

REPORT
of the Afghanistan Energy Sector Improvement Program (AESIP)
Stakeholder Meeting and Planning Workshop
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Participating Institutions

The Afghan National Standards Authority (ANSA); the Afghan Renewable Energy Union (AREU) as a section of the Afghan Chamber for Commerce and Industry (ACCI); Da Afghanistan Breshna Sherkat (DABS); Ministry of Energy and Water (MEW); Independent Directorate of Local Governance (IDLG); Kabul University; Kabul Polytechnic University; Provincial Energy Commission (PEC) of Badakhshan, Balkh and Takhar Provinces.

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ANNEX

Background information on Afghanistan Energy Sector

The Government of Afghanistan is increasingly laying emphasis on utilizing Afghanistan's domestic energy resources to increase its power generation capacity. The objective is to become self-reliant in electricity supply and reduce dependence on imported power, which currently constitutes about 70% of the total electricity consumption in the country.

The Ministry of Energy and Water (MEW) governs the power sector in the country. It is responsible for formulating policies, strategies and plans for the development of power sector and implementation of these. It thus takes a vital role for the sustainable development of the power sector in the country.

The installed generation capacity in Afghanistan is only about 600 MW, which is largely based on hydro and diesel generation. The present power demand is largely met by importing power from the neighboring countries i.e. Uzbekistan, Tajikistan, Turkmenistan and Iran.

The country has about 1.2 million consumers and the per capita consumption of electricity is about 195 kWh, which is low as compared to South Asia average of 776 kWh and global average of 3,100 kWh in 2012. The level of electrification in Afghanistan is presently about 40%. The Government aims to take it up to 85% over the next 5 years.

Introduction of AESIP

GIZ, the international development agency of Germany, is supporting the Government of Afghanistan in a number of areas. A new Afghan-German Technical Cooperation Module titled "Afghanistan Energy Sector Improvement Program" (AESIP) which is the successor for the former "Institutional Development for Energy in Afghanistan" (IDEA) has been designed that is supporting the involved public and private institutions of the energy sector with the objective to improve the conditions for promoting the renewable energy and energy efficiency in the country. The key areas of support include cooperation with the energy key actors at national and provincial levels on the implementation of net-metering policy, supporting the institutionalization of National Energy Regulatory Authority (NERA), support the private sector in adoption of market-based quality standards and maintenance concepts for photovoltaics and solar thermal energy, support to the improvement of education and further training provisions to the public-sector employees and universities. To further extent, the capacity building of the targeted institutions is cross cutting at all levels of the program.

Workshop's Objective

The objective of the workshop was to develop detailed planning activities for the year 2019 within the scope of the AESIP program. In the AESIP 'results matrix of module' there are four Indicators defined, each of which divides into two sub-Indicators. The goal of the workshop was that the stakeholders should identify for all four Indicators and sub-Indicators the most relevant activities for 2019. The activities should be linked to the main and further involved stakeholders, to responsibilities, to resources of partners and GIZ, to a quarterly timeframe and to possible risks. Prepared matrices were used for this task so that the filled in matrices are providing the AESIP project planning for the year 2019.

To achieve the workshop objective, the stakeholders with support of the moderators worked out in the groups discussions and presentations within three days which were already set for this purpose.

DAY 1

The first day of the workshop started with a welcoming speech given by His Excellency Mohammad Gul Khulmi, acting Minister of the Ministry of Energy and Water (MEW). H.E. Mr. Khulmi highlighted that laws and regulations have been developed that are now in implementation stage. Future goals and visions of MEW concerning Renewable Energies and Energy Efficiency include paving the way for other private companies to become power utilities and to help NERA (National Energy Regulation Authority) to be independent from MEW. He was pointing out that the Afghan government is committed to utilize its natural resources to provide clean energy for its residents.

This opening was followed by a speech given by His Excellency Ahmad Faisal Begzad, the Provincial Governor of the Province of Badakhshan. Dr. Frank Fecher, responsible GIZ coordinator for the Afghanistan Energy Sector Improvement Program (AESIP) Program officially welcomed all the participants and opened the workshop. The moderators Prof. Dr. Florian Schindler and Dr. Sandra Bräutigam gave a brief introduction to the workshop program and an overview of the operational planning that should take place over the next three days on the basis of agile project planning matrices (APPM) given for each of the four indicators of the AESIP Program.

Following a brief round introduction of the participants Dr. Frank Fecher presented the overall AESIP Program objectives and indicators. In more detail, the AESIP team illustrated the general directions, structure and objectives as given by the four indicators of the program as well as the monitoring using the GIZ web-based tool (Ref. details given in the slides presented by Mr. Fecher and his GIZ team). After that all invited participants were given individual stakeholder charts to fill in.

Stakeholder Analysis

With the stakeholder charts the participants' personal status, role and involvement in the energy sector was recorded. Spaces to fill in were given for: Name / Position / Organization (Institution) / Goals (Vision) related to Renewable Energies (RE) and Energy Efficiency (EE) / Existing Projects (Activities) related to RE and EE / No. of Employees working in the above field. Self-assignment to one or more of the four program indicators was to be marked with a cross.

Indicator 1 Elements for the improvement of the Regulatory or Normative Framework for the advancement of RE and EE

Indicator 2 Quality Standards and Market Strategy for RE/EE agreements between Public and Private Sectors

Indicator 3 Further Qualification and Training in Academia and Vocational Training

Indicator 4 New technical and economic approaches for operating RE Plants in Municipalities of Panj-Amu river valley

All Indicators refer to the program scope from 2019 – 2022. In this workshop, however the focus has been set exclusively on the year 2019.

The individual Stakeholder Charts were kept for the project records. The Stakeholders arranged themselves in groups and presented charts as for: MEW - presenter Mr. Faridullah Sharfmal, Director RED, Da Afghanistan Breshna Sherkat (DABS) - presenter Ms. Sweeta Sakhi. Private Sector presenter of the Afghan Renewable Energy Union (AREU) was Mr. Kabul Khan Tadbir, Chairman; presenter of Afghan National Standards Organization (ANSA) was Mr. Ghulam Sarwar Hamgam. Mr Zabihullah Akhtari, Head of sectorial services department in Balkh and Provincial Energy Commission (PEC) Chairman presented PEC and Mr. Hamed Karimi Director of policy and planning at Independent Directorate of Local Governance (IDLG) presented IDLG. The two Universities Kabul University (KU) and Kabul Polytechnic University (KPU) were presented by Prof. Muhibullah Wali, Deputy head of Engineering Faculty (KU).

Ref. details given in the Annex with in photos of the Stakeholder Charts.

Already at day 1 a discussion started concerning one of the obviously very urgent topics with spun around the structure and organization of PEC. The representatives of the Provinces Balkh, Badakhshan and Takhar as well as the Head of Policy IDLG laid a strong emphasis on the importance of 'legalizing' (revising) the PEC structure.

MEW emphasized the will to support PEC to get legalized under a sustainable government structure like IDLG and then be rolled out to 34 provinces whereas the 5 northern Provinces plus Herat in the west are seen as leading structure. But the coordination, operation, planning and the financial and staff situation and sustainability still need further discussion. The subject came up again at different times during further sessions at the following two days. In summary, it was said that a Memorandum of Understanding (MoU) between MEW and IDLG (responsible for PEC) should be signed and a roadmap for transition of PEC under IDLG structure needs to be developed. GIZ stated that the project can give technical support for example helping with the development of MoU and PEC transition plan and the required CD measures particularly in the transition period.

Dr. Fecher stated clearly that the Program cannot give direct financial support (e.g. salaries for staff). Most of the debate around the topic were held in Dari, because it was the only way to deeply involve the provincial representatives. A separate chart has been elaborated during the three days as shown in the Annex. It was important for the participants involved in the matter to use a separate format to state their ideas and expectations. What they have prepared can provide a good orientation of the possibilities of an AESIP Program support. This could be for example help in the structural coordination process or foster monitoring and evaluation as well as the above-mentioned support in designing an MoU and initiate capacity building measures.

Next on the agenda was the collection of ideas for Indicator 1 "Elements for the improvement of the Regulatory or Normative Framework for the advancement of RE and EE" and starting with "RE/EE Energy Policy concepts/tools". All participants were invited to bring in their ideas and pin their board cards on the meta-plan boards. The cards were clustered / grouped in a plenary session (Ref. details given in the Annex). Participants were then asked to prioritize the

collected suggestions with green (most important) and yellow (important) adhesive dots. In a wrap-up and reflection of the first day the further analysis of the process was left for day 2.

DAY 2

The second day started with carving out two instruments / concepts for Indicator 1.1. Analyzing the ideas and suggestions in detail it showed that many of them were cross-cutting issues like capacity building and raising of awareness in the field. Others were certainly activities but not instruments as such. In a plenary session, the two most relevant concepts/instruments were identified for:

Indicator 1: Elements for the improvement of the Regulatory or Normative Framework for promoting RE and EE

Indicator 1.1: RE/EE Energy Policy concepts / tools

Ref. details given in the Annex with in photos of the matrices.

One was called "Tariff Structure / Netmetering" and the other one was named "Regulation (organizational development) of the Regulatory Body". Both subjects were seen as urgent and important objectives. The moderators arranged the participants in groups (which were not meant as binding/solid, indeed fluctuations between the groups were welcomed). The two working groups started to fill in the given agile project planning matrices (APPM) for each of the two instruments. A detailed operationalization with activities, stakeholders, timetable, responsibility, resources and risks was elaborated for both instruments. The timetable was divided in quarterly periods and related exclusively to the first (financial) section of the AESIP-program which is running until 12/2019. The results of the group work concerning Indicator 1.1 using the APPM-matrices were presented.

Group I presenter was Mr. Faridullah Sharafmal (MEW). He highlighted that the tariff structure (reform) as well as a feasibility study and the monitoring & evaluation process for projects and policies and an awareness program were seen as most urgent activities. For each activity MEW is one of or the only main stakeholder. Time line was given and other involved stakeholders were mentioned and responsibilities further clarified. The partner resources were identified as RE Directorate, policy directorate, RED solar specialists and NERA RED policy or solar specialists, as office space and personnel and NERA (National Energy Regulation Authority) was seen as a resource in itself. Technical assistance and support of the AESIP project (which could include consultants, experts, national staff, tools, software, awareness etc.) was considered as important for the issues. Risks were identified as the upcoming elections in 2019. Another very relevant activity was as mentioned before the transition of PEC. In this case IDLG has a prominent role as main stakeholder. Of course, DABS as central utility has got to take one stakeholder role or the other in each activity.

Group II presenters were Ms. M. Barakzai and Mr. Mohammad Hashim Alimi (both MEW). They presented as first activity the revision of the Regulatory Authority regulation. The support of the institutionalization of a regulatory board and the support of the development and implementation of a sustainable financial concept were seen as most important and urgent to start with. Above all and sideways the support of NERA was placed. NERA stands for National

Energy Regulation Authority, which is part of MEW at present but could be as a future vision an independent regulatory body. MEW takes the role of main stakeholder in all activities. The Ministry of Finance is needed as an involved stakeholder in most of the activities. Partner resources were identified as staff and rooms but mainly as contribution of other donors. AESIP/GIZ support is definitively seen in on-the-job trainings and consultancy / experts. Security and time-consuming processes were stated as risks.

The session continued with the specification of Indicator 1.2 referring to the two identified instruments of Indicator 1.1.(Indicator 1: Elements for the improvement of the Regulatory or Normative Framework for promoting RE and EE)

Indicator 1.2: Management trainings concerning the new RE/EE Energy Policy concepts / tools

Ref. details given in the Annex with in photos of the matrices.

Next step was the group work concerning Indicator 1.2. With this step, the management training needs referring to the two identified instruments for Indicator 1.1 (Tariff Structure / Netmetering and Regulation of the Regulatory Body) were to be assessed. A previous analysis of the matrices for Indicator 1.1. revealed already some training activities. These were taken into consideration for the matrices of Indicator 1.2. All training needs for the two identified instruments were listed in the matrices and operationalized for Indicator 1.2 (Ref. details given in photos of the Matrices for Indicator 1.2).

Group I (Tariff Structure / Netmetering) identified on-the-job training needs for the operational and financial department staff and vocational technical trainings such as *Training on Solar Water Heater and Solar Rooftop* and the need for Vocational Training Centers for laboratory trainings. Furthermore, the YES-Program (Youth Entrepreneurship Support) was stated as a successful training measure and combined with the idea to prolong such a measure. Main stakeholders for the activities are MEW and DABS. One activity was seen in the private sector with AREU being main stakeholder, this was the training of engineers and technicians in order to perform in mega size projects. Resources provided from the partners would be office or venue space. AESIP/GIZ support with trainers and consultants would be appreciated for all activities.

Group II (Regulation of the Regulatory Body) came to quite similar conclusions for their activities. Training needs were identified for the regulatory staff as well as for the tariff structure analysis and technical and financial analysis. Main stakeholder for all activities is MEW with DABS and Public-Private-Partnership (PPP). NERA and DABS were willing to give resources mainly in form of staff. The AESIP/GIZ support was seen for providing experts. Financial limitations, the availability of experts and travel permits were stated as risks.

Indicator 2: Management Quality Standards and Market Strategy for RE/EE agreements between Public and Private Sectors

After the successful completion of the matrices for Indicator 1.1 and 1.2 the participants continued to work with Indicator 2.

Ref. details given in the Annex with in photos of the matrix.

The two sub-Indicators 2.1 'PV-Quality Standards agreement' and 2.2 'Market strategy for PV financing and maintenance concepts (AREU with German BSW)' were jointly addressed. For this Indicator there will be a separate workshop for the private sector together with German BSW. Mr. Tadbir (Chairman of AREU) stressed the importance of laws and regulations for the private sector. The matrix was filled with some first activities and will be continued working on in a separate workshop in February 2019.

DAY 3

The last day of the workshop attention was given to Indicator 3 and Indicator 4.

Indicator 3 Further Qualification and Training in Academia and Vocational Training.

Ref. details given in the Annex with in photos of the matrices and additional pin board and chart.

A detailed analysis of the matrices for Indicator 1.1 and 1.2 revealed already a considerable amount of training and capacity building activities. These were marked with dots to be left at place but taken into the further group work as overlapping activities. Groups established themselves for academia and vocational training. For the academic sector Mr. Wali (KU) presented themes/topics related to RE/EE education and training. As a main activity, a need assessment for establishing, developing and revision of the relevant curricula was identified. The GIZ as well as the private sector were pointed out as possible supervisory bodies. A second very important activity was seen in the Train-of-Trainers (ToT) approach which should be provided by the GIZ and international Universities. As a support of working resources, the development of laboratories and libraries was mentioned. Study programs on Bachelor and Master level and the help to get international certification for them were pointed out to be of importance as well. The trainings at the Universities should as well address technician levels and the cooperation with the industry was considered essential. Other suggestions were stimulated by the idea of international research. They were taken into account but put to another stage of programs, because AESIP focusses on practical technical approaches.

The results for the group work on the aspect of inhouse on-the-job-trainings were presented as well. As mentioned above, they mainly summarized what was stated before at other Indicators. The Train-of-Trainers (ToT) approach was seen as urgent activity as well as providing laboratories and tools for the training measures. ANSA should be empowered and capable of performing energy audits. Other activities (awareness training measures, training of engineers and technicians in order to perform in mega size projects, continuing YES-Program "Youth Entrepreneurship Support" as a training measure) had been mentioned and discussed before. Certification (of companies) and standardization were again stated as important. Main stakeholders for the activities were identified as MEW, MoHE and DABS with further involvement of Universities, Vocational Training Centers, AREU and GIZ. The AESIP program was asked mainly for providing trainers / consultants / experts. No risks were specified.

In addition to the presentations Dr. Temor Sharan (IDLG) gave a talk in which he stressed the importance of the cooperation between academia and private sector concerning trainings and piloting models for choosing best practices.

Apart from the matrices there were more detailed expectations to be expressed and two group works took place on the urgent subjects. One group called their list of activities *Expectation on the Private Sector*. Herewith suggestions were made how AREU executive structures could be optimized and how the companies of AREU could be categorized. Standardization and certification (by ANSA) were highlighted as being of great importance. As an overall agreement, there could be a MoU between the three Ministries MEW, MRRD (Ministry of Finance and Ministry of Rural Rehabilitation and Development) and AREU and ANSA.

In the second group, the important subject of the relation between PEC and the Afghan Government was treated once again as well on national as on local level. A coordination unit, the establishment of PEC on local levels and many aspects of capacity building as well as awareness training measures were stated. An involvement of AESIP/GIZ for all activities would be welcomed. As overall topics were mentioned "getting the coordination right" and referring to "Afghan good practice models" (best practices, what worked already). No risks were specified.

Input at day 3 came through two presentations. One presentation was held by Ms Sweeta Sakhi who introduced DABS as key implementing partner. The other talk was given by Mr. Walid Rahimi who presented the EU co-finance project on climate change as input to Indicator 4.

Indicator 4 New technical and economic approaches for operating RE Plants in Municipalities of Panj-Amu river valley.

Ref. details given in the Annex with in photos of the matrix.

While some groups had been working on Indicator 3 one group was already preparing the matrix for Indicator 4. The activities collected for sub-Indicator 4.1 *Concepts for Maintenance and Repair of RE-Plants (e.g. Microhydro, PV) in Municipalities* were given as: assessment of all RE Plants (MHPs+PV) with a prior baseline survey, community selection for PV and MHP rehabilitation and installation, rehabilitation and extension of MHPs+ PVs, and PV installation. Main stakeholders are MEW (especially responsibility at RED planning department) and MRRD (partly joined by NEPA and DABS) with PEC as other involved stakeholder. An important involved stakeholder for all activities is NEPA (National Environment Protection Agency). Partner resources would be personnel and GIZ contribution would be seen as technical implementation support. Risks were stated as security and seasonal problems. Since the EU contract for support of Indicator 4 had yet to be signed it was agreed that there would be a separate planning once the documents were finalized.

The activities identified for sub-Indicator 4.2 *Models for cost-effective Operation of RE-Plants in Municipalities located in the Panj-Amu river valley* were in the first hand the training for locals as vocational training and as University training related to the subject of O&M (Operation and Maintenance). Furthermore, some subjects were seen in the need for clarification like the tariff structure and the ownership of DABS versus private sector. A feasibility study and a survey

were suggested as well as the network extension. MEW was seen as main stakeholder and responsible (apart from the activity of clarifying the ownership of DABS versus private sector) and DABS was identified as second main stakeholder (apart from the training activity were the IDLG and the MRRD came in). PEC and NEPA were stated as involved stakeholders. Partner resources would be personnel and GIZ contribution would be seen as technical implementation support. No risks were stated.

The final speech and workshop wrap up was given by Mr. Amanullah Ghalib (CEO DABS).

Closing the workshop Mr. Frank Fecher expressed special gratitude to H. E, Mohammad Gul Khulmi, acting Minister of the Ministry of Energy and Water, and H. E. Ahmad Faisal Begzad, Provincial Governor of the Province of Badakhshan, for taking the time to attend the full three days of the workshop and he expressed his deepest thanks to all participants for the dedicated efforts to elaborate a detailed working plan for Indicators 1 to 4 for the coming year 2019. Finally, a group photo was taken.

Conclusion:

The AESIP objective and Indicators refer to the program scope from 2019 – 2022, but in the planning workshop, the focus has been set exclusively on the year 2019, thus the below activities and milestones are set for AESIP to achieve till end of 2019: some other activities proposed by the workshop participants can only be implemented after the first year of the commission (2019)

Activities:

Output 1 (indicator 1.1 and 1.2):

- Support legislation of Net Metering
- Support Development of a PR strategy for net metering for MEW
- Support MEW in Feasibility Study of 15MW solar rooftop systems for Public Buildings
- Provision of designing software for MEW to support feasibility study of 15MW solar rooftop systems for Public Buildings
- Support DABS in rolling-out solar water heater subsidy program
- Support accessibility of data in AEIP
- Support further coordination among the sector stakeholders by conducting up to 5 RECC and up to 8 TWG meetings
- Support institutionalization of PEC under Gov structure
- Support development of tariff reform for consumers
- Support legislation of NERA (National Energy Regulation Authority)

Output 2 (indicator 2.1 and 2.2):

- Baseline Survey and assessment of Private Sector

- Conduction of private sector planning workshop with support of BSW (German Solar Association). More activities for private sector are foreseen to be planned after the successful conducting of the mentioned workshop.
- Support conducting YES Program
- Support for conducting of the workshops/conferences and awareness programs on promotion of 2000MW-package for private sector

Output 3 (indicator 3.1 and 3.2):

- Prepare a skills requirement analysis for MEW and DABS to develop tailored further trainings via Conducting Technical Need Assessments (TNA)
- Advise and support the universities and vocational institutes on the development and adaptation of curricula.
- Qualify/train teachers and lecturers at vocational training institute of MEW
(Qualify/train teachers in VTI/MEW in utilization of RE lab)

Output 4 (indicator 4.1 and 4.2):

- Identify potential locations/communities and sites for MHP (up to 60) in the Panj-Amu river valley
- Identify potential locations/communities and sites for PV (up to 60) in the Panj-Amu river valley
- Feasibility study of up to 1.2 MW for rehabilitated MHPs in selected Districts in the Panj-Amu river valley
- Feasibility study of up to 1.5 MW for PV in selected Districts in the Panj-Amu river valley
- Vulnerability study of selected MHPs and PVs in the Panj-Amu river valley
- Conducting Socio-economic survey and identifying baseline conditions and effects of energy access in selected Districts in the Panj-Amu river valley
- Identifying SMEs and options for productive use of renewable energy (e.g. sewing and embroidery factories, carpet producers, oil presses, retail, dairy, cooling/storage) in selected Districts
- Development of Energy Masterplan for the Panj-Amu river basin
- Provide advice on the creation of up to 8 district energy plans and an energy masterplan for the Panj-Amu river basin
- Develop O&M business models for MHP and PV mini grid systems in selected areas
- Develop standard tendering documents and procedures for MHP and Solar PV system construction work.
- Train up to 16 local professionals in monitoring and reporting on AESIP work progress in the targeted areas
- Public awareness campaigns on mini grid systems, payment for electricity, operations and maintenance, options for the productive use of electricity in the targeted areas

Below activities are agreed as cross cutting activities for AESIP to be implemented in 2019:

- Public awareness campaign through conducting of Afghanistan sustainable Energy Week 2019/1397
- Human Capacity Development (HCD) and provision of onsite training and exposure visits for sector directors

Milestones till end of 2019

Indicator 1.1: Two further concepts or tools for implementing selected Afghan energy policies (net metering and feed-in tariff)

Target value till end of 2019: roadmap for legislation of Net Metering developed and feasibility study of 15 MW solar rooftop system supported.

Indicator 1.2: qualification measures for cooperative implementation of the new regulatory elements for promoting RE and EE

Target value till end of 2019: The roadmap for development of NERA is in place and the required capacity development assessment is developed accordingly.

Indicator 2.1: Two PV quality standards agreed between key public-sector actors and private sector

Target value till end of 2019: The milestone for this indicator will be identified in an exclusive workshop for private sector facilitated by BSW in Feb/Mar 2019.

Expected/possible milestone: roadmap for development and implementation of two PV quality standards are developed and shared with the key public and private actors.

Indicator 2.2: market strategy for solar PV financing and maintenance concepts jointly developed by BSW and AREU member companies

Target value till end of 2019: The milestone for this indicator will be identified in an exclusive workshop for private sector facilitated by BSW in Feb/Mar 2019.

Expected/possible milestone: Baseline survey of the private sector is conducted and further direction for AREU is developed and shared with key actors.

Indicator 3.1: agreement of energy sector key institutions regarding on-the-job training with 400 employees

Target value till end of 2019: technical needs assessment for on the job trainings in key institutions is conducted.

Indicator 3.2: Afghan universities offer two distance-learning courses accredited by MoHE for RE & EE

Target value till end of 2019: the concept of adapting curricula for RE/EE in relevant universities is presented.

Indicator 4.1: Two concepts for maintaining and repairing RE plants are available to the municipalities (e.g. for micro hydropower and PV)

Target value till end of 2019: Up to 60 communities identified, feasibility and socio-economic studies conducted.

Indicator 4.2: adjusted models for operation of RE plants have been agreed in 30 selected municipalities in the Panj-Amu river valley

The activities for this indicator are feasible to be planned after 2019.