project Information Sheet-Power Sector Model)**
- Initial web site development has occurred and the web site is being progressively populated with available key electric sector information. The mission of the web page is (1) to distribute detailed engineering drawing to DABM, MEW, and Donors working on rehabilitation projects, and (2) for the lay person it is to provide an overview of the energy situation in Afghanistan: resources, plans, issues, maps, and programs, (3) as a feedback tool to determine what energy information is a priority to capture and report for donors, GoA officials, local and international energy professionals active in Afghanistan, and Afghan citizens. The web site may be visited at [www.afghanenergyinformationcenter.org](http://www.afghanenergyinformationcenter.org)

### **3.0 Continuation of the AEIC**

**3.1 Options:** There were two obvious potential actions that could have been taken relative to the AEIC. The first was to simply close it. The second was to determine and implement a short term operations plan for continuation and expansion of its effectiveness and include in the plan the longer term and sustainable placement of the AEIC.

**3.1. a Closure:** Closing the AEIC would have eliminated the only central written “institutional memory” collection point within the AEAP and other donors’ work in the energy sector. The current staff of the AEIC would disburse and the training provided to them in information management would have been lost. The transition of information capability incorporated within the AEIC in CCN staff would also have been lost. In continuing the AEAP and USAID activity the same function would in some form have to have been recreated at additional cost.

**3.2. b Continuation:** Recognizing the unacceptable cost of closure the decision was made to continue the AEIC. In making the decision to continue the AEIC the following potential issues and actions were recognized:

- The AEIC is totally managed and operated by CCN staff trained by AEAI. It is physically located in the Office Annex which is the office area for all project technical personnel.
- The computer hardware supporting the AEIC is located in the AEAI residence adjacent to the Office Annex in a limited access climate and dust controlled locked area.

- The Center is physically fully developed as far as computer infrastructure with its own servers capable of supporting data base and Web Page development, in a climate controlled office location with necessary broad band internet support.
- The beginning of a reasonable energy reports library with Dari translations of prefaces and contents of documents exists.
- The Center could be transited to MEW and/pr DABM recognizing the lack of a climate controlled environment and uninterruptible power supply will lessen its value and stop its continued development.
- The staff of the AEIC will not, we suspect, accept the salary levels that are offered by MEW until the PRR process actually (if ever) produces public sector salary levels that can attract and maintain trained professional staff.
- The Center could also be transited to the new AGC building recognizing that the interim time gap between demobilization and the availability of the AGS building is expected to be 9 months. This is indicated on the basis that the AGS building will have the required infrastructure to support the AEIC computer operations.
- In the interim if the decision were to be to locate the Center at the AGS building the option exists to maintain the Office Annex lease and move the servers and UPS equipment to the Office Annex.
- The AEIC can be transited temporarily to the new IRP contractor, assuming rapid mobilization and capability to assume by June 30, 2006, and then transited to the new AGS building to the floors to be occupied by MEW.

### **3.2. c Statement of Work for Continuation: Task Order**

**3.2. c 1. Objective:** The primary objective of the AEIC was to provide a centralized energy information facility to serve as an access and analysis point which would be available to USAID and all donors. The AEIC currently exists and has been increasingly becoming a valuable tool as a store house and source of data and information on Afghanistan's electric sector.

The objectives for this activity are to: (1) provide continued support for the AEIC and (2) evolve the strategy to incorporate other donor support into the expansion of the AEIC as an "all donor and GoA" primary source for data and information storage and retrieval. Part of this activity will be engendering the support of all donors and the movement of the AEIC to the AGS building as a central "non-partisan" permanent location for the AEIC.

**3.2. c. 2 Scope of work:** Work under this task shall include the following:

In continuing to support the development of both the AEIC and the CCN staff of the AEIC the Contractor shall be responsible for:

1. Performing an initial information and capability requirements audit of the AEIC
2. Based upon the audit, providing a written report to USAID on strengths and weaknesses of the AEIC.

3. Provide specific and budgeted recommendations to USAID to enhance strengths and overcome weaknesses on a prioritized basis.
4. Assessment of the capability of AEIC personnel and recommending specific and timely Capacity Building programs for each staff CCN member.
5. Determination of specific actions to attract donor interest in supporting and joining the AEIC as a center of energy information collection/dissemination point.
6. Provide continued expert guidance on data base development and information cataloguing and library management.
7. Provide an effective ICT and office infrastructure as required to achieve objectives.
8. Develop specific and documented training programs for the AEIC CCN staff.
9. Continue further exposure of the AEIC and its integration with the information development and energy sector program planning occurring among all donors and USAID.
10. Develop and implement a short term plan (one year) for the effective relocation of the AEIC to the AGS building.
11. Develop and implement a short term plan (one year) for the effective development of broader donor and GoA financial support and involvement in the longer term sustainability of the AEIC.

### **3.2. c 3 - Deliverables**

Deliverables will include, but not be limited to:

1. A schedule to implement the SOW indicated and a weekly schedule to actual report tracking progress in achieving each key identified activity and milestones applicable to each activity.
2. A weekly report indicating identified additions to the information and data base maintained by the AEIC.
3. A weekly report indicating "hits" on the web page and requests for data and information from the AEIC.
4. A fully functioning AEIC at the AGS building unless otherwise directed by USAID.
5. Other tasks as assigned by the CTO.

## **4.0 Issues to Consider**

1. It is believed that the core project objectives for the AEIC have been met. However, a considerable volume of documents still need to be collected, copied, scanned, and indexed.

2. Location and facilities provided at the IRD office location were never adequate for the AEIC and systems support provided (including GIS technical support) was marginal. This retarded the development of the AEIC. Consideration as to location of the AEIC must be carefully undertaken to avoid disrupting is growing development.
3. The local technical development contractor and local technical resources that the contractor and the AEIC and AEAP project needed to develop and support this project are in very short supply and most individuals lack practical experience in the most basic of technical tasks.
4. The AEIC was unable to find any highly qualified GIS experienced candidates in Afghanistan and could not find any fully qualified expatriate GIS experienced candidates willing to work in Afghanistan. The GIS expertise available is highly capable but requires training.
5. Lack of ICT skilled support staff above the basic entry level constrains all sustainability of ICT support in Afghanistan. Governmental systems need to be automated and these automated systems will need to be supported by skilled ICT specialists but Afghanistan does not have the skilled mid-level technical personnel to provide sustainable operation of such systems.
6. It is recommend one full time expatriate advisor for the technical library function of the AEIC at a minimum and one full to part time expatriate advisor for GIS (if one can be found) be immediately applied to the AEIC.
7. A basic information management function needs to be nurtured in the AEIC. This indicates the need for an energy information cataloguing specialist. A basic limit of understanding of the energy sector impacts local staff capability to input and catalogue information effectively.

Attachment 1: AEIC Catalog of Information

<b>No</b>	<b>Book Name</b>	<b>Author</b>	<b>Edition date</b>
1	Background in Formation for the Development of Geothermal power Facility in Sheberghan Final Report	Maunsell	8/3/2005
2	Feasibility Study for the Development of a gas Fired thermal Power Facility In Sheberghan Final Report	Maunsell	8/3/2005
3	Plant Engineering Report for the Development of A gas fired thermal Power Facility in Sheberghan	Maunsell	03-Aug-05
4	Power Sector Master Plan Appendix C Hydropower	Maunsell	04-Jul-05
5	Feasibility Study for the Development of a gas fired thermal power facility in Sheberghan	Maunsell	03-Aug-05
6	Feasibility Study for the Development of A gas Fired thermal Power Facility In Sheberghan Final Report	Maunsell	03-Aug-05
7	Feasibility Study for the Development of A gas Fired thermal Power Facility In Sheberghan Final Report	Maunsell	Aug-05
8	Feasibility Study for the Development of A gas Fired thermal power Facility in Sheberghan	Maunsell	8/3/2005
9	Environmental impact Statement for the Development of A gas fired thermal power facility in Sheberghan	Maunsell	Aug-05
10	Afghanistan Rehabilitation Strategy Action Plan for Immediate Rehabilitation Volume III	United Nations	Jul-05
11	Afghanistan Power sector Master Plan		18-Jul-05
12	Draft Feasibility report for the Development of a Gas fired Thermal Power Facility in Sheberghan, Afghanistan	Draft	7/6/2005
13	Oil and gas potential in Afghanistan-Ussr Min. Geology-1970	Ministry of Geology of the Ussr	
14	Feasibility Report Kahabad hydro-Electric report	Afghan Globe Consultancy	July 04 2005
15	Oil and Gas Potential in Geology and oil and Gas Potential of Northern Afghanistan	Trudy	27-Oct-05
16	Master Plan Report		Nov-77
17	Kabul Medium Voltage City Network Plan	PISU	07-Jul-05

<b>No</b>	<b>Book Name</b>	<b>Author</b>	<b>Edition date</b>
18	Afghanistan power Sector Master Plan Volume 1 Main Report		<b>17-Jul-05</b>
19	Guidelines for Earth Quake Resistant Design Constriction, & Retrofitting of Building in Afghanistan June 2003 (MUDH)		<b>7/11/2005</b>
20	Afghanistan Rebuilding a Nation		<b>13-Nov-05</b>
21	Society of afghan Engineers Journal Infrastructure, Rehabilitation and Development in Afghanistan Volume 1, Number 1 July 2004	SAE	<b>Jul-04</b>
22	Afghanistan Rebuilding a Nation Conference 08 June 2003		<b>20-Oct-05</b>
23	Afghanistan Post-Conflict Environmental Assessment United Nations Environment programme 1 August 2005		<b>01-Aug-05</b>
24	Afghanistan Reconstruction Assessment/Review June 2004		<b>19-Oct-05</b>
25	Feasibility study for the Turkmenistan-Afghanistan, Pakistan natural Gas pipeline Project Draft Final Report Volume1		<b>15-Oct-05</b>
26	Power Sector Master Plan (Afg/03170) Final Report Volume4		<b>16-Oct-05</b>
27	Power sector Master Plan Chapter 1 Executive Summery Ministry of water & power, Afghanistan		<b>Oct-04</b>
28	Afghanistan Valley Department Project Master Plan Development Reconnaissance Report		<b>23-Jul-05</b>
29	Afghanistan Rehabilitation Strategy Action Plan for immediate Rehabilitation Volume II October 1993	United Nations	<b>18-Jul-05</b>
30	Afghanistan Rehabilitation Strategy Action Plan for I Immediate Rehabilitation Volume (VI) October 1993	United Nations	<b>18-Jul-05</b>
31	Afghanistan Rehabilitation Strategy Action Plan Immediate Rehabilitation Volume (V)	United Nations	<b>18-Jul-05</b>
32	Afghanistan Rehabilitation Strategy Action Plan for Immediate Rehabilitation Volume (1)	United Nations	<b>18-Jul-05</b>
33	Power Sector Master Plan (Afg/03170) Final Report		<b>10-Oct-04</b>
34	Power Sector Master Plan (afg/03170) final Report volume6 16 October 2005		<b>Oct-05</b>
35	Power Sector Master Plan (afg/03170) final report Volume2		<b>10-Oct-05</b>
36	Power Sector master Plan (afg/03170) final report volume3		<b>Oct-05</b>
37	Power Sector Master Plan (afg/03170)final report Volume5		<b>Oct-05</b>
38	Home Power the Hands-On Journal of Home Made Power Issue # 50 December 1995/January 1996		<b>07-Aug-05</b>

<b>No</b>	<b>Book Name</b>	<b>Author</b>	<b>Edition date</b>
39	Home Power the Hands-On Journal of Home Made Power Issue # 51 February/March 1996		<b>08-Oct-05</b>
40	Home power the hands-On Journal of Home made power Issue # 52 April/May 1996		<b>08-Aug-05</b>
41	Home Power the Hands-On Journal of Home Made Power Issue# 53 June/July 1996		<b>Aug-05</b>
42	Home Power the Hands-On Journal of Home Made Power Issue# 55 October/November 1996		<b>Aug-05</b>
43	Home Power the Hands-On Journal of Home Made Power Issue# 58 April/May 1997		<b>07-Aug-05</b>
44	Home Power the Hands-On Journal of Home Made Power Issue# 57 February/March 1997		<b>24-Aug-05</b>
45	Home Power the Hands-On Journal of Home Made Power Issue# 56 December 1996/January 1997		<b>07-Aug-05</b>
46	Home Power the Hands-On Journal of Home Made Power Issue# 48 August/September 1995		<b>Oct-05</b>
47	Home Power the Hands-On Journal of Home Made Power Issue# 54 August/September 1996		<b>Oct-05</b>
48	Home Power the Hands-On Journal of Home Made Power Issue# 43 October/November 1994		<b>Aug-05</b>
49	Home Power the Hands-On Journal of Home Made Power Issue # 46 April/May 1995		<b>04-Aug-05</b>
50	Home Power the Hands-On Journal of Home made Power Issue # 47 June/July 1995		<b>13-Aug-05</b>
51	Home Power the Hands-On Journal of Home Mad Power Issue# 49 April/May 1995		<b>Aug-05</b>
52	Bidding Documents for Substation Package for 220/11020 kV Kabul Substation Under kabul- Pul-e-Khumri Transmission System in Afghanistan		<b>May-05</b>
53	Bidding Docs for substation Package for 220/110/20 KV Kabul substation under Kabul - Pul-e-Khumari Transmission System in Afghanistan Volume_II Technical Specifications	A Govt. of India Enterprise	<b>May-05</b>
54	Detailed survey & Soil Investigation for 220 kV D/C Kabul to Pul-e-Khumri Transmission Line and 220/110 kV Substation at Kabul in Afghanistan		<b>Sep-04</b>
55	Kabul City		<b>Jul-05</b>
56	Rehabilitation of Naghlu HEPS Bedding Documents for Electro-mechanical and Hydro mechanical Works Volume 2 of 4		<b>18-Nov-05</b>
57	Kajakai Hydroelectric Plant		<b>13-Nov-05</b>

No	Book Name	Author	Edition date
58	Trends TN Water Resources Management Turkmenistan		18-Nov-05
59	Transboundary water and Energy Project Initial Performance monitoring Results		Nov-05
60	A national Assessment of Kanmbarata 1 and 2 Hydropower Projects		18-Nov-05
61	Rehabilitation of Naghlu HEPS Bedding Documents for Electro-mechanical and Hydro mechanical Works Volume 1 of 4		Nov-05
62	Rehabilitation of Naghlu HEPS Bidding Documents for Electro-mechanical and Hydro Mechanical Works Volume 1 of 4		Nov-05
63	Rehabilitation of Naghlu HEPS Bedding Documents for Electro-mechanical and Hydro mechanical works Volume 2 of 4		Nov-05
64	Study Power Interconnection project Reactive Requirement Study 10 August 2004		24-Aug-05
65	Kajakai Environmental and Sociological Assessment-Project Inception and first, Second, Third, Fourth, and fifth monthly report		Nov-05
66	Tender Drawing for Kabul Substation Appendix on: may 2005		Jul-05
67	Chamkani Hydro Assistance Part Tow		Oct-05
68	Chamkani Hydro Assistance Part one		Oct-06
69	Bidding Documents for substation Package for 220/110/kv Kabul Substation Under Kabul-Pul-e-Khumri Transmission System in Afghanistan Volume II		7/13/2005
70	Kajakai environmental & sociological Assessment-Project Inception and First Monthly Report	UNOPS	May-05
71	Kajakai Environmental & sociological Assessment-Project Inception and First Monthly report	UNOPS	May-06
72	خلاصه مطالب مهم ماستر پلان سکتور انرژی وزارت آب و برق افغانستان کابل - افغانستان (Executive Afghanistan ,power & Summary Power Sector master Plan Ministry of Water)		Oct-05
73	خلاصه پتانسیل (ذخایر نهانی) تیل و گاز در شمال افغانستان کابل افغانستان (Oil and Gas Potential In Northern Afghanistan)	Draft	Oct-05
74	په افغانستان کی د نړیوال بانک فعالیتونه د هیواد په کچه و پروژو په هکله تازه معلومات		Nov-05
75	پروژه های منتخب در سیناریو پیشرفت (Candidate Project for Development Scenario)		Nov-05
76	سیناریو ترقیاتی انرژی مناطق: کابل ننگرهار. پروان. قندهار. هلمند. بلخ. غور. هرات و دیگر		22-Nov-05
77	S Trade .Resource Guide U Afghanistan Rebuilding a Nation Project) د افغانستان بیار غاونه (and Development Agency)		22-Nov-05

No	Book Name	Author	Edition date
78	خلاصه راپور امکان پذیر برای گسترش دادن توانایی گاز در شیرغان ( Feasibility Report for the ) ( Development of a Gas Fired Thermal power facility in Sheberghan Afghanistan	Draft	Nov-05
79	ساختن پایپ لاین کابل افغانستان ( Pipeline Construction project of TAP ,Turkmenistan) (Gas Pipeline (Pakistan ,Afghanistan	Ministry of Water & Power , Afghanistan	Oct-05
80	طرح و دیزاین TAP پایپ لاین ترکمنستان. افغانستان و پاکستان ( Pipeline (TAP)Design of ) (Pakistan &Afghanistan .istanTurkmen	TAP	15-Oct-05
81	خلاصه پتانسیل (ذخایر نهانی ) تیل وگاز در شمال افغانستان کابل افغانستان ( Oil and Gas Potential In ) (Northern Afghanistan	Draft	17-Oct-05
82	کمکهای ایالات متحده امریکا در بازسازی افغانستان (U.S.A Help In Recons. of Afghanistan)	U.S.A	08-Oct-05
83	خلاصه مطالب ماستر پلان سکتور انرژی کابل افغانستان (power Sector master Plant)	Ministry of Water & Power , Afghanistan	08-Oct-05
84	برق و گاز منحصی منابع اقتصادی افغانستان (of power and Gas as Economical Resource of ) (Afghanistan		15-Oct-05
85	دکجکی برشناپی فابریکه (Kajakai Hydroelectric Plant)		08-Oct-05
86	بخش انرژی پلان C ضمیمه قوه آبی وزارت آب و انرژی افغانستان ( Power Sector Plan Appendix C ) (Hydropower	Ministry of Water & Power , Afghanistan	15-Oct-05
87	افغانستان تاسیسات برق آبی		03-Aug-05
88	اقتصاد و منابع انرژی افغانستان (Project Resources Guide)	Economic Resources	08-Oct-05
89	Afghanistan power Transmission Maps		07-Jul-05
90	ماستر پلان سکتور انرژی پیش بینی مطالبات برای انرژی برق در افغانستان ( Electricity Demand Forecasts Ele ) (in Afghanistan	Ministry of Water & Power , Afghanistan	17-Oct-05
91	Sub-& Junction Station	PISU	07-Jul-05
92	Wind Energy: Living With A Wind Machine Dan Whitehead		09-Oct-05
93	Society of Afghan Engineers & Society of Afghan Architects and Engineers	SAE	17-Dec-05
94	Watershed ATLAS of Afghanistan		01-Jan-04
	NEW BOOKS		
95	Final report comparing independent power wholesale Electricity prices in South Asia	AEAI	Apr-03

No	Book Name	Author	Edition date
96	On Interstate Electric Power Council of the Integrated power System of Central Asia.	AEAI	29-Dec-05
97	Viability OF POWER EXPORTS FROM BANGLADESH TO INDIA	AEAI	
98	Rehabilitation of the Naghlu HEPS Bidding documents for Electro _mechanical and Hydro mechanical Works	Bechtel National, Inc.	
99	Rehabilitation of the Naghlu HEPS Bidding documents for Electro _mechanical and Hydro mechanical Works Volume 2 of 4.		
100	Bidding Documents Emergency Power Rehabilitation project. Rehabilitation and Extension of Kabul city Distribution Network(MWP/300)		
101	Rehabilitation of Naghlu HEPS Bidding Documents for Electro mechanical and Hydro mechanical works volume 3 of 4	Ministry of water and power	Dec-04
102	National Load Dispatch Center Feasibility Study	Ministry of water and power	4-Dec
103	Country presentation of Nepal Workshop on power Sector Tariffs and ratemaking in Newly formed Regulatory Bodies in the south Asia		September 26-2005
104	Caspian Sea: Oil And Politics, Is It worth it	By Cathie Carlson	
105	Commercial Agreements Concepts & Contents	Lecturer Name	
106	Privatization of Military Installations Objectives, Lessons Learned and Success Realized	American states	August-17,2005
107	Sub national Administration in Afghanistan: Assessment and Recommendations for Action		Mar-04
108	Afghanistan Electricity Demand Forecast	USAID	05-Nov-05
109	Afghanistan in Perspective An Orientation Guide Defense Language Institute Foreign Language Center Curriculum Development Division Instructional Design Department		Jul-05
110	Charter of Independent International Dispatch Center	DRAFT	22-Jul-98
111	Proposals for Improved Water And Energy Management in The Sir Darya River Basin		29-Jan-03
112	Project Management Plan Helmand Valley Water Management Plan	US	Jun-04
113	Tran boundary Water and Related Energy Cooperation for the Aral Sea Basin Region of Central Asia		May 5,2002

No	Book Name	Author	Edition date
114	South Asia Regional Initiative for Energy (SARI/Energy) Power Sector Tariffs and Rate Making in Newly formed Regulatory Bodies in the south Asian Region		<b>26-30 September</b>
115	Power Generation Technology Assessment (Preliminary Results)		<b>15-Mar-05</b>
116	Bhutan Electricity Authority Presentation		
117	Afghanistan State Building, Sustaining Growth, and Reducing poverty	The World Bank	
118	Bidding Documents Emergency power Rehabilitating Project		<b>Mar-05</b>
119	Regional Hydro-power Resources: summary and Analysis of Selected SARI Date	Neat	<b>Nov-03</b>
120	The four Borders Project: Reliability Improvement and Power Transfer in south Asia	Nexant	<b>Nov-01</b>
121	Opportunities for Regional Harmonization of Appliance Standards & Labeling Program	Nexant	<b>2003</b>
122	Regional Hydro-Power Resources: Status of Development and Barriers	Bhutan	<b>2002</b>
123	Rural Energy Services Best Practices	USAID-SARI/Energy Program	<b>Revised May 2002</b>
124	Concept Paper Energy Efficiency Standards & Labeling for Appliances Bhutan	USAID-SARI/Energy Program	<b>Feb-03</b>
125	Clean Transport Fuels-Forging Options for Regional Cooperation Regional Executive Summary	USAID-SARI/Energy Program	<b>Sep-03</b>
126	Rural Energy Services Legal & Regulatory Review	USAID-SARI/Energy Program	<b>Feb-02</b>
127	Sustainable Guarantee Facility Operating Guidelines		<b>May-04</b>
128	Outline of A Regulatory framework to the 1998 Agreement on Multiple purpose Use of The Syr Darya Water Resource		<b>26 neb 2005</b>
129	The Helsinki Rules On the Use of the Water of International Rivers	London International Law Association 1967	<b>26 neb 2005</b>
130	The power of Water In Divided Central Asia max Poor And Anatoly Krutov		<b>26 neb 2005</b>
131	Rehabilitation and Equipment of Mazar-e-Sharif Fertilizer and power Plant		<b>26 neb 2005</b>
132	Protocol of Experts Joint working of Meeting To Develop a Draft agreement between the government of the Republic of Kazakhstan		<b>26 neb 2005</b>

<b>No</b>	<b>Book Name</b>	<b>Author</b>	<b>Edition date</b>
133	Ministry of Water and Power Republic of Afghanistan project Preparatory Technical Assistance Asian Development Bank		
134	Sari/Energy Laying the Foundation for Regional Energy Cooperation	USAID	
135	Central Asia natural Resources management Program Tran boundary Water and Energy Project	USAID	<b>November 10, 2003</b>
136	Tran boundary Water and Related Energy Cooperation for the Aral Sea Basin Region of Central Asia	USAID	<b>May 5,2002</b>
137	Conceptual Model For Central Asia Electricity markets		<b>30-Jun-99</b>
138	Tran boundary Water Cooperation in the Newly Independent States		<b>26-Dec-05</b>
139	Technical Assistance for Improved Management of Shared Water Resources in Central Asia	Asian Development Bank	<b>Dec-03</b>
140	Request For proposal Recruitment of Consulting Firms for Technical Assistance (TA) Using Quality and Cost-Based Selection(QCBS) Method	Asian Development Bank	<b>26-Dec-05</b>
141	Ministry of Water and Power Republic of Afghanistan Project Preparatory Technical Assistance Asian Development Bank		<b>Jan-04</b>
142	Geothermal Energy in Afghanistan: Prospects and Potential		<b>Feb-04</b>
143	A Guide to Government in Afghanistan	The World Bank	<b>12-Dec-05</b>
144	Water Rights Allocation in the Aral Sea Basin Lizhong Wang Liping Fang and Keith W.Hipel1,3		
145	Band-I-AMIR micro hydropower project A Technical Feasibility/ Design Report	Asian Development Bank	<b>12-Dec-04</b>
146	Rehabilitation Aga Khan Irrigation Dam As-Built Drawings by Oeg Omulbald Engineering Group for Louis Berger Group		<b>12-Dec-05</b>
147	memorandum of Understanding Among Power Systems and Power companies in Central Asia		<b>13-Dec-05</b>
148	Afghanistan: Rebuilding a Nation Project Resource Guide U.S trade and Development Agency		<b>29-Nov-05</b>
149	Lessons on cooperation building to manage water conflicts in the Ara sea Basin		<b>26-Dec-05</b>
150	Da Afghanistan Breshan Moassessa Ajar micro Hydel Scheme Bamiyan province Afghanistan		<b>Oct-74</b>

No	Book Name	Author	Edition date
151	Central Asia Power Pool System Operator Agreement		26-Dec-05
152	Technical Assistance for the Feasibility Studies of the Turkmenistan- Afghanistan- Pakistan natural Gas Pipeline Project	Asian Development Bank	Dec-02
153	Ta No. 6066 - Reg Feasibility study for the Turkmenistan - Afghanistan- Pakistan Natural Gas Pipeline Project Draft Final Report	Asian Development Bank	12-Dec-05
154	Feasibility Study for National power Transmission Grid		29-Dec-05
155	Technical Assistance for the Feasibility Studies of the Turkmenistan- Afghanistan- Pakistan natural Gas Pipeline Project		Dec-02
156	Between , the government of the Republic of Kazakhstan, The Government of the Kyrgyz Republic on Utilize of Water Facilities of Interstate Use on The Chu and Talas Rivers		12-Dec-05
157	Water and energy in Central Asia-preventing the slow death of Aral Sea		29-Dec-05
158	provisions on interstate Electric Power Council of the Integrated Power System of Central Asia		29-Dec-05
159	The Changing Value of Water		29-Dec-05
160	Managing Tran boundary Water Resource in the Aral Sea Basin: in Search of A Solution		29-Dec-05
161	CE 397 Tran boundary Water Resources Reading List Water Availability	UNDP	29-Dec-05
162	Car Region-World Bank 10 year Assessment Central Asia: Ten Years of Transition		29-Dec-05
163	Roadmap for Harmonization of Energy Efficiency Standards in South Asia Report on the Second Sari/Energy harmonization Meeting		Oct-03
164	Economic Impact of Poor Power Quality on Industry: Review of Studies India		November 2003
165	Kunduz Province	DABM	
166	Darunta Hydroelectric project Vendor Contact Summary	AEAI, McCandless	1/23/2006
167	Kajakai Environmental & Sociological Assessment-Second Monthly Report June 2005	Maunsell Aecom	Jun-05
168	Outline of a Regulatory Framework to The 1998 Agreement on Multiple Purpose Use of The Syr Darya Water Resource	AEIC	
169	Optimization of Syr Darya Water And Energy Uses	IWRA, Water International	4/12/2002

No	Book Name	Author	Edition date
170	Agreement Between the Government of the republic of Uzbekistan, Tajikistan, Cooperation in The Area of Rational Water and Energy Uses in 2000		10/2/2000
171	Hydrographic and Sedimentation Survey of Kajakai Reservoir Afghanistan	United States Government Printing Office, Washington	
172	Figure 8: Fatmasti Irrigation Canal Outside Bamian, Afghanistan	GAO-04-403	
173	Feasibility Study Chakhansur Flood Control And Irrigation Project Afghanistan	Asian Development Bank Philippines	Jul-73
174	Water Resources of Northern Afghanistan And their Future Use	Soyuzvodproject' Moscow, Russia	
175	Rapid Assessment of Water Sector Afghanistan, United States Agency for International Development (USAID)	University of Hartford West Hartford, CT	May-02
176	International Workshop on flash floods and Sustainable Development in The Hindukush- Himalayas	Lhasa, P,R, of China	22-Oct-05
177	National Irrigation And power Program	National Priority Program	
178	Water Resources Management in Afghanistan The Issues and Options	IWMI	Jun-02
179	Current Drought Situation In Afghanistan	Afghanistan	Aug-02
180	Afghanistan Hydrological Network (River Basin) Coding Manual Introduction	Coding Manual Introduction	
181	A Survey of Drought Impacts and Coping measures in Helmand and Kandahar provinces of Afghanistan	IWMI Internal Report	Dec-04
182	drought Impacts and potential for Their Mitigation in Southern and Western Afghanistan	International Water Management Institute	
183	Water Resource Development in Northern Afghanistan and Its Implications for Amu Darya Basin	The World Bank	Jun-04
184	Afghanistan Energy And Resources ( World Resource Institute )	World resource institute	12/29/2004
185	Geothermal Energy in Afghanistan Prospects and Potential		12/29/2004
186	Afghanistan Country Analysis Brief		
187	world Bank in Afghanistan	world Bank	Jun-05

No	Book Name	Author	Edition date
188	Energy efficiency & Passive Solar Architecture in the Construction Sector	the future in mind to rebuild now Afghanistan	2004
189	Islamic Republic of Afghanistan Ministry of Economy Central Statistics office	Estimated Population of Afghanistan 05-	2005-2006
190	Afghanistan in Perspective An Orientation Guide Defense Language Institute Foreign Language Center Curriculum Development Division Instructional Design Department	Afghanistan	Jul-05
191	Doing Business In Afghanistan	a Country Commercial Overview	winter 2005
192	Socio-demographic data Districts of Kabul	Gauff GmbH/IBU/ICON	20/01/2005
193	Ministry of finance government of Afghanistan Guidance on the preparation of the 1384 National Development Budget		10-Nov-04
194	United Nations Industrial Development Organization	UNIDO	Aug-02
195	Afghanistan Challenges after 23 years of Civil War		
196	Securing Afghanistan's Future Accomplishments and the Strategic Path Forward	A Government International Agency Report	17-Mar-04
197	Afghan American Chamber of Commerce	ACEC	
198	Tran boundary Water and Related Energy Cooperation for the Aral Sea Basin Region of Central Asia		5-May-02
199	The World Bank in Afghanistan	(World Bank Support)	
200	Afghan Supply Pipeline Performance	Major Johan Hall, USAR	2/5/2006
201	Public Finance in Afghanistan's Developments		
202	National Priority programmer of the Government of Afghanistan	NPP Strategy	
203	The Mineral Industries of Afghanistan And Pakistan		2001
204	Afghanistan Country Analysis Brief		
205	Afghanistan's reconstruction regional and country Context	William Byrd	31-Oct-02

No	Book Name	Author	Edition date
206	US Funding Focused on Humanitarian Aid	GAO-04-403 Afghanistan Record	<b>Oct-01</b>
207	Energy Overview		
208	Afghanistan Information Management Service (AIMS)	AIMS	
209	Protocol of the Workshop for the representatives of Water and Energy Authorities of the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan and The Republic of Uzbekistan related to waste and energy use issues in the forthcoming 1998/9fall-winter season and 1999 vegetation period		<b>August 24 1998</b>
210	Charter of Independent International Dispatch Center	DRAFT	<b>22-Jul-98</b>
211	Fichtner Study	Decon	
212	Central Asia Power Pool System Operator Agreement	DRAFT	<b>15-Jul-98</b>
213	Development of Hydrocarbon Resources Exploration promotion, regulatory Policies and privatization	World Bank	<b>Apr-04</b>
214	Co-Operation Fuels Development	The World Energy Book	<b>2005</b>
215	Shamalan Canal Socio-Economic Study	Afghans for Civil Society- shamalan canal study	<b>6/13/2004</b>
216	The Life Cycle of a mineral Deposit a Teacher's guide for Hands - On Mineral Education Activities	USGS	<b>2005</b>
217	Regional Energy Integration In Africa A Report of The World Energy Council		<b>Jun-05</b>
218	Energy Resources at Stake		<b>12/29/2004</b>
219	Provisions on interstate electric power Council of the integrated power system of Central Asia	DRAFT	
220	Outline of a regulatory Framework to the 1998 agreement on Multiple purpose use of the Syr Darya Water resource		
221	U.S. Funding Focused on Humanitarian Aid, Represented Sizable portion of International Assistance	GAO - 04-403 Afghanistan Recon	
222	Energy for Life A Case Study Compendium	USIAD	<b>Apr-01</b>
223	In The Balance Measuring progress in Afghanistan	CSIS	<b>Jul-05</b>

No	Book Name	Author	Edition date
224	Afghanistan a Country Study	Illinois Institute of Technology Library Chicago	
225	Western Basins Water Recourse Management and irrigation Agriculture Development project	Asian Development Bank	<b>Oct-04</b>
226	Ministry of Water & power Islamic State of Afghanistan		<b>Aug-01</b>
227	Technical Assistance to the Islamic State of Afghanistan for preparing the National power Transmission Grid project	Asian Development Bank	<b>Feb-04</b>
228	Technical Assistance to Afghanistan for the Energy Sector Review and Gas Development master Plan	Asian Development Bank	<b>Mar-03</b>
229	Technical Assistance to Afghanistan for the Energy Sector Review and Gas Development Master Plan	Asian Development Bank	<b>Mar-03</b>
230	Technical Assistance to the Islamic Republic of Afghanistan for Preparing the Natural Gas Development Project	ADB	<b>Oct-05</b>
231	Technical Assistance to the Islamic Republic of Afghanistan for Natural Resources management and Poverty Reduction ( Cofinanced by the Global Environment Facility and the Poverty Reduction Cooperation Fund)	ADB ( Technical Assistance)	<b>Dec-04</b>
232	Technical Assistance to the Islamic Republic of Afghanistan for Preparing the small to Medium-Sized Hydropower Development project	ADB ( Technical Assistance)	<b>Oct-05</b>
234	Technical Assistance to the Islamic Republic of Afghanistan for poverty Reduction and Rural Renewable Energy Development ( Financed by the Poverty Reduction Cooperation Fund)	ADB Technical Assistance	<b>Dec-04</b>
235	Asian Development Bank ( ADB) Technical Assistance Report	ADB	<b>Dec-05</b>
236	Report and Recommendation of the President to the board of Directors on a Proposed Loan and Asian Development Fund Grant and Technical Assistance to the Islamic republic of Afghanistan for the Power Transmission and distribution Project	ADB ( Report and Recommendation of the president)	<b>Mar-05</b>
237	Rehabilitation of Naghlu HEPS Section X-B2. Technical Data of proposed Equipment - Mechanical Equipment	Lahmeyer International Gmbh	<b>Dec-04</b>
238	Rehabilitation of Naghlu HEPS Section X-B2. Technical Data of proposed Equipment - Mechanical Equipment	Lahmeyer International Gmbh	<b>Dec-04</b>
239	Rehabilitation of Naghlu HEPS Section X-B2. Technical Data of proposed Equipment - Mechanical Equipment	Lahmeyer International Gmbh	<b>Dec-04</b>

No	Book Name	Author	Edition date
240	Afghanistan emergency Power Rehabilitation Environment And Social Safeguards Framework		
241	Technical Specification for 1x17.4MW hydraulic Generating unit of Kajakai Project		may 24/2001
242	Feasibility Study for Installation of Spillway Gates at Kajakai Reservoir Afghanistan	Asian Development Bank Philippines	Aug-71
243	Technical Assistance to the Islamic Republic of Afghanistan for the Security of ADB - financed Projects in Afghanistan	Asian development Bank	Jun-04
244	technical Assistance to the Islamic Republic of Afghanistan for poverty Reduction and Rural Renewable Energy development ( Financed by the poverty Reduction Cooperation Fund)	ADB Technical Assistance	Dec-04
245	Technical Assistance to the Islamic Republic of Afghanistan for Capacity Building for Impact Monitoring and Evaluation	Asian Development Bank	04-Dec
246	Project Management Plan Helmand Valley Water Management Plan	US Army Corps of Engineers	Jun-04
247	ADB National Power Transmission Grid Project	Maunsell	09-Mar-05
248	Chamkani Power Project		
249	Technical Assistance for the Turkmenistan Afghanistan Pakistan Natural Gas Pipeline project (Phase 11)	Asian Development Bank	Dec-03
250	Afghanistan Power Network (Executive Summary) National Load Dispatch Center Feasibility Study	national Load Dispatch Center	
251	MV Network Drawings Kabul	PISU	11/09/2004
252	Updated Reactive Power Requirement Study	Maunsell Aecom	Jul-05
253	Kajakai Environmental & Sociological Assessment - Third Monthly Report	Maunsell Aecom	Jun-05
254	Technical Parameters AFG-UZB-TAJ Transmission Interconnection	Maunsell	Mar-05
255	Report and Recommendation of the President to the board of Directors on a Proposed Loan and Asian Development Fund Grant and Technical Assistance to the Islamic republic of Afghanistan for the Power Transmission and distribution Project	Asian Development Bank	Mar-05
256	A Technical Feasibility / Design Report Asian Development Bank	ADB	Jan-04
257	Ministry of Water and Power Kabul, Afghanistan Rehabilitation of the Naghlu HEPS Bidding Documents for Electro-mechanical and Hydro mechanical Works	Lahmeyer International Gmbh	Dec-04

No	Book Name	Author	Edition date
258	Technical Assistance to the Ministry of Water And Power for Program Implementation Support and Capacity Building		
259	Securing Afghanistan's Future: Accomplishments and the Strategic Path Forward Power Sector Technical Annex		<b>Jan-04</b>
260	United Nations Development Programme in Afghanistan	UNDP	<b>Mar-04</b>
261	Afghanistan Post- Conflict Environmental Assessment	UNEP	
262	Design And Supervision of the Rehabilitation and Expansion of Urban Distribution Networks		<b>Aug-04</b>
263	Ministry of water and power Submission to IARCRC for Priority Reform and Restructuring Stage 1 Application		<b>30-Apr-04</b>
264	Survey and Design of Medium and Low Voltage network Kabul East Afghanistan	Decon	<b>June 7-2005</b>
265	planning and implementing Projects in energy technology, environmental technology, process engineering, water technology, infrastructure, power supply as well as management consultancy	TUV	
266	Progress Report on TA Cluster 3874-AFG: Capacity Building for Reconstruction And Development	ADB	<b>Jan-05</b>
267	Natural Resources: in Recovery	ADB	<b>Mar-04</b>
268	Country Strategy and Program Update 2004-2006 Islamic Republic of Afghanistan	Asian Development Bank	<b>Aug-04</b>
269	Rehabilitation and Extension of Kabul city Distribution Network	ministry of Water & power,	<b>Nov-04</b>
270	Water politics of syr darya Basin central Asia		
271	Kochi livestock operations in the Helmand Valley Afghanistan		
272	Ministry of energy and water Decon final bidding Docs April 2005		
273	Sangtuda power plant in Tajikistan		
274	Technical economical reports Russian		
275	Reclamation Manual Directives and standards		
276	Lest cost fuel plan Kabul Afghanistan		
277	Ministry Energy and water feasibility study for the national power Transmission Grid		
278	Government of Afghanistan MEW Kajakai gate project		
279	Progress report on Ta Cluster Capacity Building for Reconstruction and Development		

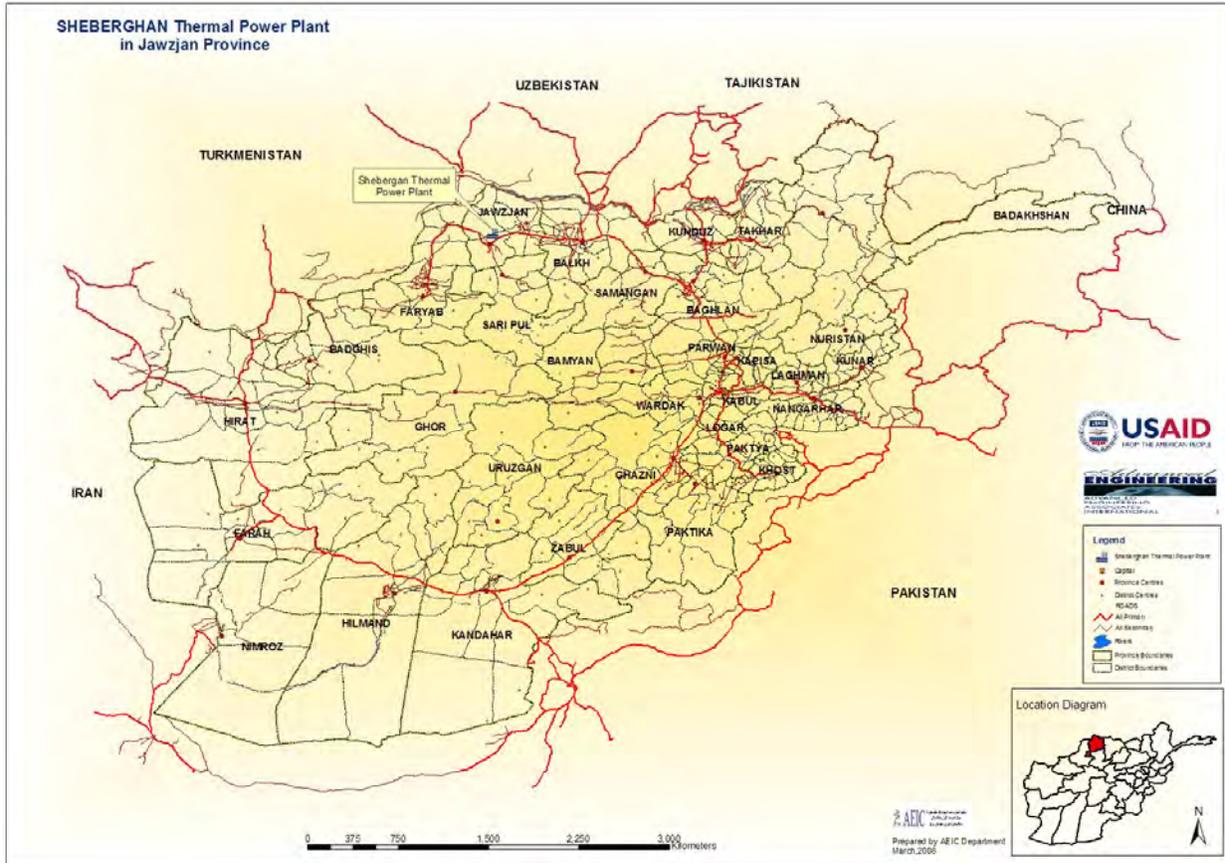
No	Book Name	Author	Edition date
280	Afghanistan Emergency Irrigation Rehabilitation project technical Annex		
281	Watershed Atlas of Afghanistan		
282	Afghanistan post conflict environment Assessment		
283	Technical Annex for a Proposed Credit of SDR 72.4 million to GoA Emergency power Rehabilitation project		
284	Advanced Engineering Associated International Inc. Company Policy Manual		
285	Regional power transmission modernization project		
286	Sardeh Irrigation system Cam condition Assessment reports		
287	Proposed Technical Assistance to GoA for Western Basin Water Resources management and irrigated Agriculture Development		
288	Technical Annex for a proposed grant of SDR 26.5 million Emergency infrastructure Reconstruction project		
289	Technical Assistance to the GoA for the Security and ADB financed project in Afghanistan		
290	Convention on the Protection and use of transboundary water courses and international		
291	Integrated Water Resources Management in Central Asia		
292	Afghanistan Resident Mission		
293	Tap Natural Gas pipeline feasibility study inspection reports		
294	changing perspectives in the management of international water resources		
295	Ajar Micro Hydrel Cheme Afghanistan		
296	international consortium for cooperation on the Nile *ICCON		
297	outline of a regulatory framework the 1998 agreement on multiple purpose use of the syr Darya water Resources		
298	meeting protocol Draft agreement between the Gov of Kazakhstan, Tajikistan and Uzbekistan Daraya water and energy Resources		
299	Afghanistan energy investment strategy		
300	agreement Between the Government of the republic of Uzbekistan, Tajikistan, joint water and energy resources of the Naryn Dyr Darya Cascade Reservoir 1998		
301	on Creation of the Central Asia power pool CAPP		

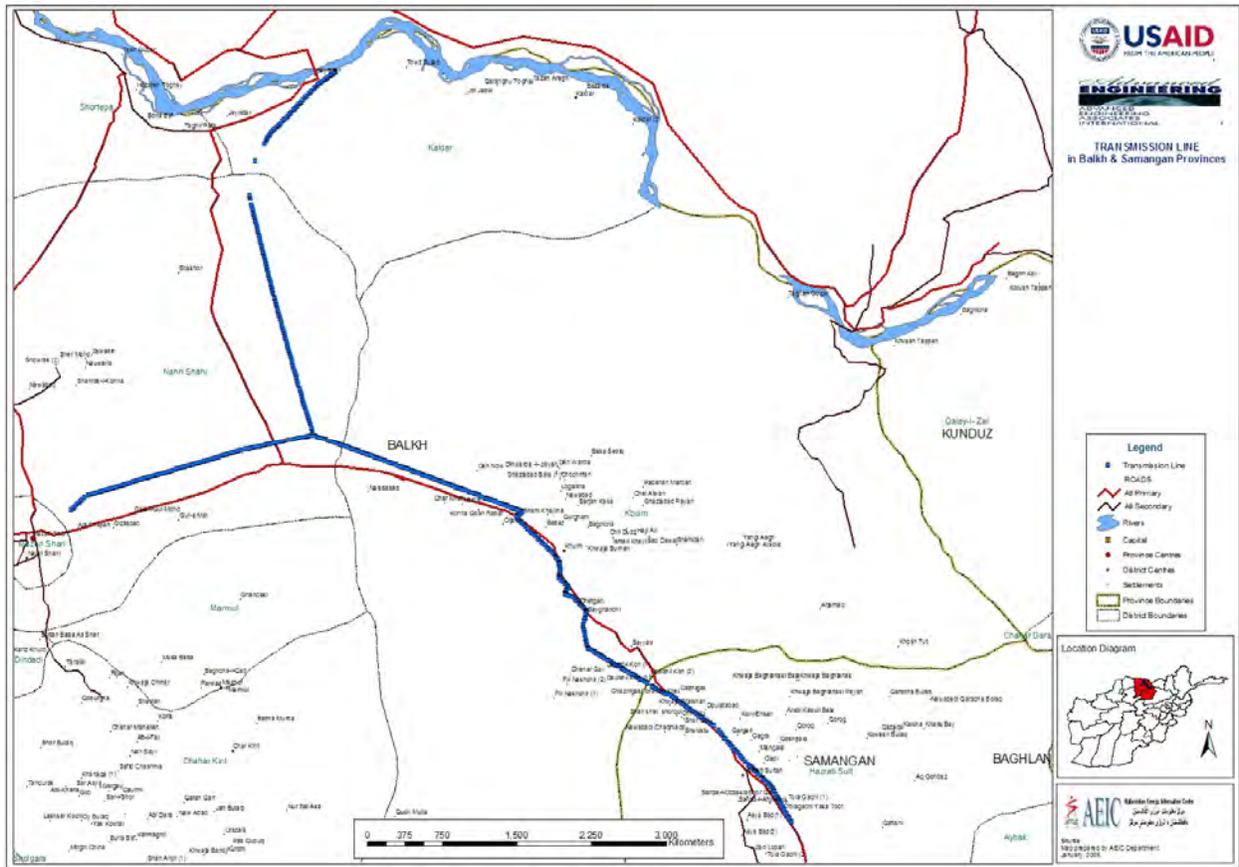
No	Book Name	Author	Edition date
302	Contract for the sale and purchase of Energy in central Asia		
303	agreement Between Kazakhstan Kyrgyz comprehensive use of water and energy naryn Syr Dara Cascade Reservoir 1999		
304	agreement between Gov of Uzbekistan in the use of water and energy resources of the Syr Darya Basin and its energy Resource		
305	power sector Regulatory reform in transition Economies progress and lessons learned		
306	agreement between the Gov Kazakhstan and Gov of Kyrgyz Republic		
307	Amu Zang Irrigation rehabilitation Uzbekistan		
308	the national Risk and Vulnerability Assessment 2003 Rural Afghanistan		

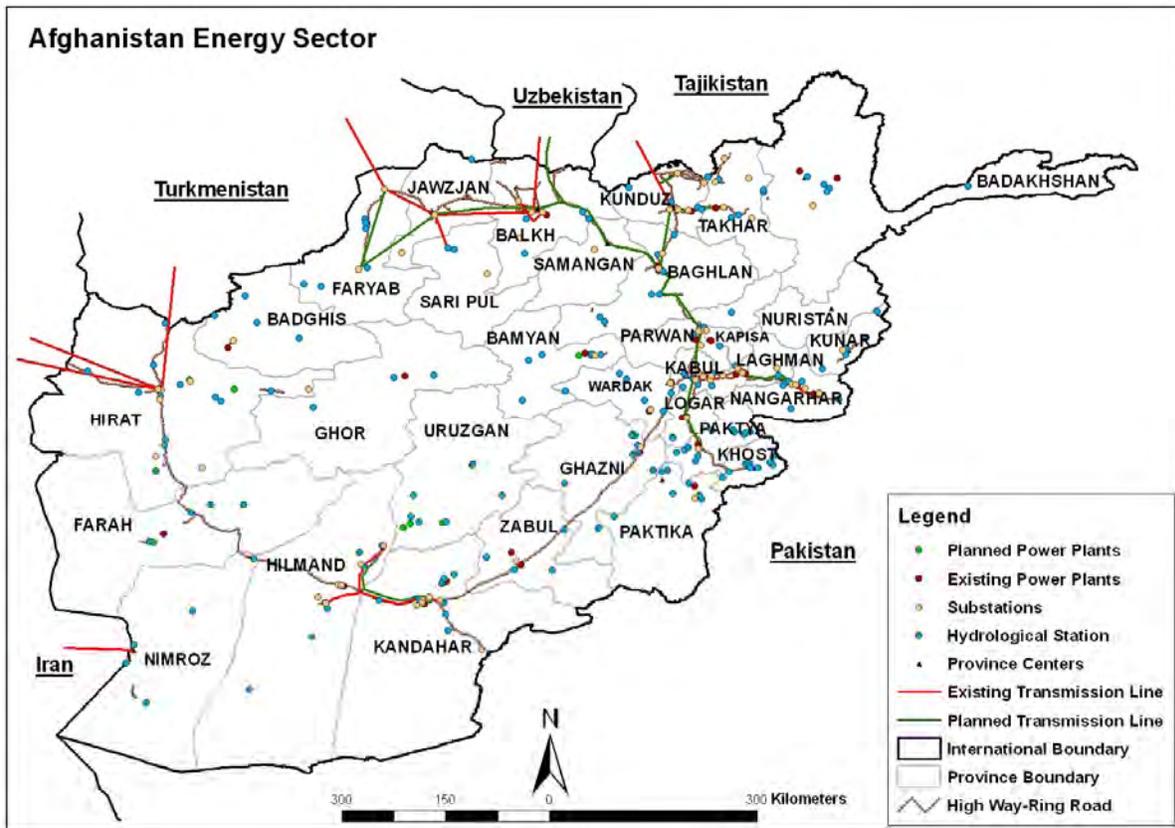
Attachment 2: AEIC Maps on Demand

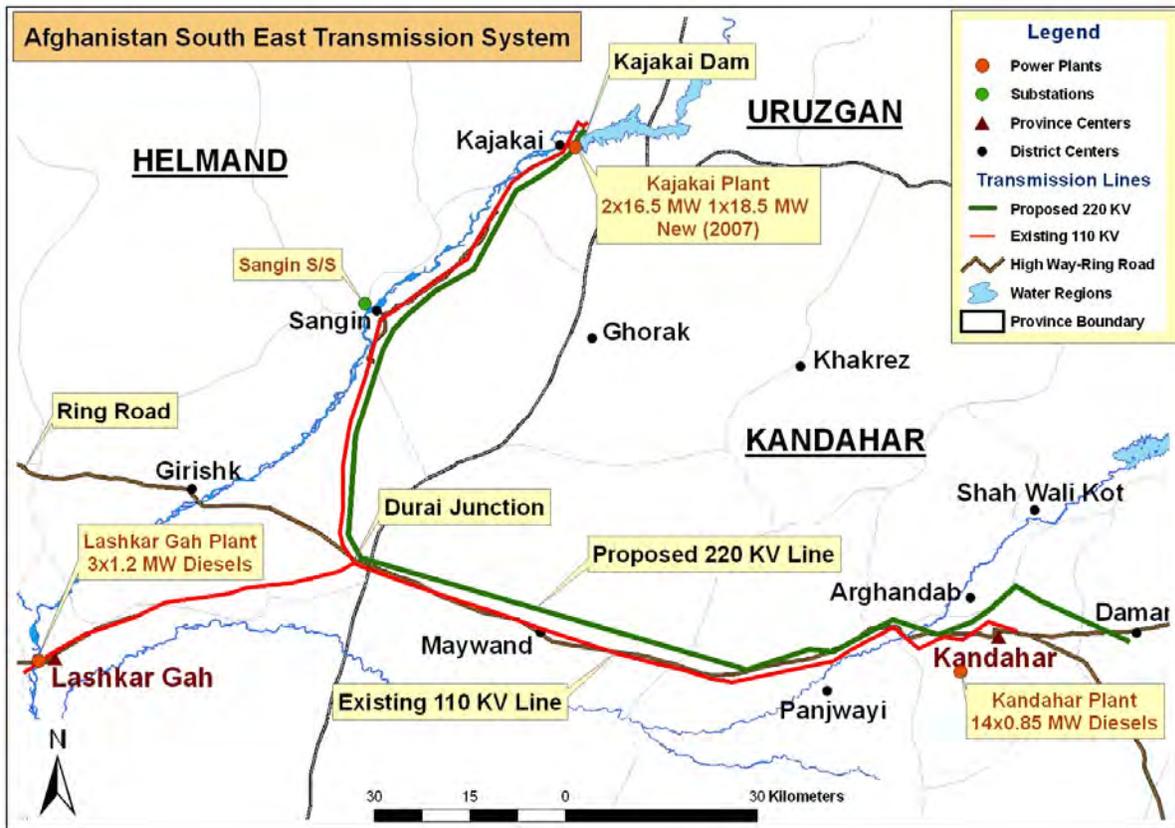
Maps may be generated according to the categories listed below, and according to combinations of categories. Sample maps are on the following pages.

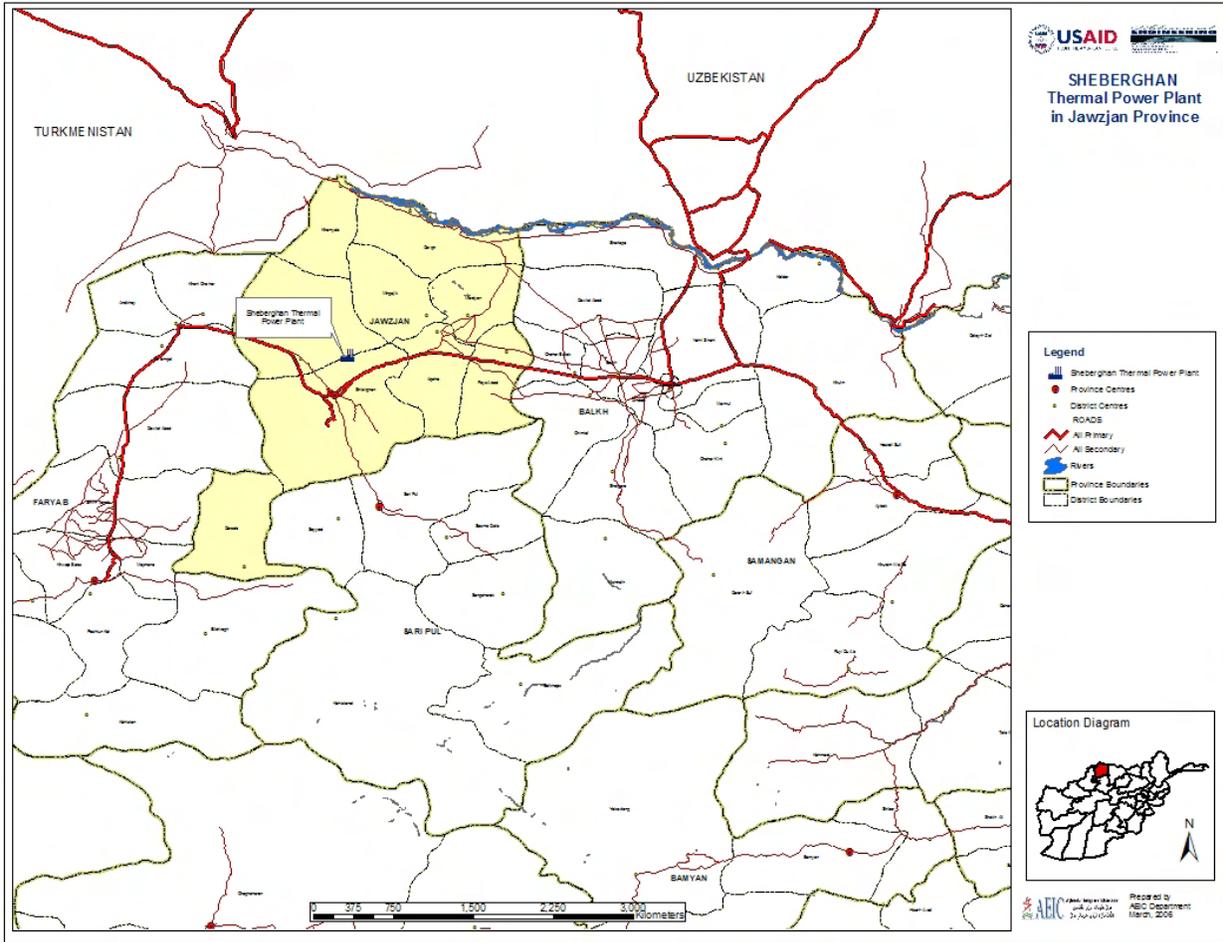
<b>Maps on Demand</b>			
<b>Section</b>	<b>Maps</b>	<b>Map information</b>	
<b>General</b>	Country/province/district vise	Boundaries	
		Administrative	
		Topographic	
		Landcover	
		roads	
		rivers	
		province/district centers	
		cities/settlements	
		watersheds/lakes/rivers/dams	
		irrigated areas	
		international airports	
		health facilities	
		cultivated area	
		airport airfields/international airports	
		Elevation	
		Kabul City	Airports/clinics/schools/bridges etc
		Kunduz City	
		Heart city	
		Jalalabad city	
		Kandahar city	
Mazar			
<b>Power/Energy</b>	Country/province/district vise	Existing/planned Power Plants	
		Major Power Plants	
		Substations	
		Towers	
		Existing/planned transmission lines	
		Hydrological stations	
		Irrigation projects	
		Power projects	











Attachment 3: AEIC Categories including Drawings

**All AEIC Documents/Books/Drawings/Files by Attachments.**

<b>Section</b>	<b>Attachment No</b>	<b>Document Name</b>	<b>Q-ty</b>	<b>Document</b>
<b>Physical/ Digital Library</b>	<b>Attachment 1</b>	AEIC-List of Present Books	<b>308</b>	Books
<b>Digital Library</b>	<b>Attachment 2</b>	Darunta Project Documents		Documents
	<b>Attachment 3</b>	Kajakai Valve House Drawings Documents/Reports		Documents
	<b>Attachment 4</b>	Kajakai Mechanical Drawings	<b>536</b>	Drawings
	<b>Attachment 5</b>	Kajakai/Helmand Documents/ Reports/Photos		Documents
	<b>Attachment 6a</b>	Kajakai Irrigation Tunnel Drawings	<b>46</b>	Drawings
	<b>Attachment 6b</b>	Kajakai Irrigation Tunnel Drawings	<b>46</b>	Drawings
	<b>Attachment 6c</b>	Kajakai Irrigation Tunnel Drawings	<b>16</b>	Drawings
	<b>Attachment 6d</b>	Kajakai Irrigation Tunnel Drawings	<b>24</b>	Drawings
	<b>Attachment 6e</b>	Kajakai Irrigation Tunnel Drawings	<b>11</b>	Drawings
	<b>Attachment 6f</b>	Kajakai Irrigation Tunnel Drawings	<b>32</b>	Drawings
	<b>Attachment 6g</b>	Kajakai Irrigation Tunnel Drawings	<b>18</b>	Drawings
	<b>Attachment 6h</b>	Kajakai Irrigation Tunnel Drawings	<b>46</b>	Drawings
	<b>Attachment 6i</b>	Kajakai Irrigation Tunnel Drawings	<b>37</b>	Drawings
	<b>Attachment 6j</b>	Kajakai Irrigation Tunnel Drawings	<b>23</b>	Drawings
	<b>Attachment 6k</b>	Kajakai Irrigation Tunnel Drawings	<b>31</b>	Drawings
	<b>Attachment 7</b>	Kajakai Bid Drawings	<b>34</b>	Drawings
	<b>Attachment 8</b>	Aybak	<b>228</b>	Drawings
	<b>Attachment 9</b>	Sheberghan Reports/Photos		Documents
	<b>Attachment 10</b>	Naghlu Drawings Section 1-2	<b>2271</b>	Drawings
	<b>Attachment 11</b>	Norconsult Master Plan-Documents		Documents
	<b>Attachment 12</b>	All Darunta Drawings	<b>1059</b>	Drawings
	<b>Attachment 13</b>	Different Power/Energy Documents/ Reports/Pict	<b>189</b>	sec
	<b>Attachment 14a</b>	Kajakai Power House Drawings	<b>194</b>	Drawings
	<b>Attachment 14b</b>	Kajakai Power House Drawings	<b>206</b>	Drawings
	<b>Attachment 14c</b>	Kajakai Power House Drawings	<b>27</b>	Drawings
	<b>Attachment 15</b>	Sheberghan List of Drawings	<b>23</b>	Drawings
	<b>Attachment 16</b>	Solar Documents		Documents
<b>Files</b>	<b>Attachment 17</b>	All AEIC Existing Files	<b>8</b>	Files
<b>Summary</b>	<b>Attachment 18</b>	Drawings Repaired/Scanned/Printed		Table
<b>Contact List</b>	<b>Attachment 19</b>	People contacted for Power/Energy Information & Participated in AEAC Development		Table
	<b>Attachment 20</b>	AEIC Contact List		Table

Attachment 4: Power Sector Model Project Information Sheet\



**USAID | AFGHANISTAN**  
FROM THE AMERICAN PEOPLE

**Project Information Sheet**  
**Power Sector Model**

**Electricity planning tool –a comprehensive, detailed and integrated electric system model**

Implementing Partner	<b>AEAI</b>
Project Start Date	<b>October 1, 2005</b>
Anticipated Finish Date	<b>March 31, 2006</b>

**Objective**

As Afghanistan builds its electric infrastructure, the Government of Afghanistan and Donors must make strategic decisions regarding optimizing sector operations, least-cost planning, assessment of subsidy requirements and investment justification.

The Power Sector Model was implemented to create a comprehensive, detailed and integrated electric system model to capture data about the existing and planned electric power system in Afghanistan to aid in critical decisions and analysis.

The project objectives are to track electric power balances and cash flow, to understand the cost of delivering electric power, the cost and timing of system development and sensitivity to various power generation alternatives and to plan for least cost reliable power.

**Project Description**

Reliable information about the power sector in Afghanistan has been extremely difficult to obtain. The most recent qualitative depiction was the Power Sector Master Plan done in 2004. Additional information has been sketchy, anecdotal, piecemeal, and often conflicting. As a result, planning and evaluating investments have been difficult, as is communication with stakeholders.

The model focuses on assessing the impact of developing the North East Transmission System (NETS) and the South East Transmission System (SETS) in relationship to the overall energy sector. As part of Model development intensive data collection and verification to create a baseline was done. The Power Sector Model will be used to analyze and understand the data and to make useful forecasts for the Government of Afghanistan and the donor community. This is needed for strategic decision-making, optimizing sector operations, least cost planning,

assessment of subsidy requirements and for justifying investments in the sector.

The Power Sector Model can be used to:

- Create information tools needed to accomplish the tasks, including software, data capture, procedures and reporting
- Provide model documentation, flowcharting and executive presentation
- Demonstrate to Afghan counterparts the vital need for electric power system information and its use
- Engage and train Afghan counterparts in the mechanics of electric system modeling

**Project Status and Impact**

The Power Sector Model, a working energy and financial strategy tool, has been developed. A database of generation and customer information was developed. A communication process was established with Government of Afghanistan and donors now engaged in collaboratively developing a timely and accurate database of power section statistics.

International donors were introduced to the model, which was provided to them with the intent of having regular work group sessions to mutually enhance the model and exchange baseline data and assessments of the impact of investment decisions. The Model is being presented to senior GoA officials as a tool that may help make more effective choices in electric power policy.

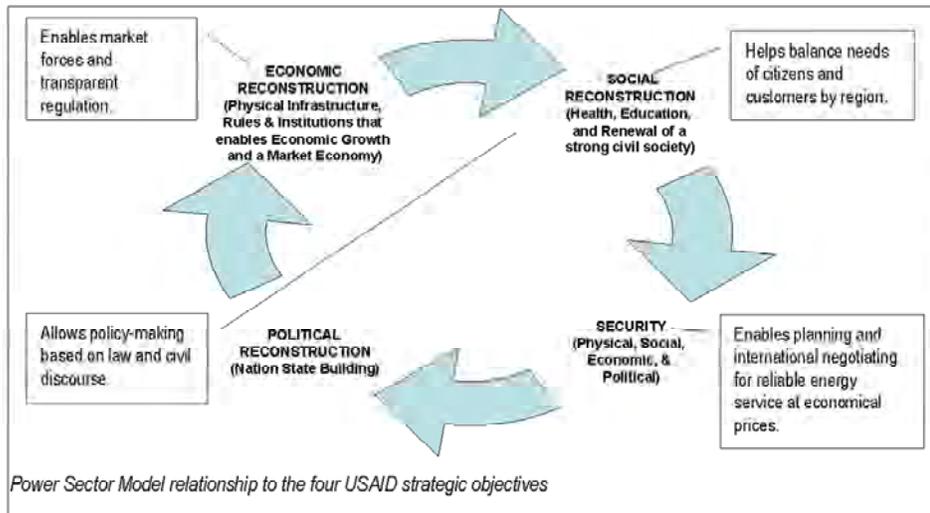
Meeting the strategic objectives of USAID and its Afghan Energy Assistance Program (AEAP) depends on increasing efficiency, transparency, fairness and economic rationalization. The Power Sector Model helps to provide data, forecasts and analyses to promote sound policy aimed at developing efficient markets and public understanding regarding energy and its interaction with the economy and the environment.

The following diagram shows how the Power Sector Model relates to the four USAID strategic objectives:

Energy information provides a baseline to assist in fair and reasonable utility practices, and safe, reliable, high quality essential services. Furthermore, the provision of reliable and reasonably priced utility services is crucial to the



growth of the Afghan economy, the health and well being      The Power Sector Model provides a quantitative



of the population and a higher quality of life. The Model allows explicit and measured consideration of high priority issues affecting consumers who are captive to the system and among whom are the most vulnerable in the population.

In order to justify and attract private investment into the sector, there is a need to assure the certainty brought by regulatory practices and the rule of law whenever possible and the provision of greater clarity on priorities and policy positions where it is most needed. Certainty within operating rules and institutions requires transparency of process and a validated database of reliable information about the electric power sector.

One example of the output possible with the Model is a tool for predicting, and then clearly graphically exhibiting, how long subsidies will be needed. The bar chart, resulting from detailed calculations, illustrates the impact on needed subsidies for a particular policy decision. It depicts the subsidies in red and customer revenues in black. Using this tool, CoA officials, donors, and other stakeholders can consider the impact of different choices in tariff rates, investment, and achievements in the levels and timing of commercial and electric systems improvements.

assessment, resulting in the following potential benefits:

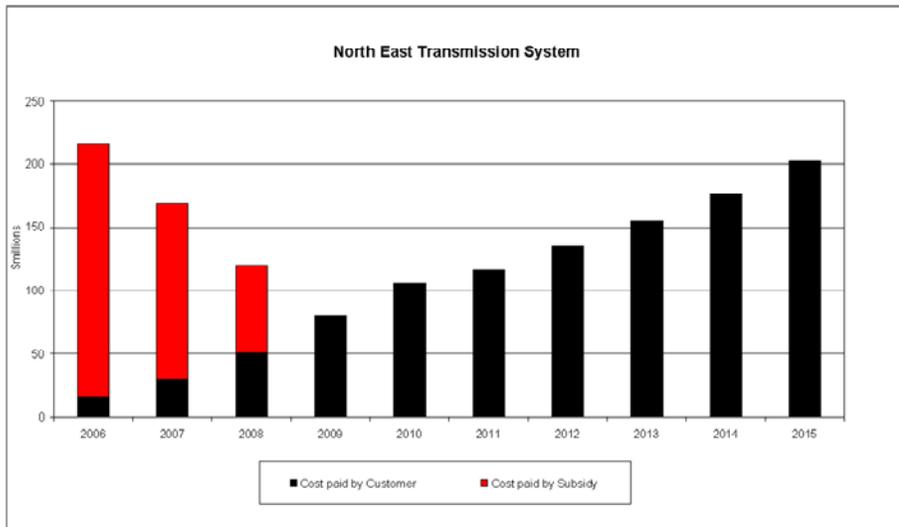
- Quantification of a give strategy & implementation
- Evaluation of existing operations
- Assessment of investment decisions
- Current donor investments
- Future private sector investments
- Prediction of cost recovery, sustainability of tariffs, subsidies needed, budgeting for system growth
- Assessment of power supply and demand, imports and domestic generation (electric energy balance)

**Project Accomplishments**

- Created information tools necessary to accomplish the purposes of the project: software, validated data base capture, procedure and reporting
- Documented the Model, flowcharts and executive presentations
- Demonstrated to Afghan counterparts the vital need for electric system information and how to use it for planning purposes



- Engaged and trained Afghan counterparts in the mechanics of electric system modeling



#### Future Activities

- Impact of Strategy Implementation should be measured, reported and discussed by CoA and the Donors
- Policy issues can be quantitatively framed by stakeholders
- Quantification of AEAP, MEW, and donor program activities can be tracked and reviewed during planning meetings and Donor Coordination meetings.

#### Resources Needed

- Senior financial Analyst, Finance modeling, database design, report design
- Financial Analyst, data gathering and input, quality control, report development
- Financial Analyst, data gathering, documentation exception investigation