



Islamic Republic of Afghanistan
Inter-Ministerial Commission for Energy
Subcommittee for Capacity Building
Capacity Building Strategy



February 2011

Inter-Ministerial Commission for Energy Capacity Building Strategy

English Version

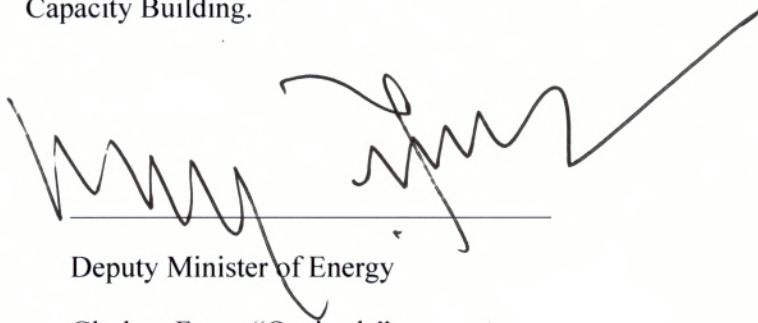
February 12, 2011

Prepared by

**The Strategy Working Group of the ICE Subcommittee for Capacity Building with
representatives and support from:**

MEW, DABS, MoM, MRRD, MoHE, ANSA, IARCSC and MoEc

This Capacity Building Strategy is officially approved and recommended to the Inter-Ministerial Commission for Energy (ICE) by the Chairman of the ICE Subcommittee for Capacity Building.



Deputy Minister of Energy
Ghulam Faruq "Qazizada"

Message from the Capacity Building Strategy Working Group

For the preparation of the Subcommittee of ICE

In The name of Allah, the most Merciful, the most Compassionate

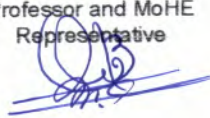
We are pleased to present the Inter-ministerial Commission on Energy Capacity Building Strategy, which reflects the commitment of the ICE Subcommittee for Capacity Building to develop the capacity of energy sector institutions and personnel for a stable energy sector of Afghanistan. The ICE Subcommittee for Capacity Building Strategy Working Group was mandated by the ICE to produce an Afghan-owned capacity development strategy that is based on the national strategies of the government entities and meets the requirements for a capacity development strategy paper. The Working Group met on a regular basis to design, discuss and oversee the development of the strategy, including the identification of the challenges, needs and solutions for promoting effective energy sector resource allocation and actions. To embrace "Afghanization" and ownership, the Working Group facilitated inclusive and extensive consultations both at national and sub-national levels. Sustained fiscal support and continuous evaluation and monitoring are essential now to meet the challenges ahead related to implementation.

The democratic aspirations of the Afghan people are high, yet financial resources remain limited. While much has been accomplished since 2001, more remains to be done as we move from "Compact to Impact". The Working Group has operated with absolute commitment to the energy sector and developing a clear set of capacity building objectives. We look forward to working with our government colleagues, civil society representatives, tribal elders and religious scholars, the private sector, the international community and, most importantly, fellow Afghans to implement the Strategy, to help realize the ICE vision.

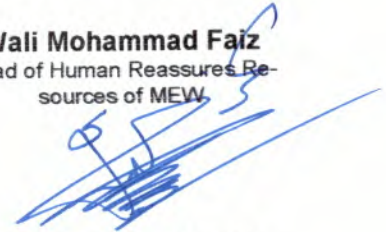
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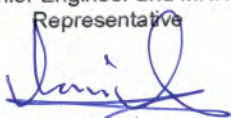
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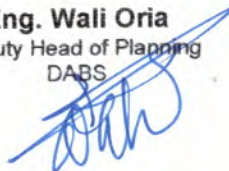
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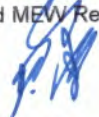
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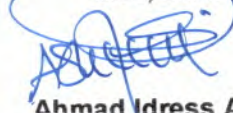
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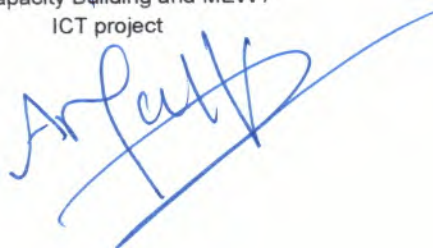
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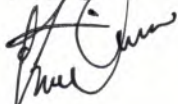
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| Attachment 1: Summary of Baseline Needs Assessments Database performed within last 5 years that are archived at the Afghan Energy Information Center | |
| Attachment 2: Capacity Building Activities- Past/Current/Planned | |

Acronyms

AEIC - Afghan Energy Information Center

ANDS – Afghan National Development Strategy

ANSA – Afghan National Standards Association

DABS – Da Afghanistan Breshna Sherkat

GoIRA – Government of the Islamic Republic of Afghanistan

HR – Human Resources

IARCSC – Independent Afghanistan Reform Civil Service Commission

ICE – Inter-Ministerial Commission on Energy

IMS – Information Management System

KSA – Knowledge Skills and Abilities

M&E- Monitoring and Evaluation

MEW- Ministry of Energy and Water

MoEc- Ministry of Economy

MoHE- Ministry of Higher Education

MoM – Ministry of Mines

MRRD – Ministry of Rural Rehabilitation and Development

NGO – Non-Governmental Organization

TOR- Terms of Reference

Introduction

This strategy is a collaborative effort of MEW, DABS, MoM, MRRD, MoHE, ANSA, MoEc and the IARCSC. The drafting of the strategy was an Afghan-directed initiative that created positive partnerships and facilitated open discussion between the organizations. Though each organization will have its own strategy, objectives and individualized approach, this sector-wide strategy aims to identify opportunities for collaboration, sharing of lessons learned, and reducing costs by working together with respect to operations, training efforts, and future policy development. This strategy focuses on the core approach for addressing the needs of the sector rather than just outlining the needs themselves.

The representatives to the working group responsible for developing this strategy do not see this as an end-point to their work, but rather as the first step to strengthening the ability of the Inter-Ministerial Commission on Energy Subcommittee for Capacity Building to guide the implementation, review, coordination and development of capacity building activities over time as the needs of the sector change. This strategy will be reviewed and updated on an annual basis to ensure that it closely addresses the changing needs of the sector.

Strategy Outline

Background: Energy Sector Definition and Strategy Section: Identifies key stakeholders impacted by the strategy that will participate in strategy implementation. Also summarizes the relevant ANDS vision statement and the Afghan Compact and Economic and Infrastructure Development Cluster goals.

Energy Sector Capacity Building Strategic Vision Section: The Energy Sector Vision Statement that is aligned with the visions of each organization and the Energy Sector Strategy.

Challenges Section: Identifies the challenges currently faced in the implementation of Capacity Building efforts at a broad level.

Objectives Section: This section presents the overall three-year objectives for the sector. The objectives include suggested principles for MEW, DABS, MoM, MoHE, MRRD, MoEc and Donors to identify, prioritize, design, implement, measure and record capacity building efforts. This set of operating principles forms the essential approach to capacity building activities and is based upon lessons learned.

Goals Section: Identifies specific outcomes and target dates for achieving the objectives. It includes the goals of finalizing needs assessments, work plan, monitoring and evaluation matrix, results framework, budget plan, risk analysis plan, etc. which will support the implementation of the strategy. This section also indicates the need for a revision of this strategy based on the future development of the Energy Sector Master Plan.

Needs Assessment Appendix: This section identifies the available reports and assessments that can be used for evaluating the baseline of the current and future training and development needs of the sector. The needs assessments on this list will be made available digitally at the Afghan Energy Information Center.

Current Activity Appendix: This section identifies the past, current and planned sector-wide capacity building activities. This appendix consists of the excel database of activities that the ICE Subcommittee is responsible for updating on a quarterly basis.

Background: Energy Sector Definition and Strategy

The Energy Sector includes organizations that perform the necessary activities and use the available resources to fulfill the required energy needs of the Afghan people in both urban and rural areas. Energy sources include those generated from oil, gas, coal, hydro, wind, solar, biomass and other renewables, as well as imported power sources. The sector includes the following organizations and stakeholders:

1. Government entities: MEW, DABS, MRRD, MoM, MoHE, IARCSC, MoF, MoEc, ANSA
2. Educational organizations: universities, vocational, private training companies, professors, teachers, students
3. Private sector companies
4. Donor organizations
5. Non-government and non-profit organizations
6. Public/consumers

Energy Sector Strategy Summary- content from ANDS, Economic and Infrastructure Development Cluster and Afghan Compact

The Vision of the Energy Sector is to provide the citizens of Afghanistan and drivers of growth in the economy with long-term reliable, affordable energy access based on market-based private sector investment and public sector oversight. The function of the National Energy Supply Program is to deliver cost-effective energy to industries/communities.

- The goal of the Afghanistan Energy Sector Strategy is to deliver sufficient energy, in the most cost effective manner, to support economic growth of approximately 9% per annum. Approximately 4% annual growth will help lower poverty by an estimated 3% per year.
- Proposed Targets:
 - By end-2011: electricity will reach at least 65% of households and 90% of nonresidential establishments in major urban areas and at least 25% of households in rural areas.
 - By end-2011: at least 75% of the costs will be recovered from users connected to the national power grid.
 - By 3 – 5 years (2013-2015): energy supply of 1,800 MW (of which 1,200 MW are from domestic production), 85% urban and 40% rural coverage (both commercial and households), 95% collection rate, 45% reduction in technical losses, and 15,000 jobs created across all sectors of the economy.

Note: These targets may change with the drafting of the Energy Sector Master Plan

Energy Sector Capacity Building Strategic Vision

To provide capacity building in all aspects including technical, administrative and basic skills through a unified and reliable system that efficiently manages the technical and financial resources of the energy sector as defined above and assures the timely provision of the energy sector's priority capacity needs for improving quality, reliability, efficiency and sustainability.

Challenges

1. Need for Guidance, Oversight, Communication and Management

A primary challenge facing capacity building in the energy sector is the coordination of activities according to priorities and accepted standards. Efforts have been made to support coordination, including the creation of the ICE Subcommittee for Capacity Building. This is an important first step. The challenges detailed below are those that the Subcommittee was formed to address.

- a. Lack of Needs Based Capacity Building- There are numerous requests for capacity building assistance from GoIRA to the donor community. Unfortunately, needs are not comprehensively assessed and prioritized according to the infrastructure development plans of the sector and at times, training is being delivered to support staff without the evaluation of overall departmental/organizational effectiveness. In some cases, different departments request the same training from different donors and there is duplication. Also, in some instances, needs assessments are based upon what participants or departments want to learn rather than what they require to fulfill the functions of their job positions; this is likely because the required Knowledge, Skills and Abilities (KSA) of the job are not yet clearly defined.

When comprehensive assessments are completed by one donor, the recommendations are not always shared nor implemented collaboratively with other donors. Also, assessments are sometimes not adequately communicated to GoIRA because the documents are not available in local languages.

The lack of clearly defined KSAs leads to the nomination of inappropriate personnel for training programs who lack the minimum required KSA for the training to be effective.

- b. Lack of Capacity Building according to Industry Standards- With multiple countries supplying equipment, Afghan technicians and engineers are learning how to operate and maintain a wide array of systems and technologies. The workforce lacks a common set of technology standards to base training and skill development plans. This situation also makes it difficult for the educational institutions to train the future workforce on the appropriate information and skills.
- c. Need for Monitoring, and Evaluation of Training Design and Delivery - A unified GoIRA guided monitoring and evaluation mechanism for sector capacity building (program content and design, language requirements, participant selection, instructor capability or training appropriateness, post training impact/ availability of materials/facilities to use developed skills post-training) does not currently exist. There is not a sustainable mechanism for following-up on the long term impact of trainees and verifying that the skills that are being developed are actually put to use or that the program was successful. Currently, monitoring and evaluation is performed by individual programs, but the GoIRA does not have a system for reviewing training related capacity building activities from a broader scope.

- d. **Limited Information Sharing-** Across the sector, there is a lack of a mechanism to collect information in a uniform and comprehensive manner, which would allow sharing of data on capacity building and sharing of training materials. This makes review of capacity building activities across the sector and screening of participants difficult, and contributes to overlap. Donor funded projects are also completing activities without effectively transferring/sharing the knowledge/reports, etc. which could be used by other projects to continue with the progress made and build upon previously provided training.
- e. **Underutilized Resources-** Each donor is independently recruiting top energy sector experts to support individual ministries/projects, etc. The expertise could benefit the universities, other ministries, private sector organizations and NGOs. The knowledge of these experts is being shared in a limited way and there is currently no mechanism or platform for them to share their knowledge with a broader audience.
- f. **Lack of Coordination with Afghan Training Institutions-** (Addressed in-detail in section 2.) While there is a great desire from all sides (both GoIRA and donors) to build the capacity of the Afghan training institutions, there seems to be a lack of capacity to manage coordination to create and manage the necessary relationships, meetings, agreements, planning, etc. There is insufficient communication between energy sector stakeholders and educational institutes regarding the development of a needs-based curriculum.
- g. **Lack of Coordination between Donors-** Donors (and their contractors) do not confer with each other on planned capacity building activities and discuss lessons learned, questions and concerns on a regular basis. This has begun to change with the creation of the ICE Subcommittee for Capacity Building, and will hopefully be sustained and developed.
- h. **Lack of full time Capacity Building Coordination Staff-** Guidance and coordination of capacity building efforts are currently being managed by a working group and coordinator, each with other full time jobs. Managing the direction of all these elements requires a small full-time team to draft and follow-up on communications, support consensus building, promote networking between organizations, monitor and evaluate trainings, and update the databases. Currently, there is not a GoIRA employee with full-time accountability and there is the risk that any capacity built by the current technical assistance program will be lost.

2. Limited Capacity of Academic, Vocational, Professional and Technical Training Institutions/Centers

(Includes Kabul University, Kabul Polytechnic, MEW VTC, future DABS Training Center, Civil Service Institute and private commercial institutions)

GoIRA institutions and donors have stated that they wish to develop a sustainable model of capacity building by empowering the Afghan Academic, Vocational and Technical Training Institutions that can eventually replace the short-term foreign training programs that are currently used to build capacity. In order to do this, there are several core challenges that need to be addressed.

- a. Limited Communication of Energy Sector Needs- There is insufficient communication between Energy Sector organizations and educational institutions regarding developing curriculum based on priority Energy Sector needs and industry accepted standards. For example, if a large transmission project is planned to begin in two years, the educational institutions need sufficient time to develop the students to fill those positions. Also, GoIRA institutions lack a clear mechanism for encouraging students to pursue study relevant to the needs of the sector. Currently, many students train in the field and then pursue other careers because of a lack of job opportunities with attractive salaries or because GoIRA institutions do not hire the recruited students as intended.
- b. Limited access to Curriculum Development Resources - Instructors lack experience creating new curriculum that most address the needs of the sector and incorporate both theoretical and practical lessons. Also, Afghan training institutions have limited access to up-to-date training materials and course outlines that may help them with curriculum development. In part this is because the materials have not been produced, but also because the available resources are not shared in an easily accessible manner. Training materials and outlines from donor implemented training courses are often not always stored for future use where institutions can use them as a resource.
- c. Lack of Qualified Professors/Instructors/Trainers- Institutions lack sufficient, qualified academic and training personnel who are knowledgeable of current industry standards and technologies (including renewable technologies). The low salaries of professors and trainers make recruitment and retention of high-quality personnel difficult. Additionally, the training institutions themselves do not provide the professors and instructors with incentives to expand and develop skills. As a result, trainers who are receiving training in foreign countries with the intention of training others, are not all being used for this purpose. This happens because the trainers are not fully integrated into existing organizational structures to use their skills upon their return, or because there are limited incentives for them to stay in an Afghan Governmental institution and turn to private companies or on development projects.
- d. Lack of Educational Institutional Capacity/ Adequate Facilities- The sector lacks a sufficient number of capable vocational and technical schools in the capital and in provinces that can deliver standards-based training. Schools and centers lack sufficient modern, standardized, lab equipment and computer labs; and professors lack access to internet and curricula in vocational and technical schools and universities.

None of the schools has a department offering specialized sector specific executive education or continuing technical professional education (for example, an Executive Diploma in Energy Management) or short term technical trainings. GoIRA Sector institutions have to turn to donor implemented programs for such training rather than turning to these institutions as a resource because the institutions do not have the facilities/ programming to provide the needed short term trainings for current sector staff.

- e. Limited Practical Training- Institutions lack opportunities to provide practical training in the Energy Sector for students and instructors. Projects being implemented to develop the

Energy Sector could provide great practical experience. Afghan universities have requested internship placements, but often receive limited response or follow-through from Ministries, DABS, and donors.

- f. Collaboration with the Afghanistan Civil Service Institute and General Directorate of Projects Design and Management is not consistent across Energy Sector institutions. There is not broad sector awareness of how their services can be used and employed.

3. Challenges with Institutional Capacity of Energy Sector Institutions

Energy Sector institutions lack the management and administrative capacity required to advance the sector and operate independent of donor funding. The following issues contribute to this challenge:

- a. Sector institutions and departments have limited capacity to work from their budgets, including budgeting for their own internal capacity building and training. The current capacity building model is unsustainable. Capacity Building is largely being funded by outside donors, rather than developing GoIRA capacity to budget for their own training and capacity building – including creating their own incentives for employee retention and career development. This hinders the ability of GoIRA to develop their own internal systems to manage their capacity building needs and activities according to their own pace and schedule.
- b. Limited capacity of Ministries in preparing project plans, budgets, policies, planning and standards. There is also limited empowerment of employees to implement those policies as well as institution-wide awareness of those policies amongst the employees.
- c. Currently, some job positions are offered inappropriate personnel, who lack the minimum required knowledge, skills and ability to fulfill the requirements of the position. Hiring and promotion processes are sometimes decided by relationship rather than skill level, which weakens the motivation of workers to increase their capacity for the benefit of a financial reward. Institutions lack clear job position qualification requirements according to KSAs, responsibilities, deliverables and future advancement opportunities along a career path. This prevents training from being standardized across delivery systems and limits the opportunity for staff to be self-motivated to take necessary steps to advance themselves along a career path.
- d. Incomplete Advisor/Counterpart Transition- Donors are providing expert advisors who provide valuable mentoring; however, there is often no direct counterpart, or if a direct counterpart is selected, the institutions and donors fail to effectively develop a transition plan giving the counterpart ownership of the task. This may be attributable to multiple factors such as the insufficient duration of the advisors mentorship role (it often is not long enough to develop all the skills necessary to assure effective transition), the lack of technically qualified staff in the institution to be trained as a counterpart, the direct counterpart assigned may be part of a short-term project themselves, the counterpart that is selected may have little financial reward or promotional career path for developing their capacity or the counterpart is also responsible for another full time accountability and cannot focus on the mentorship program.

- e. Due to a lack of capacity building incentives and employee retention plans, otherwise successful capacity building efforts fail to make a long-term impact because the participants are not attracted or retained by the intended institutions. Processes for recruiting, promoting, retaining and retiring professional staff according to the civil service law are not clear and easily implemented by ministries. Standard salary levels within the government are substantially lower than private sector and donor project salaries and cannot compete to attract and retain talent. Participants may take courses simply to receive the transport allowances or travel opportunity and there is insufficient personal or institutional stake in successfully learning the subject or skill.
- f. Human Resource departments have difficulty to objectively evaluate, remove and replace employees, which limits reorganization of the institution and hinders hiring appropriate staff to fulfill the needed functions. In addition, there is no provision for implementation of the lessons learned by the employee. Performance evaluations are limited in effectiveness for the following reasons:
 - Evaluations are not done on a regular basis
 - Evaluations are based on supervisor- employee relationship rather than objective feedback
 - Evaluations do not include modality for supervisor to be evaluated.

4. Energy Sector Capacity Development Challenges in Provinces

The following challenges for the sub-sector for rural energy supply/rural electrification through renewable energy technologies have been identified:

- a. Political awareness of the sub-sector is relatively low.
- b. An institutional and regulatory framework for the sub-sector is just beginning to emerge in a very dynamic process.
- c. The mandates, tasks and responsibilities of public agencies are not yet clearly defined for the planning, implementation and monitoring of rural energy supply through renewable energy technologies.
- d. Improvements are needed in awareness, skills, and knowledge of general administrative and managerial issues as well as in specific technical tasks related to rural energy supply through renewable energies, for all relevant agencies and actors.
- e. The existing training infrastructure – particularly for vocational training – is weak and no specific provision has yet been made for rural energy supply or renewable energy technologies.
- f. The technical infrastructure does not exist to support a large scale electrification effort.
- g. Geographical restrictions limit the implementation of large scale projects for provincial beneficiaries due to high costs or transmission losses.

5. Limited Capacity of Afghan Private Industry and Service Providers

- a. Local Afghan companies are inadequately manufacturing the high priority equipment and materials needed in the sector. Products that are produced do not always meet the international standards as mandated by ANSA.
- b. Some of ANSA the standards for equipment need modification to be most appropriate to the environment and conditions of Afghanistan.
- c. Local companies cannot compete with international products and foreign companies. Local industry lacks the capacity to meet the requests to manufacture the equipment and the government is required to purchase equipment from foreign companies at a high cost. This The situation results in not only lost economic opportunity, but also a delay of development and operation and maintenance due to the procurement and repair processing time for foreign materials.
- d. Local private construction companies and energy sector related service providers do not consistently provide high quality work that meets international standards.
- e. Government is not providing clear information about the opportunities for local private sector companies to invest in developing products and services for the sector.
- f. Energy sector manufacturing companies lack the capability (financial resources) to purchase and adopt the advanced machinery required for most energy related applications. Companies also have access to a limited supply of raw materials, which impedes production.
- g. There is limited awareness in the sector of which companies are providing the services and which could be adapted.

Objectives

1. Development of Guidance, Oversight, Communication and Management Mechanism

- a. Training program design, curriculum, trainer capability, delivery and results of capacity building programs shall be created, monitored and evaluated by an ICE Capacity Building Unit according to the principles detailed below to support capacity building coordination, impact and process improvement.

Capacity Building Principles:

- i. Training is demand-driven (based on needs) and developed with the objective of bridging the gaps identified in the KSA assessments (needs assessments).
- ii. Training delivery is scheduled such that the skills being developed will be applied immediately following the training and the facilities, equipment, tools and technology needed to implement the new skills are available upon completion of training.
- iii. Afghan academic institutions and training centers need to be contacted first regarding capacity building needs. Afghan academic institutions should be given the first opportunity to provide the training if capable. Academic center representatives shall be informed of training programs in the sector and invited to participate in the training programs to build their capacity.
- iv. Training is based on accepted national industry standards as established by ANSA
- v. Training is appropriate for the audience and the delivery format will assure maximum retention. Practical application of theory is best. Every effort shall be made to have the training done in the local language or participant language; in cases where it is not possible, a qualified technical translator shall be translating and materials will be translated into local language.
- vi. Before starting the training process, a detailed curriculum must be completed for the proposed initiatives. The curriculum should have the detail training plan to meet the objective and include identification of possible local resource person/organization. The proposed capacity building training needs to be carried out as a regular activity with appropriate follow up and backstopping process.
- vii. Training candidate selection shall be based on a review of their job position KSAs to see if it is a required skill and participant interview to ensure they possess necessary foundational skills to benefit from training.
- viii. Training participation shall be based upon clear and transparent financial and status incentives that support career advancement and eligibility for promotion.
- ix. Training has clearly defined program goals and measurable, outcomes, impact, and performance measures contributing towards the KSA assessments of the organizations. The training is monitored and evaluated on a regular basis and shared with ICE. The certification upon completion of training must assure that the participant is adequately prepared to apply the skills covered in the training.

Training results will be entered into an HR database with unique identifier number. Participants who do not pass will be identified.

- x. Project must demonstrate that the expected benefits exceed the costs of implementation.
 - xi. All mentoring and advisory assistance projects shall include a transition plan of responsibilities and processes to a local staff, requiring GoIRA to hire the appropriate staff for such a transition and the donors to develop a plan with GoIRA to which both parties commit.
- b. Training activities are scheduled based on providing the necessary technical capacity to support the current energy sector assets, followed by providing the future necessary capacity for the *priority* energy development projects identified by ICE leadership.
- i. Current Assets/Projects: Capacity needs will be based on first determining the technical positions needed for maintaining and operating each of the current assets. For each position, internationally accepted standardized qualifications required to perform the required functions of this position will be identified. Training programs will be supplied to address the gaps between the possessed qualifications and the required qualifications.
 - ii. Future Assets/Projects: All future development project plans must include a full description of the necessary standardized job positions required to operate and maintain the project in the long-term. Training and recruitment incentives (with universities and vocational schools) will be initiated in advance of the project at contract signing to assure that the necessary supply of labor with the standardized qualifications will be available when the project/asset is completed.
- c. All donors plan all capacity building activities based upon this strategy and the work plan developed by the ICE Capacity Building Unit. Individual Ministries notify the ICE Capacity Building Subcommittee prior to initiating any Capacity Building program requests. Before any training is initiated, the donor reviews a Capacity Building Activities Database that is available at the Afghan Energy Information Center, to assure there is not any overlap.. Donors share needs assessments and capacity building plans and results via the Afghan Energy Information Center. Donors are expected to provide documents translated into local language as directed by the GoIRA. The ICE leadership will monitor donor participation and documentation in this effort.
- d. Afghan Energy Information Center is located in new building and successfully transitioned to GoIRA management. Funding is allocated to retain trained expert personnel who can provide up-to-date and accurate information to all Energy Sector organizations and donors including capacity building information. This information will include the past, current and planned activities as well a digital library of curricula. The masters will always stay at the AEIC. Upon completion of training, participant lists, evaluations, test results and training materials will be entered into a database.

2. Development of Academic, Vocational, Professional and Technical Training Institutions/Centers

The Academic, Vocational and Technical training centers of Afghanistan shall be capable of providing all needs-based capacity building support required by the sector. Each institution will have the necessary facilities, qualified faculty and needs-based curricula according to their areas of specialty. MEW, DABS, MoM and MRRD will each have scholarship/internship programs with these institutions and centers to recruit the future workforce into the needed fields. Any donor implemented capacity building programs shall all be delivered in partnership with these centers and transfer capacity to Afghan teachers and instructors. Afghan institutions shall have strengthened technical research and development and innovation capacity and a focus on the unique needs of the Afghanistan's environment and market. Institutions will have opportunities for technology transfer including renewable energy technology. The graduates of the Afghan institutions will be ready to enter the Afghan workforce and support the needs of the sector.

3. Capacity Building of the Energy Sector Institution Management and Operations

MEW, DABS, MoM, MoHE, MRRD, MoEc leadership and top management will have the institutional capacity to each plan and manage their own budgets for all operations including capacity building according to the KSA needed to address the priority projects according to ICE. Each institution's management, administration and human resources policies and practices will support a sustainable capacity building approach necessary to adapt to the changing priorities of the sector.

- a. All organizational structures will be reviewed to determine the necessary job positions for successfully performing the goals and objectives of the organization. Next, all job positions will be clearly categorized with KSA requirements, responsibilities and duties. Trainings will be implemented to bring position holders up to required standards of KSA. In cases where the current position holder does not possess a certain credential. They will be given the opportunity to demonstrate that they possess the necessary KSA to perform the functions of the position.
- b. MEW, DABS, MoM, MRRD, MoHE, will develop mechanisms for transparent incentives and employee retention. Each organization will have clear career development policies that incentivize employee development with promotions and raises. Ministries will work with the Civil Service Commission to design a HR and career development policy that abides by Civil Service Law and also meets the unique specialized requirements of the Ministry, allowing them to create incentive programs. Institutional staff will be well informed of processes and be empowered to develop their own capacity to gain the opportunity for a promotion.
- c. Each institution will develop and execute their own capacity building budgets which will allow for increased control over programming, implementation and results. This will lead towards sustainable implementation of capacity building within the sector.
- d. Technical Assistance programs will support a sustainable transfer of skills by pairing up expert mentors with qualified counterparts for 1-2 years and implementing a transition plan. Afghan institutions will provide counterparts with promotion incentives for successfully

developing themselves and accepting the transfer of new skills from the mentor upon 6 months after the completion of the program.

- e. Human Resources departments will be supported to make staffing decisions based upon the required KSA for the job positions in the organizational chart. Performance evaluations with clear objective measurement criteria will be given by both supervisor to staff and staff to supervisor in a “360” format, to support clear assessment of performance and possible training needs.

4. Expansion of Capacity Building Models in Provinces

- a. A sustainable process for capacity building is established at the capital and provincial level. A regular platform for broader discussion of capacity development needs and possible interventions among stakeholders and donors is established.
- b. The institutional and regulatory framework of the sub-sector is established and understood by stakeholders.
- c. The mandates, tasks and responsibilities of public agencies are defined for the planning, implementation and monitoring of rural electrification through renewable energy technologies.
- d. Five training centers are established in key provinces for providing and facilitating capacity building programs on technical skills (usage, construction, operation and maintenance of renewable technologies) as well as administrative skills (awareness, skills, and knowledge of general administrative and managerial issues).

5. Development of Afghan Energy Sector Related Industry and Service Capacity

Afghan Energy Sector companies are providing the necessary high quality, reliable products and services at competitive rates that meet the national standards and specifications established by ANSA. Afghan government policy and donor programs encourage entrepreneurship and competition in the market which leads to companies investing in the development of their own capacity to meet the needs of the sector.

- a. Local companies understand new and existing financial instruments that they can use to develop their business to meet the needs of the energy industry in Afghanistan.
- b. Local companies are aware of the existing opportunities for providing energy sector manufacturing and services to the Government, and have sufficient time and information to develop their capacity to respond to these needs. Local companies have a trade association to help share information and coordinate with government regulation.
- c. Private foreign manufacturing and services companies have incentives and confidence to form linkages and partnerships with local companies for mutual capacity development and profit.
- d. Through the facilitation of recognized energy sector trade associations, ANSA promotes awareness of adopted international standards and testing of energy systems (including renewable energy systems) in Afghanistan. ANSA is responsible for reviewing existing

standards and if necessary, adapting them to Afghanistan conditions, and procedures for testing/certification. Technicians and engineers can gain professional certification of their knowledge and skills through these associations.

Goals

1. Development of Guidance, Oversight, Communication and Management Mechanism

- a. By April 2011, ICE Capacity Building Subcommittee Working Group will finalize the TOR for the ICE Capacity Building Unit that will be created as a GoIRA-funded four-year project to sustainably manage the communications, database management and deliverables necessary for implementation of this strategy and coordination support for the ICE Subcommittee. The Unit will have offices at both the Ministry of Economy and the Ministry of Energy and Water to coordinate with the Afghan Energy Information Center. Two trilingual – Dari, Pashto and English speaking Afghan staff (a Director and one assistant with database management skills) shall be hired full-time under a Ministry of Finance project to run the ICE Capacity Building Unit. The unit shall be responsible for:
 - Overseeing drafting of the invitations, agendas, briefings for the ICE Subcommittee Chairman and Secretariat. Sending email communications for ICE Capacity Building Subcommittee and Strategy Working Group and maintaining an accurate contact database.
 - Coordination between Energy Sector organizations and donors by facilitating sharing information on capacity building activities via the ICE Subcommittee for Capacity Building’s monthly meetings, collecting donor updates and revising the Capacity Building Activities Database, writing quarterly reports of Capacity Building progress and activities, facilitating problem solving and consensus building between organizations.
 - Preparation, management and updating of ICE Capacity Building Activity Work Plan, Monitoring and Evaluation Framework, Results Framework, Risk Analysis and Management Plan, Budget Plan/Strategic Budget Management Plans. Reporting progress to ICE on a quarterly basis.
 - Reviewing proposed training activities and training providers against standards and principles of this strategy, notifying ICE leadership of questions or concerns.
 - Managing and the submission of digital files of needs assessments, training program materials and capacity building activities database to the Afghan Energy Information Center. All Masters should be stored at the information center and copies can be made for participating institutions.

The ICE Subcommittee Strategy Working Group will support the ICE CB Subcommittee Secretariat to draft the proposal to apply for a GoIRA-funded project.

- b. By June 2011, a Subcommittee Selection Team shall interview and select the Director and Assistant. The Selection Team shall include representatives from ICE Leadership and donor agencies. The ICE Chairman shall provide the final approval of the candidate.
- c. By June 2011, a Strategic Management training program for the Unit and Subcommittee Strategy Working Group will be implemented through the resources of the Civil Service Institute. The focus of this course will be to support the Unit and Working Group to manage future revisions of the strategy, implement the strategy, develop and use the necessary

management tools (Monitoring and Evaluation Framework, Results-Based Management Plan, Risk Analysis and Risk Management Plan, Budget Plan/Strategic Budget Management Plan)

- d. By July, 2011 the completion of the ICE Capacity Building first quarter Work Plan for July-Sept. This first short-term work plan will include the development of the Strategy Monitoring and Evaluation Framework, Results-Based Management Plan, Risk Analysis and Risk Management Plan, Budget Plan/Strategic Budget Management Plan. The Prioritized Work Plan will be shared with donors by GoIRA .
- e. By August, 2011 Completion summary training needs assessment report for MEW, DABS, MRRD, MoM, MoHE, and MoEc. The assessment should be based on assessing gaps in clearly defined KSA for the standardized job positions and or organizational chart required to support current energy sector projects. Needs Assessments and work plans for addressing needs will be entered into the IMS. Each ICE entity will need to do the assessment and supply their individual assessment to the Unit that will include:
 - i. DABS – KSA of job positions required for operating and maintaining current energy sector assets according to industry standards.
 - ii. MEW – KSA of ministry job positions required for implementing Project Development, Planning and Policy activities for priority projects in the sector.
 - iii. MRRD – KSA of Ministry job positions required for implementing Rural Electrification Planning, Rural Development Training, Public Awareness of Renewable Technologies
 - iv. MoM – KSA of Ministry job positions required for developing, managing, processing and distributing supplies of Gas, Oil and Coal for sector consumption.
 - v. MoEc- KSA of job positions required for developing and reviewing budgets for sector projects.
 - vi. MoHE – see Goal 2
- f. By November 2011, finalize the ICE Capacity Building Unit’s long term M&E process for evaluating sector trainings and programs that includes creation of the quality control process and policies and preparation of check lists and forms to support accurate information gathering.
- g. By December 2011, a comprehensive online Information Management System (IMS) for energy sector capacity building shall be completed and policies for GoIRA, NGO, Private sector and donor usage and reporting requirements that address the challenges indicated in this strategy will be finalized. It shall include information on: past/current/future activities that will include lists of participants with unique identifier numbers and their job position history. All ICE Entities will be responsible for developing their own individual database systems based on their own needs, however at a minimum, each system needs to include a unique identification numbers that will allow for accurate tracking of personnel. Processes for quarterly collection and entry of information will be established and policies and incentives for participation will be defined. The Database will be linked to the Afghan

Energy Information Center. The database will be designed to easily accept CSV files from participating ICE entities.

- h. By 2012, the Capacity Building Activities Work Plan will be revised to support the prioritized needs for capacity building as indicated in the completed Energy Sector Master plan.
- i. By 2012, the Afghan Energy Information Center relocation to the new building will be completed and management will be transitioned to GoIRA including plan to retain trained expert staff.

2. Development of Academic, Vocational and Technical Training Institutions/Centers

- a. By June 2011, identify area(s) of specialization for each university/ training center (for example, Policy, Planning, O&M) so as to develop targeted specific capacity building plan and facility development for that area of specialization. Institutions include, but are not limited to, Kabul University, Kabul Polytechnic, MEW VTC, DABS Technical Training Center – not yet developed. Identify one center to be the nexus for a future Energy Sector Executive Education/Center for Excellence program.
- b. By September 2011, complete need assessment report of the academic and training centers to deliver training to support MEW/ DABS/ MoM/ MRRD KSA training needs based on the area of specialization
- c. By October 2011, develop five-year training and hiring plan to develop faculty of existing institutions in Kabul up to national standards. This training plan will include institutional linkages with institutions in countries with comparable technologies.
- d. By October 2011, complete the Terms of Reference (TOR) and Technical Career Development Training plan for DABS Training Center. The Technical Career Development plan should include a clear outline of the job positions held at each DABS asset and the necessary KSA needed to successfully perform the duties for each position. It is the responsibility of DABS to communicate the entry level KSA requirements to the vocational schools and universities and create incentive plans (paid internships, scholarships, awards, etc. to encourage the necessary future talent pool to be developed).
- e. By October 2011, develop annual practical internship programs between in each institution that create plan for coordination between ICE entities and universities to institutionalize on-the-job training/internships.
- f. By November 2011, establish coordination policy within sector to require all outside capacity building training programs to invite a quota of professors and instructors as participants in all outside training to building their capacity. Also develop program at the universities to invite visiting experts on donor funded projects to participate in a guest lecture program open to all sector professionals to share knowledge and network.
- g. By December 2011, develop salary incentives program for attracting Masters/PhD-level instructors where required. Develop scholarship and other incentives programs for current professors to build their capacity and then return to positions in Afghan institutions.

- h. By January 2012, develop process for needs based curriculum development according to industry standards for universities with support from advisors from foreign universities. Process should include systems for ongoing evaluation of the university programming trainings.
- i. By March 2012, complete upgrade, construction, and development of identified specialized laboratory facilities plan according to needs assessment. This includes the completed TOR for the DABS Training Center.
- j. By October 2012, complete the DABS Training Center and Career Development Track Program.
- k. By October 2012, developing a system for channeling energy sector capacity building activities through the educational institutions. Identifying relevant academic centers for training purposes – creating a network of communication between academic centers so that they can determine which center will implement training.
- l. By December 2013, train universities to prepare proposals and grants for donors for research and development programs.
 - i. Survey of the current energy research centers in the country
 - ii. SWOT analysis of the existing centers
 - iii. Preparing the structure and TOR for this center
 - iv. Establishment of this center’s coordination cell with the stakeholders of the energy sector.
 - v. Performing research and gathering accepted international practices for realizing the mission of this center. Develop knowledge exchange programs and technology transfer programs with international institutions.
 - vi. Promote R&D of renewable energy technologies, including design of renewable energy systems and components tailored to Afghanistan (e.g. minigrids and stand-alone systems for rural areas) and adaptation of mature technologies (e.g. hydro and wind turbines) to suit Afghanistan conditions, such as weather, market features and possibilities for local manufacturing. This activity will seek close collaboration with the private sector.
 - vii. Reporting to ICE and cataloguing findings at AEIC.

3. Capacity Building of the Energy Sector Institution Management and Operations

- a. By August 2011, evaluate management and operational effectiveness of sector institutions and create plan for building needed capacity through recruitment or training. The focus should be on assessing the training needs to enable long term budget planning and execution with management and director level personnel.
- b. By October 2011, complete an awareness program to streamline the process of communication between Energy Sector institutions and Civil Service Commission regarding programs for developing capacity and creating incentives for employee development.
- c. By October 2011, applying the article number 35 of the civil service employer’s law.

- d. By November 2011, initiate on the job training/mentoring programs to build capacity according to the assessment. In particular, each organization will need support for change management. Mentoring should focus first on promoting operational and management excellence according to a budget. All mentors should be paired with a dedicated counterpart who will be at the ministry for 2 years and a transition plan should be created within the first 6 months of the mentorship program.
- e. By November 2011, implementation of support to MEW, DABS, MRRD, MoM, MoHE (energy sector related departments) to plan and implement their institutional budgets. Initiate training programs and mentoring program for the departments of Procurement, IT, HR, Public Relations etc. to operate according to institutional budgets.
- f. By December 2011, create plan for supporting top directors/managers in intensive management and leadership development programs abroad.
- g. By January 2012, each ICE entity develops clear standardized salary incentive mechanisms for recruitment and retention of professionals and experts according to civil service law. Each ICE entity also develops incentives policies for all participants participating in training that encourage learning and retention. Have Government entities support trainee logistical needs to participate in the training and
- h. By March 2012, create program for ANSA to support training. Directors/Managers are current with national standards.

4. Expansion of Capacity Building Models in Provinces

- a. By March 2011, implementation of recommendations indicated in MRRD Capacity Assessment work plan that will develop the capacity of the main stakeholders of the sub-sector for rural energy supply / electrification through renewable energy technologies, including donor organizations and also raise awareness among political stakeholders and decision makers for the sub-sector of rural electrification through renewable energy technologies.
- b. By April 2011, closely link capacity development to the strategy development underway in the ICE Sub-committee for Rural Electrification and Renewable Energy, as this is where the future institutional and regulatory set-up is being discussed.
- c. By November 2011, develop proper processes and clearly assign responsibilities for the planning, implementation and monitoring of rural electrification through renewable energy technologies;
- d. By December 2011, a sustainable process for capacity building shall be prepared in the capital and provincial level.
- e. By March 2012, establish and empower the training centers in provinces designated in the work plan based on local needs and community structure. Invest in the upgrading of training infrastructure and training of trainers.

5. Development of Afghan Energy Sector Private Industry and Service Capacity

- a. By December 2011, completion of report of sector equipment, material and service needs (short term, medium term and long term) and distribution to private energy sector companies and related industries to encourage their planning and investment in developing their capacity to meet the future need. Report should include products needed for hydropower development, concentrating solar power plants and wind farms, biomass-based co-generation solar water heaters for public institutions and the tourist industry, solar water pumps and efficient stoves etc.
- b. By January 2012, publication by ANSA of updated standards and regulations for sector – including updates to make standards more relevant to Afghan climate and environment.
- c. By March 2012, support development of a professional energy sector industry association that can provide information about opportunities of the sector and also coordinate communication with public entities regarding regulations, standards and certifications.
- d. By July 2012, develop investment promotion coordination program to match interested foreign investors in local companies. This program can include facilitation of twinning programs between foreign and Afghan companies, promoting commercial agreements between foreign and Afghan companies, including technology transfer and setting-up industrial production in Afghanistan, public-private partnerships, renewable energy trade fairs, trade missions and regional investors forums.
- e. By September 2012, develop technical and business training programs for renewable energy entrepreneurs through the universities

Attachment 1 : Summary of Baseline Needs Assessments Database performed within last 5 years that are archived at the Afghan Energy Information Center

Training Need Assessments and Training Plans for Afghan Energy Sector

Documents will be available at Afghan Energy Information Center website as a downloadable PDF

| Agency | Implementing Partner | Focus of Assessment- Institution/ Organization | Language | Date of Assessment Completed |
|--------|-----------------------------------|--|------------------|------------------------------|
| DABS | DABS-Internally | DABS Generation O&M | English | 2011 |
| GtZ | Afghanistan Energy Program - ESRA | Rural Electricity Supply Through RE Technologies | English | 2009 |
| MEW | MEW- internally | MEW | Dari and English | 2010 |
| USAID | SARI-Nexant | MEW | English | 2006 |
| | AECB-AEAI | VTC | English | 2008/2010 |
| | AIRP - ICE-LBG/ B&V | DABM | English | 2008 |
| | ACEP- IRG | Clean Energy Capacity Development Needs | English | 2010 |
| | KESIP-Tetrattech | DABS | English | 2010 |

Attachment 2: Capacity Building Activities- Past/Current/Planned

Energy Sector Capacity Building Database- April 2011

| Recipient org. | Start Date | End Date | Description of Capacity Building Intervention | Participants (Names/ department/ job position / level/ gender) | Knowledge, Skills being Developed | Location | Donor Agency | Project/ Implementing Partner | Funding Amount in US \$ |
|----------------|------------|-----------|--|--|--|----------------------|--------------|-------------------------------|-------------------------|
| ANSA | 1-May-09 | 12-Jan-10 | On-the-job training on MS Access database MEW and ANSA participants together | MEW, ANSA | Administration, basic computer skills | MEW and ANSA offices | GTZ | ESRA / GTZ | |
| ANSA | 1-Apr-11 | 1-May-11 | Training in standardization for the energy sector - three weeks | Directors and engineers (up to 15 participants total from all organizations) | Basics in standardization, electricity transmission and distribution standards, certification, accreditation, regulation | Germany | GTZ | ESRA / GTZ | |
| AWEA | 22-Feb-11 | 24-Feb-11 | Management & leadership in energy projects -workshop for women | 25 Afghan women members of Afghan Womens Energy Association, working in energy related fields from different organizations (NGO, Private sector, Government) | Women's Leadership in Energy Workshop as a collaborative effort from KU, ACEP and GIZ in support to the creation of the Afghan Women in Energy Association (AWEA). This KU/ACEP/GIZ workshop is a practical event for women working in energy related fields. Participants will learn from experts in the field about the leadership, management, and gender and energy nexus. | Kabul, Afganistan | USAID | ACEP- IRG | 80 million |
| AWEA | 1-May-11 | 4-May-11 | PV systems for women | AWEA members -NGO, Government, Professors, Engineering Students (only female) | The ACEP workshop is designed for women only. The workshop will provide participants with practical knowledge and understanding on PV technologies and different applications. | Kabul, Afganistan | USAID | ACEP-IRG | 1000 |

Energy Sector Capacity Building Database- April 2011

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|--|----------|----------|--|---------------------------|---|-------------------|-------|--------------------|-------------|
| AWEA, NGO, Government, Professors, Engineering Students (only Female) | 1-Jul-11 | 5-Jul-11 | Solar food drying | AWEA members | The main goal is to introduce this technology among AWEA professionals involved in bringing development into rural areas of Afghanistan. The workshop attendees will learn the fundamentals of solar drying by participating in a theoretical session and practical component. Practical experiences consist of preparation of food, sanitation issues, solar energy fundamentals in the field, solar drying process, understanding of components of solar food dryer, performance of food dryers, dynamic evaluation of the food drying process, and quality of final product. | Kabul, Afganistan | USAID | ACEP- IRG | |
| DABS | 2009 | 2010 | Support to senior management of DABS | DABS senior management | Assist top management of DABS in undertaking board meetings, assets transfer and preparation of accounting/financial reports. | DABS HQ Kabul | ADB | MVV Consulting | 250,000 |
| DABS | 2010 | 2014 | Program managemnt and capacity building of DABS | Program Management Office | Improve capacity of DABS staff to designm procure and implement projects. | Various | ADB | SMEC International | 15 million |
| DABS | 2011 | 2014 | Operations and Maintenance of NEPS 220 kv System | Program Management Office | Assisit and train DBAS/MEW staff in maintenance of NEPS 220 kv system including provision of necessary softwares and hardware to undertake the tasks. | Various | ADB | TBD | 8.5 million |
| DABS | 2011 | 2012 | DABS management assistance | DABS management team | Facilitate capacity building of DABS management and staff as well as assist in operationalization following transfer of staff and assets from DABM to DABS. | DABS HQ Kabul | ADB | TBD | 5 million |

Energy Sector Capacity Building Database- April 2011

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|-------------|-----------|-----------|---|----------------------------------|---|--|-------|--------------------------|---------|
| DABS | 2011 | 2012 | Establishment of revolving fund in DABS | Program Management Office | Assist DABS/MEW to devise mechanism for GoA to efficiently use repayment from DABS. The revolving fund is expected to finance needs of energy sector such as system expansion, rural electrification and targetted subsidies. | DABS HQ Kabul | ADB | TBD | 200,000 |
| DABS | 2011 | 2012 | Assistance in power distribution planning of DABS | Program Management Office | Build DABS capacity on distribution planning using world class distribution planning software | DABS HQ Kabul | ADB | TBD | 700,000 |
| DABS | 23-Dec-08 | 23-Mar-09 | Refresher engineering and power systems overview | Technicians and engineers | Engineering basics | Kabul | USAID | AECB- AEAI | |
| DABS | 5-Mar-09 | 2-Jul-09 | O&M of hydro-power plant specific to Sarobi | DABS staff | Familiarization of electro-mechanical equipment, drawing, protection, hydraulic systems, governor, control system, safety, electrical and mechanical troubles, VS Hycon, alarms and messages | Sarobi Power Plant | KfW | EntecAG/Integration GmbH | |
| DABS | 20-Mar-09 | 15-Jun-11 | NEPS advisory | DABS CEO and COO | Transmission system development | multiple sites | USAID | AECB- AEAI | |
| DABS | 1-Jul-09 | 6-Jul-09 | Compuer training for DABS staff / operators of ESRA | Admin staff of DABS | soft skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| DABS | 3-Aug-09 | Jan-10 | Post graduate program in operation and maintenance of transmission and distribution. The 7 graduates are now working at DABS. | DABS and MEW Engineers - 7 total | | India | USAID | SARI- Tetrtech | |
| DABS | 1-Oct-09 | 1-Oct-09 | Lineman training for NEPS transmission lines | DABS Linemen- 34 | Lineman training | Multiple Sites | USAID | AECB- AEAI | |
| DABS | 5-Oct-09 | 10-Oct-09 | Program on operation and maintenance of substation equipment | 27 MEW and DABS employees | | India | USAID | SARI- Tetrtech | |

Energy Sector Capacity Building Database- April 2011

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|-------------|-----------|-----------|---|---|--|-------------------------------|-------|-------------------------|-----------------------------------|
| DABS | 23-Nov-09 | 10-Dec-09 | O&M of Hydro-power plant specific to Sarobi | DABS staff | Familiarization of electro-mechanical equipment, drawing, protection, hydraulic systems, governor, control system, safety, electrical and mechanical troubles, VS Hycon, alarms and messages | Sarobi Power Plant | KfW | EntecAG/IntegrationGmbH | |
| DABS | 23-Nov-09 | 19-Dec-09 | Training of Trainers (TOT) program on substation operation and maintenance. Six of these personnel are continuing to train others in Kabul. | The TOT program on Substation O&M trained 15 people from MEW and DABS. | | India | USAID | SARI- Tetrattech | |
| DABS | 10-Jan-10 | 28-Feb-11 | Protection relays for distribution system | Engineers and technicians of the Ministry of Energy and Water and DABS (25 Participants from MEW and DABS attendant). | Generation, transmission & distribution of electrical safety in power plants. Energy measurement battery and battery charger (performance & maintenance). | Iran (Mashhad) | JICA | JICA | 139,325 for MEW and DABS combined |
| DABS | 10-Jan-10 | 1-Jul-11 | English language training programs | Engineers and technicians | English - beginner, intermediate | Substations | USAID | AECB- AEAI | |
| DABS | 10-Jan-10 | 1-Jul-11 | Computer training programs | Engineers and technicians | Computer (MS Office Suite) - CIT standards | Substations | USAID | AECB- AEAI | |
| DABS | 11-Jan-10 | 2-May-10 | O&M of transmission and sub-station | DABS staff | Familiarization of sub-station equipment, electrical drawings, protection system, earthing, circuit breakers, SIPROTEC automation system, sub-station inspection, condition monitoring of transformer and battery and battery chargers | BreshnaKot sub-station, Kabul | KfW | EntecAG/IntegrationGmbH | |
| DABS | 1-Mar-10 | 27-Feb-11 | DABS planning dept. advisory | DABS planning department | planning | Kabul | USAID | AECB- AEAI | |
| DABS | 8-Mar-10 | 27-Mar-10 | Training of trainer program on metering technology. TOT program on metering technology trained 15 people from DABS and MEW. | 15 MEW and DABS employees | | India | USAID | SARI- Tetrattech | |
| DABS | 21-Mar-10 | 1-Dec-10 | OJT for NEPS substations technicians, fast track electrification program and Kabul 110 kV system training | DABS technicians | Substation O&M | multiple sites | USAID | AECB- AEAI | |

Energy Sector Capacity Building Database- April 2011

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|-------------|-----------|-----------|--|---------------------------------|---|-------------------------------|-------|-------------------------|--|
| DABS | 6-May-10 | 1-Jun-10 | O&M of MV junction station and distribution system | DABS staff | Familiarization of junction station equipment, switchgear, distribution transformer, protection and SIPROTEC relays, earthing, metering and instrumentation | BreshnaKot sub-station, Kabul | KfW | EntecAG/IntegrationGmbH | |
| DABS | 17-May-10 | 29-May-10 | Introductory courses on metering technology | 15 employees | Metering technology | India | USAID | SARI- Tetrtech | |
| DABS | 1-Jun-10 | 9-Sep-10 | 10 technicians (substation O&M) - in India, PowerGrid | 10 DABS technicians | Substation O&M | India | USAID | AECB- AEAI | |
| DABS | 7-Jun-10 | 19-Jun-10 | skill based training on transformers | 10 DABS employees | Transformer training | India | USAID | SARI- Tetrtech | |
| DABS | 12-Jul-10 | 17-Oct-10 | 10 engineers (Substation protec. & commu.)-in India, PowerGrid | 10 DABS engineers | Protection and communication | India | USAID | AECB- AEAI | |
| DABS | 26-Jul-10 | 7-Aug-10 | Program on distribution loss reduction | 9 DABS employees | Distribution loss reduction | India | USAID | SARI- Tetrtech | |
| DABS | 1-Aug-10 | TBD | 15 Hydro-engineers, in India, NPTI | 15 KU/KPU engineering graduates | Hydro-engineering | India | USAID | AECB- AEAI | |
| DABS | 1-Aug-10 | TBD | 15 Power systems engineers, in India, NPTI | 15 KU/KPU engineering graduates | Power systems | India | USAID | AECB- AEAI | |
| DABS | 30-Aug-10 | 25-Sep-10 | Metering and metering systems | DABS | Metering and metering systems | | USAID | SARI- tetrtech | |
| DABS | Sep-10 | | System Protection/ Relaying | DABS | System protection/ relaying | | USAID | SARI- Tetrtech | |
| DABS | 15-Sep-10 | 12-Oct-10 | The objective of the program on "Metering Systems and Management" is to develop the participants for planning the metering system/ specifying metering/ evaluation/ selection/ deployment & installation / audits & maintenance / establishment & mainting the meter testing laboratory. | 15 DABS Employees | Metering systems and management | India | USAID | SARI- Tetrtech | |
| DABS | 22-Sep-10 | 5-Nov-10 | MV cable-jointing and termination technique | DABS/KED (to be finalized) | Skill building of cable-jointing and termination of DABS distribution sector technicians | BreshnaKot sub-station, Kabul | KfW | EntecAG/IntegrationGmbH | |

Energy Sector Capacity Building Database- April 2011

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|-------------|-----------|-----------|---|---|--|----------------|-------|-------------------------|--|
| DABS | 4-Oct-10 | 12-Nov-10 | Workshop technology and Welding | 20 nos.of mechanics from Sarobi, Mahipar and Naghlu power plants | Skill building of power plant mechanics in lathe machine, workshop tools and machining and welding works | KMI, Kabul | KfW | EntecAG/IntegrationGmbH | |
| DABS | 23-Oct-10 | 2-Feb-11 | Operation and maintenance for substation equipment | Engineers and technicians of the Ministry of Energy and Water and DABS (12 Participants from DABS and MEW attended) | <u>Generation transmission & distribution of electrical energy principles:</u> Electrical circuit; high voltage substation equipment; distribution network protection; protection relay; performance setting tests 1-phase & 3-phase electrical digital counter (test, chuck & setting);Basic safety and wastage control (consumption optimization) | Iran (Mashhad) | JICA | JICA | 154,030 for both MEW and DABS |
| DABS | 23-Oct-10 | 2-Feb-11 | Maintenance of distribution facilities | Engineers and technicians of the Ministry of Energy and Water and DABS (13 participants from MEW and DABS attended) | <u>Generation, Transmission & Distribution of electrical energy principles:</u> High voltage substation operation; modern high voltage substation operation; H.V & M.V switches operation and tests; high voltage circuit breaker; AC/DC supply and maintenance | Iran (Mashhad) | JICA | JICA | 200,073 for both MEW and DABS combined |
| DABS | Nov-10 | TBD | Distribution System O&M | DABS-tbd | Distribution System O&M | TBD | USAID | SARI- Tetrattech | |
| DABS | 29-Nov-10 | 11-Dec-10 | 02 week program was implemented, where the participants were provided <u>hands-on experience</u> on equipment of protection systems at the premises of manufacture and also at utilities. | 16 DABS Employe | Training program on protection system | India | USAID | SARI- Tetrattech | |

Energy Sector Capacity Building Database- April 2011

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|-------------|-------------|-------------|---|---|---|----------------|-------|---------------|---------------------------------------|
| DABS | 3-Dec-10 | 2-Jan-11 | Maintenance of power generation | Engineers and technicians of the Ministry of Energy and Water and DABS (23 participants from MEW and DABS attended) | <u>Introduction with Distribution Network Standards</u> Low Voltage Network & Distribution Substation Electrical Distribution energy system Distribution Network Maintenance Transformer Maintenance Earthing system in Distribution Network Electrical Safety for Transmission & Distribution Technical | Iran (Mashhad) | JICA | MoEW and DABS | 92,004 for both MEW and DABS combined |
| DABS | 17-Jan-11 | 24-Jan-11 | Study tour for waste-to-electricity/ biogas production facilities | Dr. Shams | technology and economic feasibility of waste-to-electricity/biogas facilities and adoption of technology to Afghanistan | Germany | GTZ | ESRA / GTZ | |
| DABS | 1-Apr-11 | 1-May-11 | Training in standardization for the energy sector - three weeks | Directors and engineers (up to 15 participants total from all organizations) | Basics in standardization, electricity transmission and distribution standards, certification, accreditation, regulation | Germany | GTZ | ESRA / GTZ | |
| DABS | ongoing | TBD | Diesel O&M training is ongoing. | DABS Staff in Kandahar | Operation and Maintenance | Kandahar | USAID | AIRP-LBG/B&V | |
| DABS | Permanently | Permanently | DABS + operators - data collection and processing (Excell) - on the job | ESRA operators, DABS admin staff | Administration, basic computer skills | | GTZ | ESRA / GTZ | |
| DABS | TBD | TBD | English language Training Programs- in collaboration with AIRP TO 22 | Engineers and Technicians | English - Beginner, Intermediate | Kandahar | USAID | AECB- AEAI | |
| DABS | TBD | TBD | Computer Training Programs- In collaboration with AIRP TO 22 | Engineers and Technicians | Computer (MS Office Suite) - CIT Standards | Kandahar | USAID | AECB- AEAI | |
| DABS | TBD | TBD | Project Management | Engineers | Project Management | Kabul | USAID | AECB- AEAI | |
| DABS | TBD | TBD | GIS - - in coordination with KESIP | Engineers | GIS | Kabul | USAID | AECB- AEAI | |
| DABS | TBD | TBD | Auto Cad | Engineers | Auto Cad | Kabul | USAID | AECB- AEAI | |
| DABS | TBD | TBD | They are also in the process of developing a National Training Center at the Taraquil Power Plant. AIRP will be meeting with DABS to establish. | DABS technicians | Technical and Engineering and Management | Taraquil | USAID | AIRP-LBG/B&V | |

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| DABS | TBD | TBD | Executive Development Programs - Future tbd- Suitability for launching the program to be advised one the restructured Utility gets settled. | DABS Executive Team | Short term specialization program in leadership/governance/change management/regulation agreed to be delivered in Kabul once the relationship is established with Training institutes. | tbd | USAID | SARI- Tetrtech | |
| DABS | TBD | TBD | Project Management - Distance Online Learning | Technicians | Project Management | tbd | USAID | SARI- Tetrtech | |
| DABS | TBD | TBD | Hydro Power Maintenance - SARI/ENERGY is drafting a scope of work (TOR) to define the work., However, the funding will not be SARI/Energy; the time span of the task far exceeds the remaining life in the present SARI/Energy Program. A sponsor/donor needs to be identified if this task is to proceed beyond the SOW/TOR phase. | DABS Engineers/ Technicians | Hydro Power Maintenance | tbd | USAID | SARI- Tetrtech | |
| DABS | TBD | TBD | Switchgear | DABS-tbd | Switchgear | TBD | USAID | SARI- Tetrtech | |
| DABS | TBD | TBD | Cables | DABS-tbd | Cables | TBD | USAID | SARI- Tetrtech | |
| DABS | TBD- based upon request of GoIRA | TBD- based upon request of GoIRA | GoI is open to supporting more Capacity Building programs according to the request of the GoIRA . GoI has resources for institutional linkages, curriculum development support, study tours and training programs. The curriculum of available courses is Custom programs can be developed by specific request. | Students, Instructors, Staff | Engineering skills, Management Skills, Planning Skills, Technician Skills | India, Afghan Training Institutions | G o India | TBD | TBD |
| DABS operators/line men | Permanently | Permanently | Training of the job for linesmen and operators | Technical and management staffs for operation and maintenance of renewable energy | Technical knowledge skills building training | | GTZ | ESRA / GTZ | |

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| DABS, DRRD, DOE, DEW, RED, Governor Office Faizabad, Governor Office Takhar and ESRA | 14-Jan-11 | 28-Jan-11 | Rural electrification workshop and study tour | Partners of ESRA on provincial level | Technical Skills training | Germany | GTZ | ESRA / GTZ | |
| DABS-KED | 1-Jan | 5-Jan | General MS PowerPoint) Computer Training | Finance & Admin, Commercial 28 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 1-Jan | 5-Jan | Accounting Basic Training | Finance Dep, 12 Emplolyees | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 8-Jan | 19-Jan | General MS Excel(Basic) Computer Training | Finance & Admin, Commercial 14 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 8-Jan | 26-Jan | General MS Windows. Computer Training | Finance & Admin, Commercial 14 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 22-Jan | 9-Feb | General MS Excel(Basic) Computer Training | Finance & Admin, Commercial 14 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | Sep-10 | Nov-10 | The following training is going to be scheduled Sept-November | KED Engineers, Planning Department Staff | GIS;MS Great Plains- Payroll and Personnel;English for Business;Computer Basics;IT Management;Recruitment and Selection Methods, Tools and Practices;Job Modeling and Job Description Development;Performance Management System, Tools and Practices;Crane Truck Operations and Mainenance | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 27-Sep | 28-Sep | (Meter Reading Training) | (Commercial Dep, Meter Readers, 10 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 28-Sep | 29-Sep | (Meter Reading Training) | (Commercial Dep, Meter Readers, 21 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 5-Oct | 6-Oct | (Meter Reading Training) | (Commercial Dep, Meter Readers, 24 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 11-Oct | 12-Oct | (Meter Reading Training) | (Commercial Dep, Meter Readers, 21 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 16-Oct | 6-Nov | General MS Windows. Computer Training | Finance & Admin, Commercial 22 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 20-Oct | 21-Oct | (Meter Reading Training) | (Commercial Dep, for the newly engaged Meter Readers 17 Employees | | Kabul | USAID | KESIP-Tetrattech | |

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| DABS-KED | 25-Oct | 27-Oct | MS GP Payroll Training | (HR Dep DABS/KED/KESIP 10 Staff) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 26-Oct | 27-Oct | (Meter Reading Training) | (Commercial Dep, Meter Readers, 21 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 27-Oct | 28-Oct | (Meter Reading Training) | (Commercial Dep, Meter Readers, 21 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 7-Nov | 25-Nov | General MS Word(Basic) Computer Training | Finance & Admin, Commercial 15 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 27-Nov | 8-Dec | (Basics of Finance Accounting Training) | (From Finance & Admin Dep 9 Employees) Said Dil Aqa, Waheedullah, Said Zekria, Mohammad Ehsan, Said Alim Shah, Fazal Ahmad Mohammad Akbar, Abul Ahamd, Amrullah | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 27-Nov | 22-Dec | General MS Windows. Computer Training | Finance & Admin, Commercial 17 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 27-Nov | 8-Dec | General MS Excel(Basic) Computer Training | Finance & Admin, Commercial 16 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 27-Nov | 7-Dec | Basics of Financial Accounting | Finance Dep, 9 Emplolyees | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 6-Dec | 8-Dec | (IntroTo Microsoft Dynamics GP GL & BR Training) | Finance Dep, 12 Emplolyees | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 12-Dec | 15-Dec | (IntroTo Microsoft Dynamics GP HR Training) | (HR Dep 4 Employees) | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 12-Dec | 15-Dec | (Microsoft Dynamics APTraining) | Finance Dep, 14 Emplolyees | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 18-Dec | 29-Dec | General MS Word(Basic) Computer Training | Finance & Admin, Commercial 14 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 18-Dec | 22-Dec | Accounting Basic Training | Finance Dep, 12 Emplolyees | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 25-Dec | 29-Dec | General MS PowerPoint) Computer Training | Finance & Admin, Commercial 14 Staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 29-Jan | 16-Feb | General Microsoft Word Basic Computer Training | Admin Finance/ Commercial Dep, 14 staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 12-Feb | 2-Mar | General MS Windows. Computer Training | Admin Finance/ Commercial Dep, 14 staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 12-Feb | | English Training (Basic) | Admin Finance/ Commercial/Distribution Dep, 30 staffs | | Kabul | USAID | KESIP-Tetrattech | |
| DABS-KED | 19-Feb | 9-Mar | General MS Excel(Basic) Computer Training | Admin Finance/ Commercial/ Distribution Dep, 13 staffs | | Kabul | USAID | KESIP-Tetrattech | |

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| DABS-KED | 19-Feb | | English Training (Basic) | Admin Finance/ Commercial/Distribution Dep, 20 staffs | | Kabul | USAID | KESIP- Tetrattech | |
| DABS-KED | 5-Mar | 23-Mar | General Microsoft Word Basic Computer Training | Admin Finance/ Commercial Dep, 18 staffs | | Kabul | USAID | KESIP- Tetrattech | |
| DABS-KED | 9-Mar | 9-Mar | Recruitment & Selection Toolkit Procedure Training | DABS/KED HR Dep.8 Staffs | | Kabul | USAID | KESIP- Tetrattech | |
| DABS-KED | 12-Mar | 30-Mar | General MS Windows. Computer Training | Admin Finance/ Commercial Dep, 17 staffs | | Kabul | USAID | KESIP- Tetrattech | |
| DABS-KED | 26-Mar | 30-Mar | General Microsoft PowerPoint Computer Training | Admin Finance/ Commercial Dep, 14 staffs | | Kabul | USAID | KESIP- Tetrattech | |
| DABS-KED | TBD | TBD | KESIP – Is in the process of discussing a Training Institute at DABS based on the model for Kenya Power and Light. USAID asked if they had considered using VTC for this training. | | | | | | |
| Educational Organizations | 11-Aug-08 | 17-Aug-08 | Training for socio-economic survey I | Students | socio-economic survey skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Educational Organizations | 10-Oct-08 | 15-Oct-08 | Training for socio-economic survey II | Students | socio-economic survey skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Educational Organizations | 10-Feb-09 | 12-Feb-09 | User Training in (efficient use of electric power) | Female: Teachers | Awareness Building Skills | Jurm, Jurm District, Badakhshan | GTZ | ESRA / GTZ | |
| Educational Organizations | 21-Feb-09 | 2-Mar-10 | PV/Wind-RE-Training | Teachers of the technical school | short term technical training | Technical School, Herat | GTZ | ESRA / GTZ | |
| Educational Organizations | 1-Mar-09 | 7-Mar-09 | Training for socio-economic survey III | Students | soft skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |

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|--|-----------|-----------|--|--|---------------------------------------|---|-----------|------------|--|
| Energy Sector Wide | 09/30/09 | 09/30/11 | Civilian Technical Assistance Program (CTAP). CTAP is a new national programme that will strengthen capacity development in Afghanistan, assist public agencies to provide services to the public and support the Cabinet Clusters system. CTAP will do this by placing packages of Afghan expatriate and international technical advisors into government Ministries in order to support capacity development programmes formulated by the Ministries themselves. | GoIRA public agencies | all | Country wide | USAID - O | MoF | |
| Energy Sector Wide: Energy working group (DoWM, DoWA, DRRD, DABS, NSP, DoEc, DoUD, Governor office) | 13-Dec-09 | 20-Dec-09 | Proposal Writing Training | Manager, Planners, engineers | soft skills training | Amozushgah i Naween Dialogue Center, Faizabad | GTZ | ESRA / GTZ | |
| Energy Sector Wide: ICE | 3-Jul-10 | 10-Jan-11 | Capacity Building Coordination and Strategy Development | ICE Subcommittee Chairman, Secretariat and Coordinator and Working Group: MEW, DABS, MRRD, MoM, MoHE ICARC | Coordination and Strategy Development | Kabul | USAID | AECB- AEAI | |

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| Energy Sector Wide: KU, KPU, MRRD, MEW | 26-Apr-11 | 27-Apr-11 | Energy Efficiency Workshop | KU, KPU, MRRD, MEW Engineers and engineering and architecture students | Efforts to reduce the amount of energy required to provide products and services. For example, insulating a home allows a building to use less heating and cooling energy to achieve and maintain a comfortable temperature. Installing fluorescent lights or natural skylights reduces the amount of energy required to attain the same level of illumination compared to using traditional incandescent light bulbs. Improvements in energy efficiency are most often achieved by adopting a more efficient technology or production process. | Kabul, Afganistan | USAID | ACEP- IRG | 1000 |
| Energy Sector Wide: MEW, MRRD, industry, NGOs | 5-Mar-10 | 6-Mar-10 | Wind Energy Training Symposium (ACEP). | GO TO ACEP- WindEnergySymposiu Ap2010 TAB | Topics included wind resource assessment, small wind turbines, windfarms, wind water pumping, estimating wind turbine energy production, battery storage, wind economics, and wind hybrid systems modeling with HOMER. | Kabul, Afganistan | USAID | ACEP- IRG | 650 |
| Energy Sector Wide: MEW, MRRD, industry, NGOs | 11-May-10 | 16-May-10 | Micro Hydro Power Training Seminar | GO TO ACEP- MicroHydroSeminar May 2010 TAB | MHP basics, Desktop assessments (estimating potential - head and flow) and Topographic maps | Kabul, Afganistan | USAID | ACEP- IRG | 200 |

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| Energy Sector Wide: MEW, MRRD, industry, NGOs | 27-Jul-10 | 27-Jul-10 | First National Energy Efficiency Conference | GO TO ACEP- EnerEficConference Jul 2010 TAB | The one-day event brought together Afghan society and energy sector stakeholders from the World Bank, Asian Development Bank, Private Sector representatives and students and professors from various educational institutions such as Kabul University, Secondary Technical Institute, Afghanistan Academy of Sciences and Istaquall High School. The event highlighted the rising importance of EE for Afghanistan and laid out targeted initiatives proposed for immediate implementation, including a bulb exchange program for low income households, a program to install 5,000 solar water heaters in government buildings, a large energy user program to replace old motors and pumps, and an effort to enforce EE measures in a new national building code. Various international donors expressed interest in supporting these initiatives at the conference. | Kabul, Afganistan | USAID | ACEP- IRG | |
| Flag International | Jan 18,2011 | 20-Jan-11 | Micro Hydro Power Field Training | Flag International Engineers | On the Job Training: Field Survey Assessment on Micro Hydro Power | Ahmad Abad MHO near Gardez, Paktika | USAID | ACEP- IRG | 324 |
| GTZ ESRA partners | 15-Mar-10 | 20-Mar-10 | Training for carpenters in Sangab (on the job) | Carpenters on the job training | Business and market - economics and social impacts | Sangab, Shohada District, Badakhshan | GTZ | ESRA / GTZ | |
| Local Government | 10-Feb-09 | 12-Feb-09 | User Training in (efficient use of electric power) | Male: Head of Provincial Councils | Awareness Building Skills | Jurm, Jurm District, Badakhshan | GTZ | ESRA / GTZ | |

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| MEDA, MAIL | 3-Oct-10 | 6-Oct-10 | Solar Food Drying | GO TO ACEP-Solar Food Drying Oct 2010 TAB | From October 3-6, 2010 a solar food drying workshop for MEDA staff took place at Kabul University and MEDA in Kabul. The main goal was to introduce this technology among professionals involved in bringing development into rural areas of Afghanistan. The workshop attendees learned the fundamentals of solar drying by participating in a theoretical session held at Kabul University in the Faculty of Engineering. The practical component of the training workshop was conducted at the MEDA facilities. Practical experiences consisted on preparation of food, sanitation issues, solar energy fundamentals in the field, solar drying process, understanding of components of solar food dryer, performance of food dryers, dynamic evaluation of the food drying process, and quality of final product. Experiences from MEDA women on solar food drying. | Kabul, Afganistan | USAID | ACEP- IRG | 250 |
| MEW | 2003 | 2004 | Preparation of Power Transmission and Distribution Project | Design and Planning Department of Ministry of Water and Power | (i) Compliance with ADB's safeguard policies; (ii) economic and financial evaluations; (iii) linkage among economic growth, poverty, and the power sector; and (iv) technical project design. | Kabul, North AFG | ADB | Individual Consultants | 750,000 |

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| MEW | 2009 | TBD | Capacity building of planning cell in MEW- Ministry Support Unit under the DM of Administration. Hiring of Advisors for Finance, Planning, Procurement, Public Information, Human Resources Dept. Locals and ExPats through CTAP requests | Administration Department | Administration, Management, Advisory Support | Kabul | World Bank | MEW | |
| MEW | 2010 | 2010 | Wind training for decision makers | managers, expert engineers | Technical Skills training | Germany | GTZ | ESRA / GTZ | |
| MEW | 2010 | 2011 | Establishment of Energy Efficiency Unit in MEW | Policy Department | Energy Efficiency | Kabul | World Bank | MEW | |
| MEW | 1-Feb-04 | 1-Feb-05 | Preparation of National Power Transmission Grid | Design and Planning Department of Ministry of Water and Power | (i) Compliance with ADB's safeguard policies; (ii) economic and financial evaluations; (iii) linkage among economic growth, poverty, and the power sector; and (iv) technical project design. | Kabul | ADB | Morsul | 750,000 |

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| MEW | 1-Apr-05 | 1-Dec-07 | Poverty Reduction and Renewable Energy Development | Department of Renewable Energy Development | (i) Need assessment of 10 villages in relation to solar photovoltaic systems; (ii) provision of solar photovoltaic systems to the poor in 10 remote villages; (iii) assessment of the feasibility of setting up solar photovoltaic-powered common facilities for income generating activities; (iv) training of people from different ethnic groups and including the disabled as solar technicians at the Barefoot College in India and training of villagers in installing and maintaining solar systems and as energy entrepreneurs; (v) establishment of a microfinance facility to enable communities to borrow to set up solar energy systems not covered by the initial assessment; and, (vi) dissemination of information about the benefits of solar energy systems. | Various | ADB | Individual and International | 750,000 |
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| MEW | 1-Jul-05 | 1-Jul-07 | Capacity Building of Power Sector | MEW | The TA was intended to (i) identify the training needs and appropriate personnel to undergo training, (ii) develop appropriate training courses based on the needs and level of skills, and (iii) to deliver the training courses. In addition, a training centre was to be established. Two areas of focus were incorporated into intended outcomes: (i) improved financial management skills, and (ii) improved system operational skills. The output of the TA was to help improve skills that would increase the overall efficiency of operations and improve (i) customer service delivery, (ii) overall safety standards, (iii) daily operations, and (iv) technical and financial record keeping. | Kabul | ADB | Individual and International | 750,000 |
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| MEW | 1-Mar-06 | 1-Sep-07 | Small to Medium Sized Hydropower Development | MEW | The main objective of the TA was to assist the Ministry of Energy and Water (MEW) in undertaking feasibility studies on a cross section of small to medium-sized hydropower plants and analytical work required for the project in order to provide much needed electric power to off-grid and isolated rural areas and increase the pace of economic development in these areas. The TA had three main components: (i) preparation of sector analysis; (ii) undertaking and ranking of pre-feasibility and feasibility studies of selected subprojects; and (iii) diagnostic assessment and development of an institutional strengthening and capacity development plan for the MEW and other relevant agencies. | Various | ADB | Individual and International | 800,000 |
| MEW | 1-Jan-07 | 1-Dec-09 | Support to Interministerial Commission for Energy (ICE) | ICE | The TA comprised of two components – (i) establishment of ICE Secretariat to coordinate and develop a coherent energy strategy and reform program in consultation with all stakeholders, as well as to provide accurate information, facilitate market relationships and build regional linkages, and (ii) establishment of a commercial advisory team to develop sector plans, budgets, capacity and regulatory functions including market based contracting and cost-effective energy strategies that support private investment. | Kabul | ADB | Individual and International | 2.0 million |

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| MEW | 1-Jul-07 | 1-May-10 | Improving Capacity of Afghan Electricity Authority (DABM) | DABM | (i) To improve capacity of MEW/DABM to reduce inherent risks in operation of NEPS, (ii) strengthen institutional and management capacity of MEW to meet operational demand, (iii) improving and expanding capacity for technical employees of DABM in T&D system, (iv) develop capacity of MEW/DABM staff to handle operational, financial and managerial work, (v) improve technical efficiency of assets for DABM staff through designing training courses for generation, transmission and distribution network and on job training | Kabul | ADB | Individual and International | 1.2 million |
| MEW | 26-Apr-08 | TBD | Public Information at MEW- Journalism Training | Public Information Department | Energy Sector Reporting | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Jun-08 | 1-Dec-09 | Development of Wind Energy | Department of Renewable Energy | Wind potential in AFG and potential sites for wind farms development | Various | ADB | Individual and International | 200,000 |
| MEW | 20-Nov-08 | 1-Jul-11 | Enhanced laboratory facilities and lab training advisory support | VTC instructors and Students | Electrical engineering, Diesel Generator Repair and Maintenance | Kabul | USAID | AECB- AEAI | |
| MEW | 20-Nov-08 | 1-Jul-11 | Practical Laboratory (Motors/Meters/Transformers/Wiring) | VTC Instructors will be twinned with lab advisor; VTC students will use the facilities | Operation and Repair and installation of Motors/Meters/Transformers/Wiring | Kabul | USAID | AECB- AEAI | |
| MEW | 20-Nov-08 | 1-Jul-11 | Diesel Generator Laboratory | VTC Instructors will be twinned with lab advisor; VTC students will use the facilities | Diesel Generator Repair and Maintenance | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Dec-08 | 1-Jul-11 | Library and Curriculum Development Support | VTC instructors and Students | Supported Publication of Lecture notes and procurement of books and resources | Kabul | USAID | AECB- AEAI | |
| MEW | 23-Dec-08 | 23-Mar-09 | Refresher Engineering and Power Systems Overview | Technicians and Engineers | Engineering Basics | Kabul | USAID | AECB- AEAI | |
| MEW | 23-Dec-08 | 23-Mar-09 | Non-Technical Employee Training in Power Engineering | MEW General Staff - 70 | Basics of Generation, Transmission and Distribution | Kabul | USAID | AECB- AEAI | |

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| MEW | 23-Dec-08 | 23-Mar-09 | Non-Technical Employee Training in Power Engineering | MEW and DABS staff- 120 | Basics of Generation, Transmission and Distribution | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Jan-09 | 1-Jul-11 | English language Training Programs | Engineers and Technicians | English - Beginner, Intermediate | MEW, WAPECA, VTC | USAID | AECB- AEAI | |
| MEW | 1-Jan-09 | 1-Jul-11 | Computer Training Programs | Engineers and Technicians | Computer (MS Office Suite) - CIT Standards | MEW, WAPECA, VTC | USAID | AECB- AEAI | |
| MEW | 4-Apr-09 | 30-Sep-09 | On-the-job training in MS Excel basics | MEW RE Directorate | Administration, basic computer skills | ESRA MEW Office, Kabul | GTZ | ESRA / GTZ | |
| MEW | 16-Apr-09 | 20-Apr-09 | General Management delivered by SMART | MEW Managers | General Management | Kabul | USAID | AECB- AEAI | |
| MEW | 26-May-09 | 30-May-09 | General Management delivered by SMART | MEW Managers | General Management | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Jun-09 | 10-Aug-09 | Electrical Software Training | KPU Students | Electrical Software- for lighting design software | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Jun-09 | 20-Jul-09 | MEW Technical Training : QA/ QC training | MEW Engineers | QA/ QC | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Jul-09 | 1-Sep-09 | Total Station | 19 MEW/ WAPECA Engineers | Total Station | Kabul | USAID | AECB- AEAI | |
| MEW | 3-Aug-09 | Jan-10 | P.G. Program in Operation and Maintenance of Transmission and Distribution. The 7 graduates of the P.G. program in O&M of Transmission and Distribution are now working at DABS | DABS and MEW Engineers - 7 total | | India | USAID | SARI- Tetrattech | |
| MEW | 8-Sep-09 | 11-Sep-09 | Training Workshop on Small and Micro Hydro for Afghanistan. Included 3 days theoretical and 1 day of field trip to a Renewable Energy research center. | 5 MRRD and 5 MEW Planning Department employees attended. Three were women. | | Nepal | USAID | SARI- Tetrattech | |
| MEW | 5-Oct-09 | 10-Oct-09 | Program on Operation and Maintenance of Substation Equipment | 27 MEW and DABS employees | | India | USAID | SARI- Tetrattech | |
| MEW | 15-Oct-09 | 1-Jan-10 | Use of internet (Email, Outlook, etc.) | Engineers, MEW RE Directorate | Administration, basic computer skills | MEW RE Directorate, Bi Bi Mahro, Kabul | GTZ | ESRA / GTZ | |

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| MEW | 6-Nov-09 | 1-Jul-11 | Mentoring and OJT in System Planning at MEW Planning Department | Engineers at Planning Department | System Planning | Kabul | USAID | AECB- AEAI | |
| MEW | 10-Nov-09 | 20-Dec-09 | MEW Technical Training : QA/ QC training | MEW Engineers | QA/ QC | Kabul | USAID | AECB- AEAI | |
| MEW | 23-Nov-09 | 19-Dec-09 | Training of Trainers (TOT) Program on Substation Operation and Maintenance. Six of these personnel are continuing to train others in Kabul. | The TOT program on Substation O&M trained 15 people from MEW and DABS. | | India | USAID | SARI- Tetrattech | |
| MEW | 1-Dec-09 | 1-Jun-10 | Auto-Cad software mentoring support / troubleshooting support | MEW Planning Department | Auto Cad OJT support | Kabul | USAID | AECB- AEAI | |
| MEW | 27-Dec-09 | 31-Dec-09 | MS Access - Basics, MEW and ANSA participants together | MEW, ANSA | Administration, basic computer skills | ESRA MEW Office, Kabul | GTZ | ESRA / GTZ | |
| MEW | 10-Jan-10 | 28-Feb-11 | Protection Relays for Distribution System | Engineers and Technicians of the Ministry of Energy and Water and DABS (25 Participants from MEW and DABS attendant) | <input type="checkbox"/> Generation, Transmission & Distribution of electrical <input type="checkbox"/> Safety in Power Plan <input type="checkbox"/> Energy measurement <input type="checkbox"/> Battery and Battery Charger (Performance & Maintenance) | Iran (Mashhad) | JICA | MoEW and DABS | 139,325 for MEW and DABS combined |
| MEW | 1-Feb-10 | 1-Jul-10 | Project Management and Leadership for 25 MEW Planning Department engineers - SMART | Planning Department Engineers | Project Management | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Feb-10 | 1-Feb-10 | Intensive Train the Trainer course conducted in India for two groups of Instructors with Enable-In | VTC instructors | Presentation skills, Lesson Plan development | India | USAID | AECB- AEAI | |
| MEW | 1-Mar-10 | 1-Dec-10 | Leadership Communication and Teambuilding workshops for MEW | MEW Directors and Managers and MEW Women | Leadership Credo, Presentation Skills, Stress Management, Teambuilding, Problem Solving | Kabul | USAID | AECB- AEAI | |
| MEW | 8-Mar-10 | 27-Mar-10 | Training of Trainer Program on Metering Technology. TOT Program on Metering Technology trained 15 people from DABS and MEW. | 15 MEW and DABS Employees | | India | USAID | SARI- Tetrattech | |
| MEW | 14-Mar-10 | 4-Apr-10 | Project Management- Basics program | MEW, ESRA, GTZ-GM | Managerial skills training | ESRA Taimani Office, Kabul | GTZ | ESRA / GTZ | |

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| MEW | 19-Apr-10 | 1-Jan-11 | Policy mentoring and review of the Electricity Law support to MEW | MEW Planning Department | Policy Mentoring | Kabul | USAID | AECB- AEAI | |
| MEW | 1-May-10 | 1-Jun-10 | Non-Technical Employee Training in Power Engineering | MEW non-tech employees - 60 | Basics of Generation, Transmission and Distribution | Kabul | USAID | AECB- AEAI | |
| MEW | 15-May-10 | 30-Jul-10 | Journalism Training Program | MEW Public Information Department | Journalism skills, use of equipment | Kabul | USAID | AECB- AEAI | |
| MEW | 17-May-10 | 29-May-10 | Introductory Courses on Metering Technology | 15 Employees | Metering Technology | India | USAID | SARI- Tetrattech | |
| MEW | 1-Jun-10 | 28-Aug-10 | Electrical Practical Training | VTC Students | Electrical Engineering Basics | Kabul- VTC | USAID | AECB- AEAI | |
| MEW | 1-Jul-10 | 1-Mar-10 | Dari Literacy (logistics support) | 94 General Staff | Dari Literacy | Kabul | USAID | AECB- AEAI | |
| MEW | 3-Jul-10 | 10-Jan-11 | Capacity Building Coordination and Strategy Development | MEW Capacity Building Working Group: Offices of DM Energy and DM Admin | Coordination and Strategy Development | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Aug-10 | 1-Apr-11 | Power point classroom lecture mentoring | VTC instructors | Power Point use for the Classroom | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Aug-10 | 15-Oct-10 | Auto Cad | Engineers WAPECA | Auto Cad | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Aug-10 | 1-Nov-10 | Total Station (3-groups) | 25 MEW Engineers | Total Station (4-groups of 6) | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Aug-10 | 1-Nov-10 | Auto Mechanic Training | 42 MEW Automechanics | Auto Mechanic Training | Kabul | USAID | AECB- AEAI | |
| MEW | 28-Aug-10 | 28-Oct-10 | Project Management delivered by Impressive Consultancy Company | Engineers | Project Management | Kabul | USAID | AECB- AEAI | |
| MEW | 28-Aug-10 | 28-Oct-10 | Project Management- ICC based on MEW HR dept. needs assessment | MEW managers | Project Management | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Sep-10 | 28-Oct-10 | Thermal Power Training Program taught by KPU professors | 10 MEW Planning Department Engineers | Thermal Power | Kabul | USAID | AECB- AEAI | |
| MEW | 4-Oct-10 | 7-Nov-10 | Procurement and Financial Management - with ICC - based on MEW HR needs assessment | MEW staff | Procurement and Financial Management | Kabul | USAID | AECB- AEAI | |
| MEW | 7-Oct-10 | 10-Dec-10 | Human Resources Management with ICC - based on MEW HR needs assessment | MEW HR Department staff - 2 groups | HR Management | Kabul | USAID | AECB- AEAI | |
| MEW | 10-Oct-10 | 15-Dec-10 | Project Management delivered by Impressive Consultancy Company | Engineers | Project Management | Kabul | USAID | AECB- AEAI | |
| MEW | 10-Oct-10 | 15-Dec-11 | Project Management -ICC- based on MEW HR dept. needs assessment | MEW staff | Project Management | Kabul | USAID | AECB- AEAI | |

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| MEW | 15-Oct-10 | 23-Dec-10 | HV & MV Transmission Basics | 13 WAPECA Engineers | HV & MV Transmission Basics | Kabul | USAID | AECB- AEAI | |
| MEW | 23-Oct-10 | 2-Feb-11 | Operation and Maintenance for Substation Equipment | Engineers and Technicians of the Ministry of Energy and Water and DABS (12 Participants from DABS and MEW attendant) | <ul style="list-style-type: none"> - Generation transmission & Distribution of electrical energy principals Electrical Circuit High voltage substation equipment - Distribution Network Protection - Protection Relay (1) Performance setting tests - 1-Phase & 3-Phase electrical digital counter (test, chuck & setting) - Basic safety and wastage control (Consumption Optimization) | Iran (Mashhad) | JICA | MoEW and DABS | 154,030 both MEW and DABS |
| MEW | 23-Oct-10 | 2-Feb-11 | Maintenance of Distribution Facilities | Engineers and Technicians of the Ministry of Energy and Water and DABS (13 Participants from MEW and DABS attendant) | <ul style="list-style-type: none"> - Generation, Transmission & Distribution of electrical energy principles - High voltage substation operation - Modern High voltage substation operation - H.V & M.V switches operation and tests - High voltage circuit breaker - AC/DC supply and their maintenance | Iran (Mashhad) | JICA | MoEW and DABS | 200,073 for both MEW and DABS combined |
| MEW | 1-Nov-10 | 1-Dec-10 | Database Training to develop tracking of MEW staff training | HR Department | Database development | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Dec-10 | 1-Mar-10 | GIS | Engineers from MEW/ WAPECA | GIS | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Dec-10 | 1-Jan-11 | Auto Cad | MEW Engineers | Auto Cad | Kabul | USAID | AECB- AEAI | |
| MEW | 1-Dec-10 | 10-Jul-10 | Website Development Support | VTC IT | Website management | Kabul | USAID | AECB- AEAI | |

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| MEW | 3-Dec-10 | 2-Jan-11 | Maintenance of Power Generation | Engineers and Technicians of the Ministry of Energy and Water and DABS (23 Participants from MEW and DABS attendant) | <input type="checkbox"/> Introduction with Distribution Network Standards <input type="checkbox"/> Low Voltage Network & Distribution Substation <input type="checkbox"/> Electrical Distribution energy system <input type="checkbox"/> Distribution Network Maintenance <input type="checkbox"/> Transformer Maintenance <input type="checkbox"/> Earthing system in Distribution Network <input type="checkbox"/> Electrical Safety for Transmission & Distribution Technical | Iran (Mashhad) | JICA | MoEW and DABS | 92,004 for both MEW and DABS combined |
| MEW | 17-Jan-11 | 24-Jan-11 | Study tour for waste-to-electricity/ biogas production facilities | HE Ismail Khan, 3 engineers of MEW | technology and economic feasibility of waste-to-electricity/biogas facilities and adoption of technology to Afghanistan | Germany | GTZ | ESRA / GTZ | |
| MEW | 1-Apr-11 | 1-May-11 | Training in standardization for the energy sector - three weeks | Directors and engineers (up to 15 participants total from all organizations) | Basics in standardization, electricity transmission and distribution standards, certification, accreditation, regulation | Germany | GTZ | ESRA / GTZ | |
| MEW | TBD | TBD | They are also in the process of developing a National Training Center at the Taraquil Power Plant. AIRP will be meeting with DABS to establish. | MEW Staff and Engineers | Technical and Engineering and Management | Taraquil | USAID | AIRP-LBG/B&V | |
| MEW | TBD- based upon request of GoIRA | TBD- based upon request of GoIRA | GoI is open to supporting more Capacity Building programs according to the request of the GoIRA. GoI has resources for institutional linkages, curriculum development support, study tours and training programs | Students, Instructors, Staff | Engineering skills, Management Skills, Planning Skills, Technician Skills | India, Afghan Training Institutions | G o India | TBD | TBD |
| MEW | TBD | TBD | Accounting Basics - will be offered before/after hours - requested by MEW HR department | MEW staff | Accounting Basics | Kabul | USAID | AECB- AEAI | |
| MEW | TBD | TBD | General Management- requested by MEW HR Dept. needs assessment | MEW HR Department staff | Management Basics | Kabul | USAID | AECB- AEAI | |

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| MEW | | | Ongoing collaboration with engineers in the MEW Planning Department and data analysis and modeling training in the Policy Department. AEIC mentioned that they wish to be a resource, but sometimes do not have the staff to be a resource for training and development for everyone. | MEW Planning Department and MEW Policy Department | Data analysis, modeling and training | | USAID | AEIC- AEAI | |
| MEW | 3-Aug-09 | 18-Aug-09 | Program on Regulation in Power Distribution/ Franchising. The program on Regulation in power distribution/ franchising was held at MEW in Afghanistan with two faculty from India delivering the program. | MEW Engineers | | Afghanistan | USAID | SARI- Tetrtech | |

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| MEW/DABS | 1-Dec-10 | 1-Dec-11 | Development of Power Sector MasterPlan | Planning Departments of MEW and DABS | (i) Development of future transmission network synchronous with the grids of neighboring countries; (ii) Study PPAs with neighboring countries to achieve maximum benefit for the national economy, and develop a plan of action in regards to imports; (iii) Capacity development of MEW planning cell staff by improving theoretical knowledge, analytical skills on system planning; (iv) Development of models of AFG power system including econometric load forecasting model for generation planning, and transmission network analysis model aiming to be used in future system analysis by the planning cell staff. (a) Data gathering (Planning criteria, description of the existing system, fuel supply and costs, economic data, existing plant cost, performance, rehabilitation, and retirements, expansion options and sites), (b) Load forecast (Analysis of historical data, approach, energy | Various | ADB | To be determined (Under Procurement) | 1.5 million |
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| MFA | 1-Jan-05 | 1-Jan-06 | Capacity Building for Regional Cooperation | Ministry of Foreign Affairs | Strengthening capacity for regional cooperation within MoFA so that it can assume a greater role and responsibilities in planning, implementing, and coordinating regional cooperation activities with the rest of the Government. The main outputs envisaged from the TA are (i) a capacity-building assessment plan, (ii) establishment and functioning of a regional cooperation unit within MoFA, (iii) trained national officials involved in regional cooperation, and (iv) create technical working groups to pursue the goals of the Kabul Conference on regional economic cooperation. | Kabul | ADB | Individual and International | 400,000 |
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| MoF | 1-Jan-07 | 1-Dec-08 | Support to Afghanistan National Development Strategy | Central Statistical Office, ANDS Secretariat, ACBAR | Component 1, statistical capacity building for the ANDS, will strengthen the capacity of the Central Statistics Office (CSO) to collect, analyze, and manage statistical and other data required to monitor the implementation of the I-ANDS, ANDS, and the Afghanistan Compact. Component 2, promoting transparency and accountability, will build the Government's capacity to identify and design measures that mitigate opportunities for corruption. It will assist in developing a NACS. Component 3, a pilot participatory poverty assessment, will support a pilot PPA exercise that will complement quantitative data about poverty generated through sample surveys and administrative data (as per component 1). In addition to providing important information about the nature, characteristics, and impact of poverty in Afghanistan, the pilot exercise will enhance the | Kabul | ADB | Individual and International | 2.7 million |
| MoM | 2010 | 2013 | Capacity building of Ministry of Mines - Sheberghan Gas Fields Rehab Project | Program Management Office | Assist Ministry of Mines and Afghan Gas staff in preparation of intrnational tender, trainings of financial, managerial and operational aspects of mining sector | Kabul, Sheberghan | ADB | Gustavson Associates | 1.2 million |
| MoM | 1-Feb-04 | 1-Jan-05 | Energy Sector Review and Gas Development Plan | Afghan Gas, Department of Oil and Gas Exploration & Ministry of Mines | (i) Identify the changes required to the existing laws, rules, and policies governing the gas sector; and (ii) strengthen capacity building and training of gas industry personnel. | Kabul | ADB | SOFREGAZ (France) & Energy Mkts Ltd (UK) | 950,000 |

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| MoM | 1-Oct-05 | 1-Dec-07 | Natural Gas Development | Afghan Gas, Department of Oil and Gas Exploration & Ministry of Mines | Design and preparation of project proposal to expand gas production and further develop commercial domestic gas market. The TA developed investment program for developing natural gas reserves in known fields, including potential for private sector participation under production sharing contracts or other financial models | Kabul | ADB | Individual and International | 995,000 |
| MoM | 1-Mar-06 | 1-Jul-08 | Institutional Strengthening of Gas Sector | Ministry of Mines & Industry | (i) Policy and institutional review of gas sector for appropriate institutional development and capacity building plans (ii) understanding of weaknesses and development needs of gas sector (iii) development an institutional strengthening program in gas sector (iv) upgrading of the internet system in the Ministry of Mines, and (v) training of Afghan Gas staff. | Kabul | ADB | Individual Consultants | 750,000 |

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| MoM | 1-Dec-06 | 1-Dec-07 | Establishing a Gas Regulatory Framework | Afghan Gas, Department of Oil and Gas Exploration & Ministry of Mines | (i) Review of development of natural gas subsector in the context of regulatory framework, (ii) review of gas regulation policy frameworks in a sample of relevant developed and developing countries, (iii) establishing regulatory objectives, (iv) establishing proper institutional arrangements, (v) evaluating the economic, social, and environmental impacts of the regulations, (vi) drafting the laws and rules that will govern the regulatory framework, and (vii) determining an appropriate transition and implementation plan based on an optimal structure, taking into account Afghanistan's characteristics. | Kabul | ADB | Individual and International | 750,000 |
| MRRD | 8-Sep-09 | 11-Sep-09 | Training Workshop on Small and Micro Hydro for Afghanistan. Included 3 days theoretical and 1 day of field trip to a Renewable Energy research center. | 5 MRRD and 5 MEW Planning Department employees attended. Three were women. | | Nepal | USAID | SARI- Tetrattech | |
| MRRD | 2-May-10 | 6-May-10 | Training of operators for ERDA (MRRD) | Operators | Technical skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |

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| MRRD | 7-Mar-11 | 17-Mar-11 | Micro Hydro Power for Engineers | 45 MRRD engineers | This ACEP workshop is a practical event for engineers applying MHP technology. Participants will learn about the civil, mechanical, and electrical components of MHP. The workshop will provide a practical instruction on topography surveys, turbine calculation and design, power distribution, operation and maintenance, as well as project feasibility assessment. The workshop will include hands-on training on topography surveys. | Kabul, Afganistan | USAID | ACEP- IRG | 1,600 |
| MRRD, ESRA, DETA | 1-Dec-10 | 1-Dec-10 | Structural engineering and hydraulics | Engineers | Technical Skills training | Vieneburg, Niedersachsen | GTZ | ESRA / GTZ | |

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| MRRD, Flag International, SESA, ETC, Zularistan | Nov 7- 9, 2010 | Nov 7- 9, 2010 | Photovoltaic and Wind Water Pumping | GO TO ACEP-PVWP Nov 2010 TAB | The ACEP workshop was for system designers and installers applying solar technologies. The workshop provided participants with practical knowledge and understanding on well hydraulics, water pumps, PV technology, wind-electric pumping systems, as well as project feasibility assessment, design, and implementation. Participants learned from experienced experts about the technology capabilities and economics. The workshop included hands-on installation and acceptance testing of solar water pumping systems. Workshop instruction and materials were mostly in English, but Dari translation was available. Lunch was provided. Workshop fees were waived for invited participants. | Kabul, Afganistan | USAID | ACEP- IRG | |
| MRRD, MEW, NGO, Professors, Engineering Students | Jun | Jun | PV for Village Power | NGO, Government, Professors, Engineering Students | The ACEP workshopis designed for women only. The workshop will provide participants with practical knowledge and understanding on PV technologies and domestic applications. | Kabul, Afganistan | USAID | ACEP- IRG | 2000 US\$ |
| Private / Public Sector | 8-Nov-09 | 11-Nov-09 | Training of operators | Operators | Technical skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Private / Public Sector | 14-Nov-09 | 17-Nov-09 | Training of operators | Operators | Technical skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |

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| Private Sector | 1-Oct-09 | 15-Sep-09 | Training for socio-economic survey IV | Pamir Business Service Centre | socio-economic survey skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector | Permanently | Permanently | Training of Redo Eng. (permanently on the job + workshops as follows) | engineers | Technical skills training | Taloqan, Faizabad, at construction sites | GTZ | ESRA / GTZ | |
| Private Sector/Public | 1-Mar-08 | 10-Mar-08 | On the job training of 10 operators | power stations operators | short term technical training | Sangab, Shohada District, Chatta, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector/Public | 2-Apr-08 | 7-Apr-08 | Training of village electricians | electrician engineers | short term technical training | Jurm, Jurm District, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector/Public | 11-Apr-08 | 16-Apr-08 | Training of village electricians | electrician engineers | short term technical training | Chatta, Faizabad District, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector/Public | 12-Nov-08 | 19-Nov-08 | Training for oil-press operators in Sangab (on the job) | Operators of the oil-press | Technical skills training | Sangab, Shohada District, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector/Public | 5-Jan-10 | 1-May-10 | Training in Pole Construction | Operators of Jurm, Chatta, Sangab, Nalan, Farbambowl, members of DABS, evtl. construction company | short technical skills training | Yaftal E Payan, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector/Public | 1-Jun-10 | 1-Jun-10 | Training of operators (managerial) - two times | Operators of Jurm, Chatta, Sangab, Nalan, Farbambowl | Managerial skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector/Public | 5-Jul-10 | 3-Aug-10 | Metal work basic training | Operators of Jurm, Chatta, Sangab, Nalan, Fargambowl (the two master trainers will be include again) | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |

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| Private Sector/Public | May 2008/ May 2009/ June 2010 | May 2008/ May 2009/ June 2010 | Operator Trainings - three to five times | users of the electricity, (productive consumers) | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Private Sector: Turbine Manufacturers | 9-Aug-10 | 9-Aug-10 | Turbine Manufacturers Need Assessment Workshop | Turbine Manufacturers, MRRD, NSP, ERDA, ACEP, MEW, | Role of the private sector | Kabul, Afghanistan | USAID | ACEP- IRG | |
| Private sectors/Users | 4-Feb-09 | 9-Feb-09 | Operator Training | Operators of Jurm MHP | Technical skills training | MHP Jurm, Badakhshan | GTZ | ESRA / GTZ | |
| Private/ Public Sector | 2007 | 2008 | Operator Training in Nepal | Operators of CNTF power-stations | Technical skills training | Katmandu, Nepal | GTZ | ESRA / GTZ | |
| Public Information Center for Renewable Energy and Private sector | 5-Jun-10 | 3-Jul-10 | Metal work basic training | 2 Master Trainers + Operators of Jurm, Chatta, Sangab, Nalan, Fargambowl | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Public/ Consumers | 15-Mar-10 | 15-Apr-10 | ToT for efficient and safe use of electric power (ultipliers) | Trainers for the Training | Technical skills training | Faizabad, provincial capital | GTZ | ESRA / GTZ | |
| Public/ Consumers | 4/1/2010 | ongoing | Training on use of energy (household heads, male and female) | Electricity users - householdheads (women in particular), shopkeepers | Awareness Building Skills | Sub-office Yaftal-E-Sufla (including mobile unit) Badakhshan | GTZ | ESRA / GTZ | |
| Public/ Consumers: Productive users in the Sangab grid area | 26-Mar-08 | 1-Apr-08 | Business training Sangab | Productive users in the Sangab grid area | Managerial skills training | Sangab, Shohada District, Badakhshan | GTZ | ESRA / GTZ | |
| Public/Consumers | 1-Jun-09 | 6-Jun-09 | Business training Jurm | Productive users in the Jurm grid area | managerial skills training | Jurm, Jurm District, Badakhshan | GTZ | ESRA / GTZ | |
| Public/Consumers | 1-May-10 | 1-May-10 | Capacity development for operators and productive users (proper 3-phase connections etc.) | Operators from Jurm in connection / businessmen from Jurm in use | short term technical training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |

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| Public/consumers | 15-Jun-10 | 21-Jun-10 | CEFE Business Trainings | Productive users from Nalan, Fargambowl and Chatta (male) | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Public/consumers | 23-Jun-10 | 29-Jun-10 | CEFE Business Trainings | Productive users from Nalan, Fargambowl and Chatta (female) | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Public/consumers | 15-Jul-10 | 21-Jul-10 | CEFE Business Trainings | Productive users from Chatta, Bazaar Irtifaq, Sangab (male) | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Public/consumers | 23-Jul-10 | 30-Jul-10 | CEFE Business Trainings | Productive users from Chatta, Bazaar Irtifaq, Sangab (female) | Business and market - economics and social impacts | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Public/Consumers: User level | 15-Feb-09 | 18-Feb-09 | User Training in (efficient use of electric power - multipliers) | Public/Users | Awareness Building Skills | Chatta, Faizabad District, Badakhshan | GTZ | ESRA / GTZ | |
| Public/users | Permanently | Permanently | CD Meetings with Provincial Council Member in Energy Use | Provincial Council Members | Business and market - economics and social impacts | Chatta, Sangab, Jurm, Badakhshan | GTZ | ESRA / GTZ | |

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| <p>Universities: Kabul University, Fac. of Engineering</p> | <p>22-Mar-11</p> | <p>30-Jul-11</p> | <p>Renewable Energy Class for engineers at KU</p> | <p>Engineering students</p> | <p>Students will learn how to assess renewable resources, differentiate between different RE technologies, determine energy demands, select and size appropriate systems, and conduct tests of renewable energy power systems. Hands-on installation and laboratories of renewable energy equipment will be incorporated into the course to further the practical capabilities and confidence of students. By the end of the course, students will be able to visualize the opportunities for the implementation of renewable energy projects based on local energy resources and community needs.</p> | <p>Kabul, Afganistan</p> | <p>USAID</p> | <p>ACEP- IRG</p> | |
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| <p>Universities: Kabul University/Faculty of Engineering</p> | <p>15-Aug-10</p> | <p>15-Dec-10</p> | <p>Renewable Energy Class for 50 students...Theory and practice</p> | <p>50 Engineering Students of Kabul University</p> | <p>Students will learn how to assess renewable resources, differentiate between different RE technologies, determine energy demands, select and size appropriate systems, and conduct tests of renewable energy power systems. Hands-on installation and laboratories of renewable energy equipment will be incorporated into the course to further the practical capabilities and confidence of students. By the end of the course, students will be able to visualize the opportunities for the implementation of renewable energy projects based on local energy resources and community needs.</p> | <p>Kabul, Afganistan</p> | <p>USAID</p> | <p>ACEP- IRG</p> | |
| <p>Universities: Kabul University/Faculty of Engineering</p> | <p>15-Aug-11</p> | <p>15-Dec-11</p> | <p>Micro Hydro Power Class for engineers at KU</p> | <p>Enineeing students</p> | <p>Engineering Students will learn about theoretical and practical knowledge of the civil, mechanical, and electrical components of MHP. The course will provide a practical instruction on topography surveys, turbine calculation and design, power distribution, operation and maintenance, as well as project feasibility assessment. The workshop will include hands-on training on topography surveys.</p> | <p>Kabul, Afganistan</p> | <p>USAID</p> | <p>ACEP- IRG</p> | |

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|----------------------------------|-----------|-----------|---|--------------------------------------|---|-----------------|-------|------------|--|
| Universities: KPU | 23-Dec-08 | 23-Mar-09 | Field Training Internship Program for 85 KPU Power Engineering Students-generation/ transmission/ distribution site visits and instruction with 3 KPU professors. | KPU Power Engineering Students | practical experience with generation/ transmission/ distribution | Kabul | USAID | AECB- AEAI | |
| Universities: KPU | 1-Mar-09 | 1-Aug-10 | Post Graduate Induction Program a. 1st batch (March 2009- August 2010) currently in Bangalore, India. b. 2nd batch (March 2010- July 2011) receiving technical and leadership training in Afghanistan | KPU Engineering Graduates Batch 1 | Power Systms ; Hydro Engineering; Trans/Dist. Engineering | Kabul and India | USAID | AECB- AEAI | |
| Universities: KPU | 23-Dec-09 | 23-Mar-10 | Field Training Internship Program for 90 KPU Power Engineering Students-generation/ transmission/ distribution site visits and instruction with 3 KPU professors. | KPU Power Engineering Students | practical experience with generation/ transmission/ distribution | Kabul | USAID | AECB- AEAI | |
| Universities: KPU/ KU | 23-Dec-10 | 23-Mar-11 | Field Training Internship Program for 120 KPU/ KU Power Engineering Students-generation/ transmission/ distribution site visits and instruction with 3 KPU professors. | KPU/ KU Power Engineering Students | practical experience with generation/ transmission/ distribution | Kabul | USAID | AECB- AEAI | |
| Universities: KPU/KU | 1-Mar-10 | 1-Dec-10 | Leadership Communication and Teambuilding workshops for KPU and KU engineering professors | KU/KPU Professors- Engineering Dept. | Leadership Credo, Presentation Skills, Stress Management, Teambuilding, Problem Solving | Kabul | USAID | AECB- AEAI | |

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|---|----------|-----------|--|--|--|---|-------|------------|--|
| Universities: University of Nangahar | April | April | Biogas | Community and University of Nangahar | Attendees will learn the benefits of biogas. They will also be able to built a domestic biogas plants to convert livestock manure and night soil into biogas and slurry, the fermented manure. This technology is feasible for small holders with livestock producing 50 kg manure per day, an equivalent of about 6 pigs or 3 cows. Biogas refers to a gas produced by the biological breakdown of organic matter in the absence of oxygen. A precondition is the temperature that affects the fermentation process. With an optimum at 36 C° the technology especially applies for those living in a (sub) tropical climate. This makes the technology for small holders in developing countries often suitable. | Jalalabad, Afganistan | USAID | ACEP- IRG | |
| Users/ Public MHPs | 8-May-10 | 12-May-10 | Training of operators in Faizabad | Potential operators from Nalan and Fragambowl MHPs | Technical skills training | Faizabad, provincial capital, Badakhshan | GTZ | ESRA / GTZ | |
| Energy Sector | TBD | TBD | Scholarships for Masters Degree in Engineering | Engineers and Engineering Students | There are 10 slots for Afghan Engineers to receive award of scholarships to travel to Japan for a Masters Degree in Engineering. Applicants must pass the qualification exam to be considered. The qualification test of eligible applicants is being administered by MEW. | Japan | JICA | | |
| Energy Sector Wide | 2010 | TBD | GTZ has a micro-hydro O&M training facility they are willing to share with other donors | any | micro-hydro O&M | | GTZ | | |