



AFGHANISTAN SUSTAINABLE ENERGY FOR RURAL DEVELOPMENT (ASERD)

MID TERM EVALUATION

March, 2021

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ABBREVIATIONS

ASERD	Afghanistan Sustainable Energy for Rural Development
ANSA	Afghanistan National Standard Authority
AREU	Afghanistan Renewable Energy Union
CBARD-AIM	Community based Agriculture Rural Development - Access to International Markets (UNDP project)
CCNP	Citizens' Charter National Programme
CPD	Country programme document
DABS	Da Afghanistan Breshna Sherkat (electricity supply company of GoIRA)
FGD	Focus group discussion
GCF	Global Climate Fund
GoIRA	Government of Islamic Republic of Afghanistan
ICS	Improved cook stoves
KII	Key informant interview
LITACA	Livelihoods Improvements in Tajik-Afghan Cross-border Areas
MEW	Ministry of Energy and Water (now renamed NAWARA)
MIS	Management information system
MRRD	Ministry of Rural Rehabilitation and Development
MTE	Mid-term evaluation
NAWARA	National Water Affairs Regulation Authority of Afghanistan
NEPA	National Environmental Protection Agency
NGO	Non-governmental organisation
NIM	National implementation modality
OECD-DAC	Organisation for Economic Co-operation and Development - Development Assistance Committee
PRRD	Provincial Rehabilitation and Development Department
RREP	Rural Renewable Energy Policy
SME	Small and medium enterprise
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group

EXECUTIVE SUMMARY

EVALUATION OVERVIEW

Since 2016, the Afghanistan Sustainable Energy for Rural Development (ASERD) programme developed by the Ministry of Rural Rehabilitation and Development (MRRD) and the United National Development Programme (UNDP) has been helping to increase access to thermal energy and electricity in rural communities in Afghanistan using a technologically neutral approach.

When the project ends in 2021, it is expected that it will have increased access to electricity and clean cooking and heating options, contributed to economic development in rural areas and resulted in a tangible reduction in the pre-mature deaths of women and children due to indoor air pollution. The project is piloting seven innovative financing models which, if they are successful, will be mainstreamed. The project has also established a policy and regulatory frameworks conducive to its goals and developed the capacity of key stakeholders. It is envisaged that the project will establish a sustainable rural energy supply approach which can be scaled up after the project comes to an end.

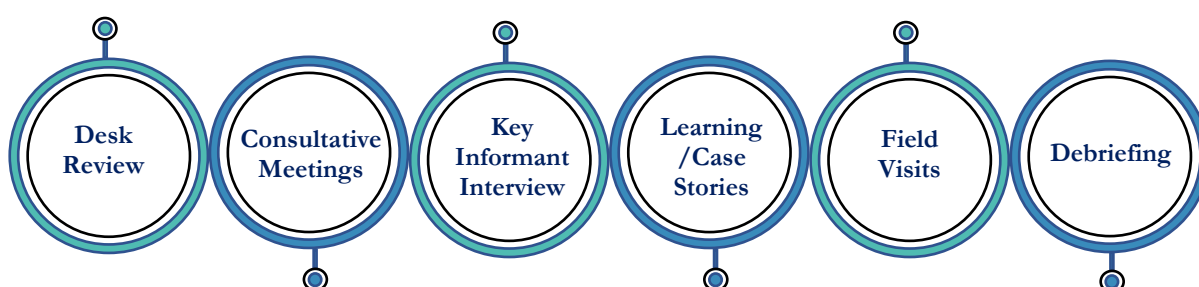
The objectives of the mid-term evaluation (MTE) were as follows:

- Assist the recipient government, beneficiaries, UNDP and, as appropriate, concerned partners and stakeholders in improving the efficiency, effectiveness, relevance, sustainability, and impact of the project and replicating the existing model;
- Provide feedback to all parties so that they would be able to improve the policy, planning, appraisal, implementation and monitoring phases; and
- Ensure the project's accountability for its results to both its financial backers and its stakeholders.

METHODOLOGY

The evaluation was begun in November 2020 with the collection of primary and secondary data and information. The consultant applied both quantitative and qualitative methodological paradigms, integrating the United Nations' Evaluation Group Guidelines and OECD-DAC evaluation criteria, including relevance, effectiveness, efficiency, impact, and sustainability.

The MTE discussed and interacted with key stakeholders (beneficiaries and officials) which further guaranteed both the quality and the usefulness of the evaluation. The MTE followed the process as outlined below.



The consultant reviewed relevant sources of information, including the annual progress reports since 2016 and was briefed about progress in project activities by the senior management of the UNDP Livelihoods and Resilience Unit. The consultant also conducted a consultative meeting with the UNDP/ASERD team before starting the field observations in order to collect its insights into and particular ideas for the evaluation and to discuss the methodology and field activities in detail.

FINDINGS

This evaluation shows the project's results at the half-way point. The project has not yet achieved its planned outputs but is making satisfactory progress. Till date, the project has successfully strengthened the capacity of targeted areas to use improved cook stoves and to construct solar-hydro hybrid mini-grids. It

has also involved stakeholders in executing the project and strengthened the national capacity for rural development.

A summary of the findings according to the five evaluation criteria is provided below.

Relevance

ASERD was relevant to and useful in achieving the priorities of beneficiaries, communities, the donor, the MRRD, and UNDP. In particular, the project responded to and met the needs of the targeted beneficiaries. The project's output thus far has served communities well and the project has developed prominence due to its ability to supplement community development and respond to stakeholders and beneficiaries.

Effectiveness

ASERD has been effectiveness in that it has brought relevant stakeholders together to execute the project and created good relations with all government agencies. The outputs of the project have not yet been achieved as the project is only halfway towards its accomplishment, but it is on its way. The project's output looks promising as it will meet the needs of the targeted communities of 79 villages by providing about 10,000 households with access to energy and thereby increase their economic opportunities. The awareness program conduct was enormously successful because it adopted both theoretical and empirical approaches. The project also minimised the health problems of 4400 households, particularly among women and children, by distributing improved cook stoves. Another 1400 people benefited from the solar hot water systems established in 35 maternity clinics.

Efficiency

Though the project's targeted outputs were both feasible and realistic, they have not implemented within the times set. Many of the targets are only half-achieved, but no associated action or discussion has taken place. The assessment showed found that although the project does benefit the targeted beneficiaries, it is not going as planned. One of the key challenges faced and reason for the delays is that its initial implementation commenced late as additional time was taken to hire staff and prepare for project execution. Other challenges and adversity included the Covid-19 pandemic, changes in senior-level staff, and, every so often, the ongoing political instability.

Impact

The project had a positive impact in terms of increasing the self-confidence and capacity of beneficiaries via training and the provision of technical skills. Beneficiaries are now confident about using what they learned in various specialised trainings, such as house-wiring and awareness about electricity. It also distributed improved cook stoves, installed solar water heater systems in birthing clinics, and conducted capacity-building activities. However, with ASERD still to achieve its targets, its impact cannot be considered at this stage of evaluation.

Sustainability

The likelihood the programme will be sustainable is quite high. It changed its modality of improved cook stove distribution so that, instead of distributing imported cook stoves, it trained local manufacturers to make them. This change in modality can be considered the basis of sustainability of this activity and is a good business model as well. The manufacturers can supply markets and interested customers can buy stoves in cities near their homes.

Having a reliable supply of electricity will create business opportunities and will add to the acceptability and sustainability of the mini-grid.

CONCLUSIONS

The ASERD project has shown strong results in the achievement of the overall objectives and expected accomplishments. The activities that the project implemented, particularly Shemol hydro-solar plant, ICS distribution, and solar hot water system installation, are highly relevant to the beneficiaries, especially women and rural people who do not have access to the national grid for electricity.

The major conclusions of the MTE are summarised below:

1. The ASEERD project is relevant, effective, efficient, impactful, and sustainable. There is a clear commitment from the Government but the challenge is securing funding for remaining proposed project activities. There is a good interest from the donor.
2. The ASERD project made significant contribution in Government's rural energy interest and responses. Despite Government's attempts to provide electricity to all, they were largely ineffective in absence of proper operation and maintenance mechanisms.
3. With operation of the Shemol power plant, beneficiaries would be utilising electricity to maximum use. Besides, lighting houses, mosques, schools at night; it is expected that the communities would utilise the day time energy and start new small business such as furniture making, weaving, bakery, etc.
4. Installation of solar hot water systems in clinics and distribution of ICSs has greatly benefited women and children.
5. Insecurity in the project's area of implementation and the Covid-19 pandemic delayed implementation. Besides, lack of clarity with respect to the procurement modality prevented the achievement of the Shemol project. Similarly, proposing activities before securing funding also showed weakness in the planning process.

RECOMMENDATIONS

1. There is a huge demand on the need of expanding rural energy activities, this would require a multi donor approach. To complete the remaining four planned projects and design new one UNDP and MRRD need to approach the donor.
2. UNDP and MRRD could connect the ASERD beneficiaries to LITACA or CBARD-AIM or other projects and promote to take their ideas on setting up new businesses, which have good market potentials in and outside Afghanistan. This would serve as a good cross-exchange among different UNDP projects.
3. The project suffered delays in finalizing the construction modality. For future projects, the project design should include adequate time for recruitment, reaching out to stakeholders, and assessing the policy and implementation environment.
4. The proportion of women who attended capacity-building exercises or training was far less than the proportion of men that did so. It is recommended that this issue be addressed in the future.

1. OVERVIEW OF THE EVALUATED PROJECT

OVERVIEW

The Afghanistan Sustainable Energy for Rural Development (ASERD) project was developed and is being implemented by the United Nations Development Programme (UNDP) and the Ministry of Rural Rehabilitation and Development (MRRD) of the Government of the Islamic Republic of Afghanistan (GoIRA) with the aim of building and providing access to renewable energy in rural areas of Afghanistan. The project targeted areas that were socio-economically underdeveloped and that essentially had no access to education, electricity, or infrastructure, and where people were living in poverty. Rural areas of Afghanistan face serious health implications, mainly for women and children, due to inadequate access to modern forms of energy. The absence of sufficient energy has also limited the productivity of private enterprises and created difficulties in delivering public services. However, rural areas of Afghanistan are blessed with renewable energy resources such as hydropower, solar, wind, and biomass which, when combined with appropriate technologies and institutional approaches, could significantly support the development of rural areas.

The ASERD project aims to develop sustainable rural energy by integrating innovative approaches that incorporate technology that can deliver thermal and electrical energy smoothly to households, businesses, and societies to enhance productivity and economies of rural areas of Afghanistan. The project directly addresses the current problems of insufficient electricity and associated health issues and indirectly creates business opportunities, generates income, boosts the agriculture sector, strengthens current private enterprises, advances social empowerment and cohesion in communities. It also expands public services to reinforce the access to better health, education and security in rural areas. To deliver its services sustainably, the project will work with the national utility sector, the private sector, and communities.

The ASERD project aims to develop sustainable rural energy services (electrical and thermal energy) in 202 rural communities and provide health, economic and social benefits. In addition, the project established an innovative delivery model incorporating technology and leveraging local and international resources, mobilising the private and public sectors, and engaging communities to promote sustainable rural energy. The project's main motive is to establish an appropriate framework for policy and regulation, environmental protection, quality and incentives, and to engage in human capacity-building and development in order to increase access to renewable energy in rural Afghanistan.

The project followed a strategy to achieve the following outcomes and outputs.

CPD Outcome 3

Economic growth is accelerated to reduce vulnerabilities and poverty, strengthen the resilience of the licit economy and reduce the illicit economy in its multiple dimensions

Project Outcome/CPD Output 7

Vulnerable and marginalised populations, especially women, have increased and equitable access to natural resources and affordable energy, including through improved environmental governance.

Output

To reach its outcome, the ASERD project has adopted the following four outputs:

Output 1: Rural energy services increased in targeted areas

Output 2: Rural energy policy and regulations developed

Output 3: Innovative approaches to delivering rural energy piloted in target areas

Output 4: Capacity of rural communities and relevant institutions developed

Strategy

The ASERD project's programme strategy was based on past experience in Afghanistan. Past challenges and problems were identified and developed into a three-pronged strategy as outlined below:

1. Graduate from the current approach of commissioning electricity-generating infrastructure in rural communities to establishing a technologically neutral sustainable energy service delivery arrangement and integrate thermal energy services provided through appropriate technologies.
2. Expand energy coverage in rural areas so that it can support and improve the productivity of existing economic activities and also be expanded to public service institutions which could act as "anchor customers," for electricity, such as schools and hospitals. Strengthen rural energy and renewable energy policies and regulatory frameworks to ensure the sustainability of the delivery models.
3. Pilot innovative implementation and delivery models for rural energy that leverage the skill sets and resources of communities, the private sector and financial institutions with a view to mainstreaming the successful ones. These delivery models should be consistent with the principles of global financing mechanisms for climate change and energy.

Innovation

The ASERD project brings innovative approaches to delivering energy services that increase impacts and engage new partners, the private sector and financial institutions. The key innovative elements employed by the project are listed below.

- Technological neutrality, which will extend coverage beyond villages close to hydropower sites to allow for the utilisation of renewable energy resources such as solar, biomass, wind and hybrid systems and grid extensions. Where possible, the scale of the electricity systems established will be increased to mini-grids and provide services to clusters of villages.
- Thermal energy services provided to rural households in Afghanistan through renewable energy and energy-efficient systems at a programmatic scale Provision of portable lighting and cooking systems to the nomadic Kuchi community.
- Use of the private sector for facilitation and village energy service provision, use of Da Afghanistan Breshna Sherkat (DABS) for village energy service provision and use of NGOs for facilitation.
- Building in-country institutional capacity with education, research and capacity-building organisations for capacity and human resource development.
- Innovation in village service-delivery models which will include innovations such as public-private-partnerships (PPPs), de-risking mechanism for private investments, utilisation of migrant remittances, women enterprises that are linked to carbon finance, rural economic zones with active participation from women, portable energisation systems for nomadic communities and a 'pay as you go' energy service model linked to mobile telephones.

The project aims to increase access to electricity and thermal energy in rural areas of Afghanistan. Its key output is to increase renewable energy services in targeted areas, develop energy policies and regulations, deliver a renewable energy plan which integrates innovative ways, and develop the capacity of rural communities and relevant institutions in renewable energy. Details of the ASERD project are listed below.

Project Title	Afghanistan Sustainable Energy for Rural Development (ASERD)
Project Duration	January 2016 – January 2021
Project Budget	USD \$50,000,000
Donor	Republic of Korea
Target Cities	Nangarhar, Khost, Baghlan, Parwan, and Kandahar provinces, Guldara District of Kabul Region
Target Beneficiaries	202 communities, 42,400 thermal energy devices distributed
Implementing Partner	Ministry of Rural Rehabilitation and Development (MRRD)
Responsible Partner	United Nations Development Programme (UNDP)
Partners	Ministry of Energy and Water (MEW) Da Afghanistan Breshna Sherkat (private company) (DABS) Afghanistan National Standard Authority (ANSA) Afghanistan Renewable Energy Union (AREU) National Environmental Protection Agency (NEPA)

2. INTRODUCTION

BACKGROUND AND CONTEXT

The Project

Recognising that rural areas in Afghanistan have limited access to adequate sustainable rural energy, the project addresses the traditional cooking and heating needs of rural households and provides sufficient energy to stimulate private and public sectors services. The ASERD project understands the significant role that the private sector and financial institutions can play in making rural energy sustainable though, at present, their involvement is limited. In addition, the project wishes to address the existing gaps in government policy, regulation, standard-setting, and incentive frameworks. To reach its planned outcomes, the ASERD project brought together all relevant stakeholders in partnership to deliver the project efficaciously.

The project is expected to increase access to electricity as well as clean cooking and heating options, contribute to rural economic development and tangible reduction in the premature deaths of women and children due to indoor air pollution. The project will also establish supportive policy and regulatory frameworks and developed the capacity of key stakeholders. It is envisaged it will establish a sustainable approach to rural energy supply that can be scaled up beyond the project period.

The project aimed to establish sustainable rural energy access in the rural areas of Afghanistan. It designed five power plants -- 340 kW hydro-solar plant in Shemol Dara-e-Noor District, Nangarhar Province was to cover 10 villages; 1000 kW solar plant in Shaykmir, Gurbuz District, Khost Province, 28 villages; the 500 kW hydro plant in Toop Ghana, Pul-e-Hesar District, Baghlan Province, 8 villages; 500 Mw solar plant in Qalandar Khil, Bagram District, Farwan Province, 8 villages; the 1000 MW solar plant in Panjwayee, Panjwayee District, Kandahar Province, 25 villages.

However, due to unavailability of funds, the hydro-solar mini-grid in Shemol was the only sub-project that was considered for construction whereas detailed designs were prepared for other sub-projects. The Shemol project is expected to complete by the end of 2020 (was completed at the time of finalising this report) and provide electricity to 1200 households. The project used innovative technologies in the form of solar-hydro-battery and a diesel generator synchronized together in Shemol power plant, which is first of its kind in Afghanistan. The ASERD project expects that once it has increased rural energy, it will be able to open up business opportunities and enhance private and public sector services and ultimately improve the economic statuses of the beneficiaries.

The project provided improved cook stoves (ICSs) with a subsidy of 80% of the total cost and distributed 3,969 ICSs, there by helping to reduce indoor air-pollution and improve health. Because they lack access to modern energy, many women and children in rural areas face serious health problems and often succumb to premature death.

In addition, the project provided trainings, conducted workshops, and developed capacities of governmental, non-governmental, private-sector, financial-sector, and civil-society organisations, as well as communities. The project developed a framework for the policies and regulations needed for testing and quality assurance and drafted environmental protection and management guidelines. It also proposed to adopt an innovative “5P” (pro-poor public private partnership) approach for delivering rural energy efficiently. These models are expected to benefit women and the marginalised nomadic Kuchi communities.

Another key project output is to develop rural energy policy and regulation in partnership with the then Ministry of Energy and Water (now National Water Affairs Regulation Authority), Da Afghanistan Breshna Sherkat (DABS), Afghanistan National Standard Authority (ANSA), Afghanistan Renewable Energy Union (AREU), and National Environmental Protection Agency (NEPA). The project has developed the Afghanistan Rural Renewable Energy Strategy, as well as an action plan, a testing and quality assurance framework for domestic and imported equipment, and an environmental protection and management guideline.

The ASERD project's outputs are as follows:

OUTPUT 1

**Rural Energy Services
Increased in Targeted
Areas**

OUTPUT 2

**Rural Energy Policy and
Regulations Developed**

This output seeks to provide rural energy services, both electrical and thermal, to rural village communities and community development councils. The output involves providing electricity using mini- and micro-grids with a clear preference for large mini-grids as well as providing thermal energy services through renewable energy and energy efficient systems and devices using a finance-service arrangement.

This output creates a favourable policy environment for rural energy efforts. The output will support the development of technical and environmental protection standards, a quality assurance framework for rural energy equipment, specific legal and policy instruments to implement and enforce the Rural Renewable Energy Policy, regulations for governing the interface between mini-grids and the national grid, and a fiscal and financial incentive framework.

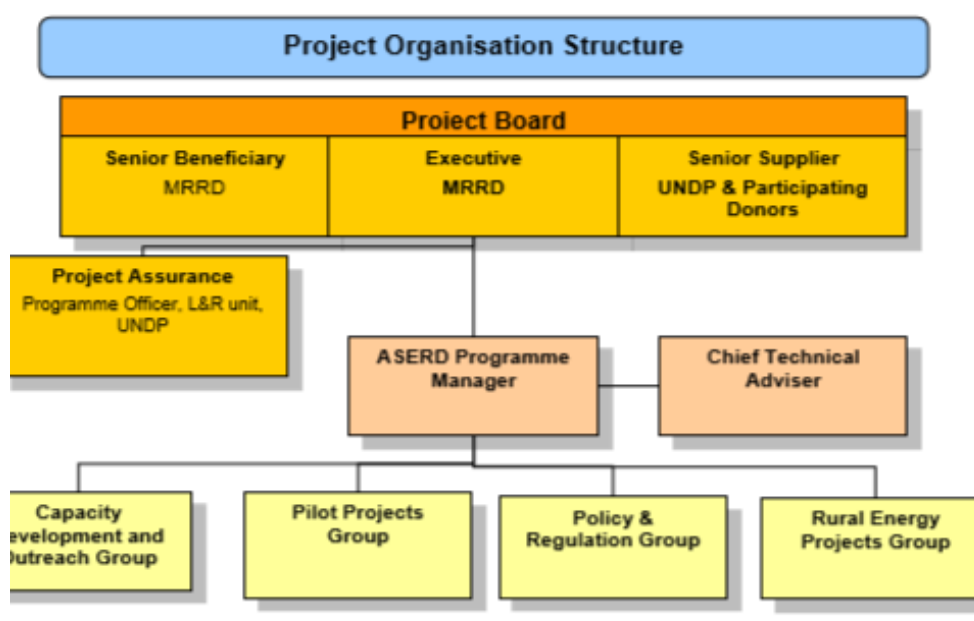


This output involves piloting of seven pilot rural energy service delivery models such as a 5P model, a rural economic zone, a private investment de-risking mechanism, migrant remittances linked rural energy service model, women's thermal energy service linked to carbon finance, Kuchi women's portable energy pilot and a mobile telephony linked rural energy service model.

This output supports the institutional capacity development of the Rural Energy and Enterprise Directorate, MRRD; the training and capacity-building of banks/financial institutions; building capacity in research, education and training institutions; carrying out generic promotion and outreach; establishing and maintaining a website; establishing an MIS for the programme; carrying out analytical and policy research and publishing key reports.

The Ministry of Rural Rehabilitation and Development implements the project through a project management unit established at the Ministry. The project organisational structure is given in the figure below.

Figure 1: ASERD's organisational structure



OVERALL PURPOSE AND OBJECTIVES

The objectives of the mid-term evaluation (MTE) as given in the Terms of Reference (Annex – 1) were as follows:

- Assist the recipient government, beneficiaries, the UNDP and, as appropriate, concerned partners and stakeholders, to improve the efficiency, effectiveness, relevance, sustainability, and impact of the project and to replicating the existing project model;
- Provide feedback to all parties so they can improve the policy, planning, appraisal, implementation and monitoring phases; and
- Ensure that the project was accountable to its financial backers and stakeholders for its results

SCOPE AND FOCUS

The MTE assessed the project's progress towards the achievement of the objectives and outcomes mentioned above and as specified in the ASERD's project document as well as early signs of the project's success or failure with the larger goal of identifying the changes the project needs to make to set it fully on track to achieve its intended results. The MTE also reviewed the project's approach and methodology, the risks to its achieving its intended results and impacts as well as sustainability, and make recommendations about how to improve the project in the remainder of its lifetime.

The MTE answered questions regarding the project's relevance, efficiency, effectiveness, impact and sustainability and covered its design, start-up, project management, and project implementation phases from 1 January 2016 to 31 December 2021.

3. EVALUATION APPROACH AND METHODOLOGY

THE PROCESS

The evaluator attempted to provide evidence-based information that is credible, reliable and useful. He reviewed all relevant sources of information, including all the documents provided him. Participants in the evaluation, tools, and methodology were finalised through joint meetings with the ASRED project team prior to data collection. The evaluation methodology focused on drawing out learnings for application to future programming.

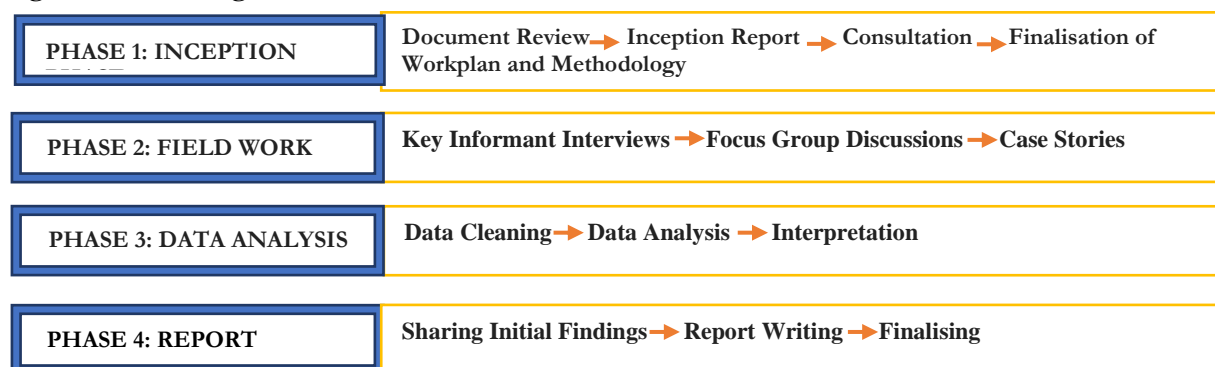
The evaluator gave due consideration to ensuring the quality of data collected and observed the capacity and capacity-building of project staff in data recording and data quality and performance indicator monitoring, including the accuracy, timeliness and completeness of records. The objectives and scope of work suggested by the terms of reference guided the approach adopted.

METHODOLOGY

The mid-term evaluation was conducted in four stages (figure 2), starting with desk review and ending with a report preparation, with discussions with beneficiaries and stakeholders and data analysis in between. The process was participatory, inclusive and sensitive to target groups and gender. Collecting information included a desk review;

A review matrix (see Annex - 2) based on the criteria and evaluation questions set out in the ToR were used for the MTE. The evaluation criteria included relevance, effectiveness, efficiency, sustainability, and impact. The evaluation questions for KIIs and FDGs were based on the criteria and evaluation questions given in the ToR.

Figure 2: MTE stages



The evaluator focused on collecting relevant information from both primary and secondary sources. The combined methodology gives more credibility to the study, making it more substantially more rigorous and enriching the quality of the evaluation report. The evaluator used both quantitative and qualitative paradigms and integrated the United Nations' Evaluation Group Guidelines and OECD-DAC evaluation criteria.

Twelve key informant interviews were conducted with a wide range of stakeholders including, UNDP senior management, donor, Government officials, and collaborating partners during the field mission in November 2020. In addition, three virtual FGDs with target groups and beneficiaries, and discussions with the programme team both at the central and regional levels were also conducted. The discussions and interactions with key stakeholders and beneficiaries further guaranteed both the quality and usage of the evaluation.

Project reports and information were reviewed and verified through monitoring data set and interviews with the field project staff. Information collected through individual interviews and focus group discussions were systematically analysed. Data on project achievements were compared and conclusions were drawn.

LIMITATIONS TO THE EVALUATION

The COVID-19 pandemic delayed planning for the field observations and interactions with stakeholders and beneficiaries, making it difficult to stick to the proposed schedule. Thus, the field mission planned for May 2020 only took place in November 2020. The fragile security situation in the Eastern Region limited movements during the field mission to Jalalabad only and evaluator was not allowed to visit the Shemol project site.

REPORT OUTLINE

This report begins with an executive summary and is followed by an overview of the evaluated project (Chapter 1), and introduction (Chapter 2) and approaches and methodology (Chapter 3). The findings (Chapter 4) are followed by conclusions, lessons learned and recommendations (Chapter 5).

4. MAIN FINDINGS

RELEVANCE

Relevance is a measure of the extent to which an intervention meet recipient needs, country priorities, and are consistent with organisational and donor policies. This evaluation showed that the objectives of ASERD were consistent with beneficiary needs, country priorities, UNDP's global and country strategies, and donor priorities.

Community Level

Participants in focus group discussions shared their happiness for implementing a power project in such remote area. They expressed their gratitude to the UNDP, MRRD, and Korean government and requested for more such projects to support many rural communities. They shared that they know the importance of electricity and further added, electricity generated would be very useful for students, mosques, and health centres. The students are expected to benefit more from these projects, as they will have clean energy for studying. Some of the beneficiaries expressed their interest in starting small-scale industries after being connected to the grid. It is regional project team believes that with houses getting electricity, the women can run weaving, tailoring, and other business.

The ASERD project established solar hot water systems in government maternity clinics to the benefit of both children and women. The beneficiaries also appraised the solar water heater systems and believed having a water pump and setting up solar water heaters in the in maternity clinics is greatly supporting women. With this facility, women who have delivered their child can get clean hot water for washing and bathing.

The improved cook stoves (ICSs) distributed by the project focused primarily on benefiting women and that it aligned closely with beneficiary needs and addressing their problems. The ICS beneficiaries shared that whereas once women spent up to two hours to cook a single meal, now, with the ICS, they spend just 20 minutes. They used to cook on wood, a practice which created indoor air pollution, causing serious health problems and premature deaths among women and children, but now that they use ICSs, indoor air pollution has decreased. While cross checking on the decrease on repertory diseases, doctors confirmed that health problems such as coughs and the flu have reduced by 45 to 50 percent.

UNDP and MRRD Priorities

The ASERD project is aligned with one of the country priorities of UNDP Afghanistan: addressing and increasing access to green energy. It also aims to establish rural livelihoods, which are an extremely important need and, in fact, a country priority. Discussions with UNDP senior management and Government officials revealed that the project was highly relevant for the country. As many parts of Afghanistan are not connected with national grid, off-grid projects like ASERD are the solutions for providing electricity to remote villages. The project fits well with the Government of Islamic Republic of Afghanistan's policy of providing energy to all citizens. The Government is building energy sector to provide the backbone for its socio-economic development.

The UNDP senior management viewed projects such as ASERD and LITACA (Livelihoods Improvements in Tajik-Afghan Cross-border Areas, a UNDP project implemented by MRRD) support and provide tangible results and direct impacts to beneficiaries. They further added that the ASERD platform paved a way to bring major projects such as the Global Climate Fund (GCF) adaptation project to Afghanistan which is built on the ASERD's activities. The GCF has considerable private sector involvement to raise capital cost and in the future will construct projects and consider managing them through the Renewable Energy Service Company (RESCO).

The implementation of the ASERD project compliments and uses learning from the UNDP's past projects, such as Sustainable Energy for All and the National Area-based Development Programme (NABDP). The ASERD team shred that the NABDP had a micro-hydro component, but the project was designed simply to provide electricity without establishing any mechanism for the operation and maintenance of the

concerned power plant before it was handed over to the community. With learnings from this, the ASERD proposed that the operation and maintenance of the Shemol mini-grid project would be the responsibility of the contractor for the first year and then later be managed by the RESCO.

One of the government's priority programmes, the Citizens' Charter National Programme (CCNP) calls for 35% of households to get electricity by 2030. Projects such as ASERD contribute to achieving this target. The ASERD project contributes to the overall integrated approach of the CCNP and complements both its overall goals and objectives, and in particular, its provisions for the delivery of basic services in rural areas. The MRRD leadership noted that ASERD is important in generating income and that it can create value in communities and contribute to existing and future projects. He added that ASERD had successfully fulfilled the MRRD's objectives by working on poverty reduction and establishing mini-grid hydropower energy in communities, a measure that would certainly boost income levels.

The MRRD leadership shared that the ASERD project is a priority of the government and that it had communicated with donors to get additional funding with which to expand its activities. He also informed the evaluator that His Excellency President Ghani had brought ASERD to the attention of development partners in a recent meeting.

The UNDP senior management and MRRD leadership expressed satisfaction with the ASERD's collaboration with other ministries, mainly with the then Ministry of Energy and Water as well as with other MRRD projects. The project has a strong vision and is designed with sustainability in mind, mainly in terms of the maintenance and expansion of the systems through income-generating activities made possible by providing clean energy to rural populations.

Donor Priorities

From 2017 to 2020, the Government of Republic of Korea outlined three key priority areas for Afghanistan: health, rural development, and humanitarian support. The ASERD is aligned with the second key area, rural development. The Korean government is committed to helping Afghanistan obtain renewable and sustainable energy and will provide additional funding. Its commitment towards funding, however, is expected to come at a later stage informed the donor representative.

The MTE found that ASERD was relevant and useful for the beneficiary, organisational, country, and donor priorities. The project's contribution to clean energy in Afghanistan is of particular relevance.

EFFECTIVENESS

Effectiveness is a measure of the extent to which the project activities produced the desired effect. Effectiveness is evaluated by comparing what is obtained with what was planned. A project's effectiveness is assessed on the basis of to what extent are the objectives achieved or are likely to be achieved and identifying the major factors influencing achievement or non-achievement of the objectives.

Overall project execution

The ASERD project was designed appropriately to address various substantive issues. To meet its intention to increase rural energy services, it has conducted over a dozen workshops with 1,119 participants (213 females and 906 males), including local community members and other stakeholders. The project has contributed to the resolution of problems with traditional cooking practices by fabricating ICSs and improved health facilities by establishing solar hot water systems in government birthing clinics.

In 2019, the ASERD project organised a four-day ICS fabrication workshop to encourage Afghan cook stove manufacturers to fabricate high-quality stoves using local resources. Stakeholders stated that the introduction of ICSs had resulted in significant reductions in the level of indoor air pollution, fuel consumption, and cooking time, leaving women with more time for leisure activities and improving the health of both women and children.

The project supported 35 maternity clinics (birthing centres) in five provinces of Khost, Kunar, Laghman, Kapisa and Paktya provinces by installing solar hot water systems. On an average, 1,400 people benefit from the systems every day. The beneficiaries were overwhelmed to have such facilities in their villages. Earlier,

women and their newly born babies were bathed with cold water but now, with the solar water heaters, they enjoy hot baths.

The project has recently completed its flagship solar-hydropower electrical mini-grids project and will provide clean energy to 2,000 households, including farmers in Dara-e-Noor District, 20 SMEs, and public institutes (31 mosques, 7 schools, and 2 clinics). During FGDs, community members demanded that the facility be extended to five more villages.

The ASERD project has introduced innovative approaches into the delivery of rural energy. For example, a financial sector de-risking mechanism is embedded in ICS distribution to provide a subsidy of 80% of the total cost. Similarly, the project plans to create rural economic zones with one or more anchor customers who will guarantee the consumption of the major share of energy produced in a certain area. Such a measure will ensure the sustainability of the planned rural economic zones, which will have large numbers of households and local businesses (a total of 7 villages with 2,140 households, 757 retail stores, and 39 SMEs). Likewise, under the project's 'pay as you go' mobile telephone-linked rural electrification scheme, mobile technology will be utilised to more easily collect electricity tariffs in remote areas. This scheme is designed as part of the ongoing Shemol power plant construction project. The 'pay as you go' model will become operational with operation of the project.

The ASERD project has successfully built the capacity of the communities it serves by providing training in energy-related topics such as awareness, safety, and proper use of electricity. Other training, such as training in house-wiring for 240 men in villages around Shemol, were also provided. The beneficiaries expressed their happiness at having received training in practical subject and said that they felt confident about applying their learning from this training once the mini-grid project started functioning.

Besides, the project organised a four-day exposure visit to Bamyan Province so stakeholders would appreciate the operation of a hydropower plant in Yakawlang District and a provincial solar power project. Those who went developed a good understanding of the entire process; include the registration of electricity users, the use of electricity, and bill payment through smart meters. Representatives of the MRRD and MEW, ANSA, NEPA, AREU, and ASERD technical staff also visited.

The ASERD distributed 101 solar dryers to farmers in Farza and Istalif districts of Kabul, and Bagram district of Parwan province, directly benefitting 24 women. The beneficiaries were given one-day training on how to properly dry fruits and vegetables. With this the project supports in improving economic conditions of farmers, as the solar dryers will allow them to avoid selling their fruits and vegetables at very low prices during the harvesting seasons. The project estimates that the 101 solar dryers distributed will increase annual profit of farmers by 6.5 million Afghanis. The project hopes to help improve the economic conditions of the targeted communities and promote their use of renewable energy. This will be implemented using the 5P innovative approach, under which 70% of the price of the solar dryers will be covered by ASERD and beneficiaries will pay the remaining 30% in regular instalments over a one-year period.

The project has been successful in supporting the institutional capacity development of relevant government agencies, communities, the private sector, and academic and research institutions in the renewable energy sector. A coordination workshop held in Jalalabad was attended by a wide range of stakeholders and beneficiaries, including the provincial governor of Nangarhar, the district governor of Dara-e-Noor, the director of the Rural Rehabilitation and Development office of Nangarhar, members of Nangarhar Provincial Council, the chief of staff of the provincial governor's office, representatives of DABs NEPA, community elders and ASERD's technical team. The workshop helped increase understanding of the benefits of using a hydro-solar hybrid mini-grid, and participants committed to transmitting their understanding to their respective communities with the hope that it would result in the use of affordable, efficient, and sustainable energy sources in those communities. In addition, a project management information system (MIS) was created at the MRRD and the project has uploaded information which, it is believed has improved the project's visibility, transparency and accountability.

Achievement of ASERD's Output and Objective
Yearly Work Plan Result

The table below shows the output indicators and the effectiveness of the ASERD project.

OUTPUT 1: Rural energy services increased in targeted areas			
Output indicators	Baseline	Target	Result at end
Number of communities with access to renewable energy with O&M arrangements	0	2016 - 28 2017 - 10 2018 - 10 2019 - 15 2020, 1 st , 2 nd , 3 rd quarter - 15	2016 - 0 2017 - 0 2018 - 0 2019 - 0 2020, 1 st , 2 nd , and 3 rd quarter - 0
Number of thermal energy devices provided to targeted communities	2016 - 0 2017 - 0 2018 - 400 2019 - 0 2020 1 st quarter- 0 2020 2 nd quarter - 4490 2020 3 rd quarter - 4490	2016 - 5654 2017 - 3400 2018 - 4000 2019 2020 - No target	2016 - 0 2017 - 400 2018 - 4000 Total: 4400
Percentage of thermal energy devices still in use a year after provision	0%	No target	No target from 2016 to 2020 3 rd quarter

OUTPUT 2: Rural energy policy and regulations in place			
Output indicators	Baseline	Target	Result at end
Existence of finalised national policy and legal instruments for rural energy supply covering both electrical and thermal energy devices under the umbrella of the RREP.	Yes	The Afghanistan Rural Renewable Energy Strategy (ARRES) finalised and promulgated in 2017.	Achieved in 2017
Existence of finalised regulations on rural renewable energy standards for Afghanistan	79 regulations on rural renewable energy standards for Afghanistan developed	50 out of 79 regulations on rural renewable energy standards for Afghanistan approved and nationalised.	Drafted
Existence of a finalised definition of a testing and quality assurance system for domestic and imported equipment	No	Yes	Drafted
Existence of finalised management and environmental protection guidelines for rural energy projects	No	Yes	Drafted

Existence of finalised framework for renewable rural energy investments and financing by the private sector	No	No target	No achievement
Existence of finalised regulations governing technical and business interfaces between mini/micro-grids and the national grid extension	No	No target	No target

OUTPUT 3: Innovative approaches to delivering rural energy pilot programmes in target areas

Output indicators	Baseline	Target	Result at end
Cumulative % towards completion of pilot initiatives for rural energy	2016 & 2017 - 0% 2018, 2019, 2020 1 st , 2 nd , 3 rd quarter - 14%	2016 - 10% 2017 - 10% 2018 - 28% 2019 - 42% 2020 1 st 2020 1 st , 2 nd , 3 rd quarter - 42%	2016 - 7% 2017 - 14% 2018, 2019, 2020 1 st , 2 nd quarters - 14% 2020 3 rd quarter - 0% Total: 77%
Number of pilot initiatives implemented which have been assessed and analysed	0	No target	

OUTPUT 4: Capacity of rural communities and relevant institutions developed

Output indicators	Baseline	Target	Result at end
Number of government and non-government officials trained in rural energy on a yearly basis	2016 & 2017 - 206 2018 - 388 2019, 2020 1 st , 2 nd , 3 rd - 757	2016 - 132 2017 - 206 2018 - 206 2019 - 250 (30% female) 2020 (1 st , 2 nd , 3 rd quarter) - 250 (30% female)	2016 - 240 2017 - 388 2018 - 731 2019 - 127 2020 (1 st quarter) - 127 2020 (2 nd quarter) - Covid-19 pandemic halted the trainings 2020 (3 rd quarter)- 439 Total: 2052
MIS developed for process management and reporting	1	1	Achieved
Project website developed	1	Yes, website developed and updated	Achieved

Results by project end

The overall results as scheduled in the work plan have yet to be achieved. Some of the works are in progress and the Covid-19 pandemic has affected other results, as is clear from the results table below. Activities such as mini-grid construction including policy and regulation documents finalisation are completed. Output 3, innovative approaches such as rural economic zones and ‘pay as you go’ mobile telephone-linked rural electrification, are aligned with the mini-grids project and will be in operation only after the mini-grids start functioning. The project is at the halfway point, so these can be considered intermediate outputs.

Below are the project’s activities and their status in terms of progress in achieving the intended results.

Activity	Status	Note
Distribution of improved cook stoves	Achieved	Distributed 4,400 ICSs
Establishment of solar hot water system	Achieved	1400 people benefitted every day
Development of hydro-solar power mini-grids	In progress	Expected to be completed in the 4th quarter of 2020
Design and development of three solar energy and 1 hydropower energy systems	Design completed	No budget for construction
Development and implementation of national policies and regulations governing electrical and thermal energy	Achieved	
Development and implementation of regulations and rural renewable energy standards for Afghanistan	In progress	50 out of 79 regulations standards have been approved and nationalised
Design, development, and implementation of a testing and quality assurance system for domestic and imported equipment	In progress	Inputs on the initial draft were received from ANSA and incorporated. The document is being translated into two local languages (Pashto and Dari) and is expected to be finalised in the fourth quarter of 2020
Design, development, and implementation of management and environmental protection guidelines for rural energy projects	In progress	Inputs on the initial draft were received from NEPA and incorporated. The document is being translated into local languages (Pashto and Dari). Finalisation is expected in the fourth quarter of 2020.
Design and development of a framework for renewable rural energy investments and financing by the private sector	Achieved	Framework for renewable rural energy investments and financing by the private sector finalised
Development of regulations governing technical and business interfaces between mini/micro-grids and the national grid extension	Unclear and no target set	Delayed, but initial meetings with financial institutions have been conducted. No progress after this plan
Conducting capacity-building, training, and workshops in rural energy for the private and financial sectors, civil society organisations, and targeted communities on a yearly basis	Achieved	Achieved each year except 2019, when security was threatened by the fragile political situation and the Covid-19 pandemic
Development of an MIS (management information system) for process management and reporting	Achieved	MIS established but not yet functional
Project website developed	Achieved	Exists but not updated
Innovative approaches support the delivery of rural energy services under a pro-poor public private partnership (5P) model	Active	Legislative framework does not support the 5P model
Financial-sector de-risking mechanism	Active	Connected with ICSs, this approach enabled an 80% subsidy on the cost of stoves
Rural economic zones	Unknown	
Pay as you go' mobile telephone-linked rural electrification	Active	Connected with mini-grid project

Activities related to Rural Energy

To achieve the targets of Output 2, the ASERD project collaborated with the then MEW, DABS, Afghanistan National Standards Authority, Afghanistan Renewable Energy Union, and National Environmental Protection Agency. With the stakeholders' inputs, the project developed three strategies: Action Plan for the Afghanistan Rural Renewable Energy Strategy, a testing and quality assurance framework for domestic and imported equipment, and environmental protection and management guidelines. The strategy is being translated into two local languages (Pashto and Dari) and is finalised. Similarly, the project developed regulations governing rural renewable energy standards in Afghanistan. Fifty out of 79 regulation standards have been approved and nationalised. The targets and progress set for renewable rural energy investments and financing by a private-sector framework and regulations governing technical and business interfaces between mini/micro-grids and the national grid extension were not achieved. As for Output 3, the cumulative progress in innovative approaches to delivering rural energy was 77% by the third quarter of 2020. Output 4 was mainly initiated to develop the capacity of rural communities and relevant institutions. The project successfully conducted its capacity-building program by providing training in renewable energy-related topics, wiring and electricity safety for altogether 2,052 people. However, the fragile political situation and lack of appropriate responses and the Covid-19 pandemic meant that activities set for 2019 and the first three quarters of 2020 were not achieved.

Changes to Activities

The innovative 5P approach was not implemented. As the current legislative framework in Afghanistan does not support this model, the ASERD project raised the issues raised with the Ministry of Finance during the RECC meetings. The innovative model has again been considered, this time for the solar dryers' project. It will enable ASERD to offer a 70% subsidy on the price a solar dryer, leaving beneficiaries to pay just 30% of the total cost in instalments spread out over a year.

The MTE noted that the ASERD was partly effective in achieving its four outputs. The monitoring and reporting on project implementation were timely, meaningful and adequate. The main driver of this success was the robust project model that addresses increased energy services in the rural areas coupled with innovative approaches for delivering energy and supported by policy and regulations along with capacity development of rural communities. The major challenges faced were delays in construction of the Shemol mini-grid project initially due to selection of construction modality and contractor, followed by community disturbances and Covid-19 pandemic.

EFFICIENCY

Efficiency is a measure of the relationship between outputs (intervention products or services) and inputs (the resources that it uses). A project is regarded as efficient if it utilizes the least costly resources that are appropriate and available to achieve the desired outputs. The project budget and delivery are taken into consideration while evaluating the efficiency.

Delivery

The ASERD project's overall burn rate, which averaged 70.4%, seems impressive, with but it was not able to achieve its planned results, mainly because it did not sequence project activities well. One of the major activities, the Shemol hydro-solar mini-grid project, was substantially delayed. Though initially planned for completion within one year of implementation, the mini grids were completed only in the fourth year, at the end of 2020. The reasons shared to the MTE for the delay included changes in the modalities of construction and operation. Other reasons were a delay in the recruitment of a chief technical advisor and protests by local communities of Shemol that live near the project site who were not initially included in the project area. In addition, the Covid-19 pandemic delayed the completion of several activities. During interviews, the ASERD team admitted that since the project had been delayed initially, planned activities

were not completed on time. The ASERD project has not yet been able to secure funds for four mini-grids in Khost, Baghlan, Parwan and Kandahar provinces although detailed project reports (DPRs) for all four projects were completed in 2019.

In terms of delivery, the UNDP senior management is convinced that what the ASERD project is doing is beneficial and necessary for rural development. The MTE team was told that the ASERD project is making good progress in meeting its goals and that its donors are interested in contributing even after this project cycle is over. Output 3, however, seems ambitious and the fact that it is linked with Output 1 has slowed the delivery rate. The delay was also attributed to bureaucratic difficulties, in particular the fact that much time is needed to secure approval.

Budget expenditure (in USD) for the years 2016 - 2018

Output	2016			2017			2018		
	Estimated	Expenses	Dlvry	Estimated	Expenses	Dlvry	Estimated	Expenses	Dlvry
Output 1	610,953.78	572,124.25	94%	2,504,816.00	1,121,341.00	45%	1,943,291.00	1,039,245.00	53%
Output 2	114,521.04	113,573.89	99%	248,611.00	211,997.00	85%	55,397.00	63,923.00	115%
Output 3	114,521.04	113,573.89	99%	234,812.00	197,541.00	84%	68,223.00	50,765.00	74%
Output 4	183,232.12	187,371.98	102%	749,771.00	599,367.00	80%	767,833.00	624,393.00	81%
Total	987,082.38	935,938.81	95%	3,738,010.00	2,130,247.00	57%	2,834,744.00	1,778,327.00	63%

Budget expenditure (in USD) for the year 2019 – 2020 (Jan – Sept)

Output	2019			2020		
	Estimated	Expenses	Dlvry	Estimated	Expenses	Dlvry
Output 1	1,081,351.00	1,316,007.00	122%	178,002.00	160,172.00	90%
Output 2	85,019.00	26,860.00	32%	76,605.00	22,806.00	30%
Output 3	25,877.00	26,021.00	101%	70,000.00	-	0%
Output 4	536,974.00	532,600.00	63%	975,393.00	603,823.00	62%
Total	6,083,614.00	4,645,960.00	76%	1,300,000.00	786,801.00	61%

Project Management

Hydro-solar mini-grids are a flagship project of both the UNDP and the MRRD. They also match strongly with the Government of Afghanistan's energy priorities and MRRD's strategy. The ASERD team regularly followed up with the contracted construction companies to make sure that their work was high quality and that any issues, including those arising from the community, were addressed on a timely basis. Out of five flagship renewable energy projects in Nangarhar, Khost, Baghlan, Parwan, and Kandahar provinces, only the one in Nangarhar, at Shemol, was able to find funding. The other projects were not considered despite the fact that detailed project reports (DPRs) have been completed for all four.

In 2018, the ASERD project and the Planning and Policy Directorate of MRRD discussed possibilities for including the project's MIS in the MRRD's monitoring system. The MIS was installed and is currently being tested to these if specific needs are being met and if additional components are needed. The integration of the project's and the MRRD's two systems will strengthen the sustainability of the system and ensure that long-term technical support is available for MIS users. With the joint MIS, data will be centralised, and users will have access to information about the project and the MRRD online. The system is expected to be fully functional from 2021.

The ASERD project has developed innovative approaches to the delivery of rural energy and has integrated technology. It has also developed policies and regulations that set renewable energy standards. These standards can be replicated in other, similar initiatives.

Implementation Modality

The ASERD project is implemented through the national implementation modality (NIM) with Ministry of Rural Rehabilitation and Development (MRRD) driving the project. The UNDP, however, is accountable for implementing the project, for managing its risks and liabilities, and for ensuring its execution goes smoothly. The project team is responsible for monitoring mechanisms, including reporting, internal reviews, and project management. The project log-frame has not been revised, though it is felt that it should be revised for the remaining project period, as many activities were not implemented, mainly due to lack of funds.

Strategic Coordination

The most important component of the design of the ASERD project is the coordination and partnership upon which its execution rests. One crucial partnership was with the then MEW, which guided the ASERD by providing technical knowledge about renewable energy and helping to identify suitable project sites. It also shared checklists for project feasibility studies so that ASERD could collect essential data to identify potential sites as well as its experience in implementing energy projects in Afghanistan. In addition, it helped identify a practical contracting model and shared its future plans regarding the expansion of the national grid so that the ASERD was able to focus on those areas that will stay off the national grid for a long period of time. Both the MRRD and then MEW developed, finalised, and secured approval for the Rural Electrification Strategy. All of the MRRD's renewable energy activities will be in line with the Afghanistan National Renewable Energy Policy and with the master plan and road maps of then MEW.

The ASERD project established a partnership with DABS for the latter to undertake the operation and maintenance of mini-grids. Similarly, it established a partnership with Kabul University so the latter could become a partner in policy-building. The ASERD project also provided training in renewable energy technologies and policies for Kabul University faculty members and students and donated lab equipment to the university's renewable energy laboratory. With Kabul Polytechnic University, ASERD collaborated in building the capacity of students and staff to conduct research in the area of renewable energy. Likewise, ASERD has coordinated and partnered with local governments and communities (shuras and community development councils) to raise awareness of rural energy and gain support for its own endeavours.

For renewable energy standards, the ASERD project's main partner is ANSA, which helps the project in drafting rural renewable energy quality standards and building a testing and quality assurance framework. The ASERD project established a joint technical team with ANSA and ASERD/MRRD to discuss and modernise the existing renewable energy lab in ANSA so that it can act as a testing centre for imported systems and components. In addition, ASERD worked with ANSA to translate the four nationalised standards into local languages.

The project will support NEPA in carrying out climate change adaptation and mitigation-related activities in Afghanistan. This work aims to improve and strengthen national capacity in responding to climate change-related challenges and to link it to rural electrification where applicable. ASERD and NEPA also envisage working collaboratively on the MEA's strategy and action plan, energy efficiency within SMEs, and the Green Climate Fund (GCF). The project also collaborated with NEPA to develop an action plan for the implementation of the environmental protection and management guidelines for renewable energy projects. The two collaborated on securing funds from the GCF for a renewable project and ASERD joined NEPA in its preparations for Climate Change Week.

In summary, the MTE found that the project was implemented efficiently. The evaluator considered appropriate resources with due regard to cost of implemented activities. One of the main challenges noted was unavailability of funding for other proposed activities.

IMPACT OUTLOOK

Impact is a measure of the notable intervention effects on the beneficiaries whether positive or negative, expected or unforeseen. It is a measure of the broader intervention consequences and might not be seen within the project period

With ASERD still to achieve its set targets, the impact of the project cannot be directly considered at this stage of evaluation. However, the MTE did identify potential impacts based on the activities the project has implemented.

The project distributed ICSs, installed solar hot water heater systems in birthing clinics, and conducted capacity-building activities at the community level. The ICS beneficiaries shared that using an improved cook stove has made their lives easier as both the amount of fuel burned and the time spent cooking had drastically reduced and as women and children suffered fewer health problems. The MTE learned that health problems attributable mainly to indoor air pollution had been cut in half. This also has environmental benefits. Due to decrease in use of firewood, carbon dioxide (CO₂) emission will also decrease. The project's change of approach of rather distributing imported ICSs, training local SMEs on improved cook stove fabrication created value addition in production of such stoves and a significant increase in sales.

The ASERD project has given due importance on acceptance of new technologies in rural areas. The project distributed brochures and broadcasted TV adverts on benefits of ICSs and is estimated to have reached roughly 2,500 households and 10 million people. Media adverts are expected to make positive impact on people inclining to use the advertised products.

Setting up of solar hot water systems in 35 Basic Health Centres (clinics) in five provinces of Khost, Kunar, Laghman, Kapisa and Paktya provinces benefitting approximately 67,500 households, with most of their clients being women and children, who use the services of these health facilities. Medical personnel at the clinics shared that now, with the solar systems installed, hot water is available for both mothers and children for bathing and other purposes.

With operation of the Shemol power plant, it is expected some beneficiaries would start SMEs within their villages. This would result in women getting involved on their traditional skills and producing goods which in turn would increase household revenue and family living conditions.

Measuring the impact of a capacity-building component is difficult as indicators simply quantify the number of people who attended a workshop or training. Measuring the change in their capacity due to participation in the capacity development activities requires measuring skill/knowledge retention and ability to adapt training to workplace. The project had a positive impact in terms of increasing the self-confidence and capacity of beneficiaries via training and the provision of technical skills. Beneficiaries are confident about using what they learned in specialised trainings, such as house wiring and awareness about electricity.

Despite being a short-term project, the ASERD indicates on some notable impacts in its all four outputs. One challenge, of course for the remaining period, is getting funds for the other planned power projects.

SUSTAINABILITY

Sustainability is a measure of intervention benefits after external support comes to an end. Many projects fail once the implementation phase is over, mainly because the beneficiaries do not have the financial resources or motivation to continue the activities.

The strategy for the project's sustainability can be considered as being two-fold. One, providing energy to rural communities that are out of the scope of the national grid, designing innovative approaches for delivering rural energy for self sustainability, and supporting the government in mobilising partnerships with RESCOs who will take care of operation and maintenance of the power plants. Two, supporting these initiatives with strategy/framework/guideline/standards back-up.

Since the project is still in its early stages, no analysis can be made of its sustainability. All the output activities and their statuses and results are presented in the effectiveness section. The likelihood that the ASERD project will be sustainable is quite high. For example, hiring an international training company to train local manufacturers in ICS production. This change in modality can be considered as the basis of the sustainability of this activity and is a good business model as well. Manufacturers can supply the market and interested people can buy stoves in nearby cities.

Combining different energy generation mechanisms and using innovative technologies such as solar-hydro-battery and a diesel generator synchronized together ensure sustainability. This is supplemented by high technology electro-mechanical equipment bought from the European market making power plant's life for at least 25 years. Besides, pre-paid smart meters are installed in the houses guaranteeing for more efficient electricity use and eliminating risks of non-payment by users adds to the sustainability of the project. With operation, the mini grid will also contribute in improving business environment, where more than 80 SMEs are expected to start their business

In its analysis of the extent to which there is constructive cooperation among project partners and the level of satisfaction of government counterparts, donors and beneficiaries, the MTE found that government counterparts are highly satisfied with the project and its activities. They expressed happiness that the project is supporting rural areas, creating jobs, and contributing to other socio-economic activities. The MRRD is so keen on having another phase of project that it has started communicating its interest to the donor. The MRRD leadership expressed its happiness with the implementation modality and committed to continuing it in future phases. The donor is also satisfied with the project and has indicated that there is a possibility for future phases. He believes that ASERD has developed a sustainable eco-system and empowered the private sector. He also emphasised that the project had helped lay the groundwork for renewable energy in Afghanistan. Beneficiaries are also excited about the project's outputs. They believe that the project will make their lives easier and increase their livelihood opportunities. The stakeholders expressed their satisfaction with the project and are eager to continue collaborating in the future. Their positivity speaks for the likelihood that the activities implemented by ASERD will be sustained.

In summary, ASERD has developed a mechanism for rural energy that would be sustainable. The project's positive intended and unintended gains seem sustainable in terms of project extension and expansion. There is a positive indication from the donor and the Government on their desire to see the modality ASERD has adopted to continue to grow and eventually be institutionalised for providing rural energy in Afghanistan.

5. CONCLUSIONS

The ASERD project has shown strong results in the achievement of the overall objectives and expected accomplishments. The activities that the project implemented, particularly Shemol hydro-solar plant, ICS distribution, and solar hot water system installation, are highly relevant to the beneficiaries, especially women and rural people who do not have access to the national grid for electricity. The mini-grid is expected to provide, besides electricity, SME business opportunities to villagers and diversify their livelihood options. The project, through training and awareness activities, has provided new skills and doing things to diversify their livelihood options.

The major conclusions of the MTE are summarised below:

6. The main strength of ASERD is its relevance as a response to Government of Afghanistan's rural energy supply. Despite Government's attempts to provide electricity to all, they were largely ineffective in absence of proper operation and maintenance mechanisms. Hybrid power plants based on the availability of energy resources combined with operation and maintenance through RESCO is a unique approach. The ASERD project made significant contribution in Government's rural energy interest and responses.
7. The ASEERD project is undoubtedly relevant, effective, efficient, impactful, and sustainable but the challenge lies in how to take this model forward. There is a clear commitment from the Government but the challenge is securing funding for remaining proposed project activities. There is a good interest from the donor and the GFC project might also take-up some proposed power plants.
8. With operation of the Shemol power plant, beneficiaries would be utilising electricity to maximum use. Besides, lighting houses, mosques, schools at night; it is expected that the communities would utilise the day time energy and start new small business such as furniture making, weaving, bakery, etc.
9. Installation of solar hot water systems in clinics and distribution of ICSs has greatly benefited women and children. The project developed a strategy for gender mainstreaming during project implementation, which includes guidelines such as those below:
 - Before distributing ICSs, host an awareness-raising workshop in every community to which local women are invited to discuss the benefits of cook stoves and their preferences for stove models
 - Only distribute cook stoves in communities where women are allowed to receive the stoves in person and attend trainings on how to use and maintain them
10. The AWP did not take into consideration delays in implementation, including the large amount of preparation work in the initial stages of the project, especially Shemol power plant. As a result, several annual targets were pushed in subsequent years.
11. Insecurity in the project's area of implementation and the Covid-19 pandemic delayed implementation. Besides, lack of clarity with respect to the procurement modality prevented the achievement of the Shemol project. Similarly, proposing activities before securing funding also showed weakness in the planning process. The implementing partners must find ways to resolve these issues.
12. Although women were not able to directly attend the awareness sessions and exposure visits organised under Output 4, the ASERD team distributed promotional materials on electrical safety, including posters and brochures, to households so that women would be informed about key messages for the safe and efficient use of electrical equipment.

6. RECOMMENDATIONS

1. There is a huge potential for the ASERD model to be extended as there is a clear demand of this model and stakeholders have high expectations from the project's potential. This could be a unique and important opportunity for UNDP to strengthen and possibly institutionalise this model.
2. The ASERD stakeholders demanded strongly on the need of expanding rural energy activities, this would require a multi donor approach. To complete the remaining four planned projects and design new one UNDP and MRRD need to approach the donor and other donors interested in rural electrification.
3. The off-grid beneficiaries have expressed their interest in utilizing the daytime electricity in operating small and medium scale enterprises. UNDP and MRRD could connect the ASERD beneficiaries to LITACA or CBARD-AIM project beneficiaries and promote to take their ideas on setting up new businesses, which have good market potentials in and outside Afghanistan. This would serve as a good cross-exchange among different UNDP projects.
4. Since its start, the project has continued to suffer from delays due to the slow pace of several administrative and bureaucratic processes. For instance, introducing the engineering procurement construction model took longer than expected due to the novelty of this type of contract in Afghanistan. This likelihood should have been taken into consideration in the initial project planning as it was known then that a new procurement modality was likely to require a considerable amount of time for approval and lead to the need for a no-cost extension to achieve the set targets.
5. The proportion of women who attended capacity-building exercises or training was far less than the proportion of men that did so. It is recommended that this issue be addressed in the future.
6. For future projects, the project design team should put aside adequate time for recruitment, reaching out to stakeholders and assessing the policy and implementation environment.

ANNEXES

Mid Term Evaluation of Afghanistan Sustainable Energy for Rural Development

Background

UNDP Global Mission Statement:

UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 166 countries, working with national counterparts on their own solutions to global and national development challenges.

UNDP Afghanistan Mission Statement:

UNDP supports stabilization, state-building, governance and development priorities in Afghanistan. UNDP support, in partnership with the Government, the United Nations system, the donor community and other development stakeholders, has contributed to institutional development efforts leading to positive impact on the lives of Afghan citizens. Over the years UNDP support has spanned such milestone efforts as the adoption of the Constitution; Presidential, Parliamentary and Provincial Council elections; institutional development through capacity-building to the legislative, the judicial and executive arms of the state, and key ministries, Government agencies and commissions at the national and subnational levels. UNDP has played a key role in the management of the Law and Order Trust Fund, which supports the Government in developing and maintaining the national police force and in efforts to stabilize the internal security environment. Major demobilization, disarmament and rehabilitation and area-based livelihoods and reconstruction programmes have taken place nationwide. UNDP Programmes in Afghanistan have benefited from the very active support of donors. UNDP Afghanistan is committed to the highest standards of transparency and accountability and works in close coordination with the United Nations Assistance Mission in Afghanistan and the UN system as a whole to maximize the impact of its development efforts on the ground

Afghanistan Sustainable Energy for Rural Development (ASERD)

The Afghanistan Sustainable Energy for Rural Development (ASERD) programme developed by MRRD and UNDP is contributing since 2016 to increasing the access to thermal energy and electricity through a technology neutral approach, in rural communities in Afghanistan. By the end of the project in 2021, it is expected this will result in increasing the access to electricity, clean cooking and heating options and will contribute to rural economic development and a tangible reduction in the pre-mature deaths of women and children due to indoor air pollution. The project will pilot seven innovative financing models which once successful will be mainstreamed. The project will also establish conducive policy and regulatory frameworks and capacity development of key stakeholders. It is envisaged that the project will establish a sustainable rural energy supply approach which can be scaled up beyond the project period.

The programme focuses on the following areas: **Output 1:** Rural Energy Services increased in targeted areas: This output will seek to provide rural energy services - both electrical and thermal energy to rural village communities/Community Development Council. The output involves providing electricity using mini and micro-grids with a clear preference for larger mini-grids and will provide thermal energy services through renewable energy and energy efficient systems and devices through a finance-service arrangement.

Output 2: Rural energy policy and regulations developed: This output will create a favorable policy environment for rural energy efforts. The output will support the development of technical and environmental protection standards and a quality assurance framework for rural energy equipment, specific legal and policy instruments to implement and enforce the Rural Renewable Energy Policy; regulations for governing interface between mini-grids and the national grid and creating a fiscal and financial incentive framework.

Output 3: Innovative approaches to delivering rural energy piloted in target areas: This output will involve the piloting of seven pilot rural energy service delivery models such as a 5P model, a rural economic zone, a private investment de-risking mechanism, migrant remittances linked rural energy service model, women's thermal energy service linked to carbon finance, Kuchi women's portable energy pilot and a mobile telephony linked rural energy service model.

Output 4: Capacity of rural communities and relevant institutions developed: This output will support the institutional capacity development of Rural Energy and Enterprise Directorate, MRRD, training and capacity building of banks/Financial Institutions; build capabilities of research, education and training institutions; carry out generic promotion and outreach; establishment and maintenance of a website; establish an MIS for the programme; carry out analytical and policy research and publication of key reports.

Against this background, UNDP is seeking an International Consultant to perform the tasks as described in the section of this ToR **Scope of Work and Deliverables** below.

Duties and Responsibilities

Evaluation Scope and Objectives

The Mid-term Evaluation (MTE) will assess progress towards the achievement of the project objectives and outcomes mentioned above and as specified in the ASERD Project Document and assess early signs of project success or failure with the goal of identifying the necessary changes to be made to set the project on-track to help achieve its intended results. The MTE will also review the project's approach and methodology, its risks to results impact and sustainability and make recommendations to improve the project over the remainder of its lifetime.

The objectives of the Mid-Term Evaluation (MTE) are to:

- Assist the recipient Government, beneficiaries, UNDP and, as appropriate, the concerned partners and stakeholders, to improve the efficiency, effectiveness, relevance, sustainability, impact and replicating the existing model of the project;

Provide feedback to all parties to improve the policy, planning, appraisal, implementation and monitoring phases; and Ensure accountability for results to the project's financial backers, stakeholders and beneficiaries.

The questions regarding aspects of relevance, efficiency, effectiveness, impact and sustainability of the project will cover the design, start-up, project management, and project implementation phases from 1st January 2016 to 31st December 2021.

MTE Approach and methodology

The MTE must provide evidence-based information that is credible, reliable and useful. The consultant will review all relevant sources of information including documents (reference the 'Documents to be consulted' section below). The consultant will also interview all relevant stakeholders including all parties who have been contracted by the project or participate in meetings and discussions with the project. The consultant is expected to follow a collaborative and participatory approach ensuring close engagement of all stakeholders (See section below: 'Evaluation Target Groups and sources of information').

The consultant will produce an Evaluation Inception Report based on a review of all relevant documents and initial consultations and present it to the UNDP Livelihoods and Resilience Unit, the Programme Strategy and Results Unit (PSR), UNDP Senior Management and other stakeholders to explain the objectives and methods adopted for the mid-term evaluation.

In addition to the Evaluation inception report, the consultant will produce:

- an Initial findings presentation on the final day of the in-country mission to Afghanistan,
- a Draft evaluation report, and

- a Final evaluation report

Evaluation Questions: Relevance:

- Is the project design appropriate to address the substantive problem that the project is intended to address? How useful are the project outputs to the needs of the target beneficiaries?
- What is the value of intervention in relation to the national and international partners' policies and priorities (including SDG, One- UN and UNDP Country Programme Document, Corporate Strategic Plan; ANPDF/NPPs, etc)?
- Are the project objectives consistent with substantive needs, and realistic in consideration of technical capacity, resources and time available for a good model to be replicated and scale up?

Efficiency:

- To what extent were project start-up activities completed on schedule?
- How well is the project managed, and how could it be managed better?
- Is there an appropriate mechanism for monitoring the progress of the project? If yes, is there adequate usage of results/data for programming and decision making?
- What is the project status with respect to target outputs in terms of quality and timeliness?
- What is the potential that the project will successfully achieve the desired target and initiatives could be replicated?
- What are the potential challenges/risks that may prevent the project from producing the intended results?

Effectiveness:

- Are the project's objectives and outcomes clearly articulated, feasible, realistic?
- Are the underlying assumptions on which the project intervention has been based valid? Is there a clear and relevant Theory of Change?
- If there were delays in project start-up, what were the causes of delay, and what was the effectiveness of corrective measures undertaken? Do start-up problems persist?
- To what extent has the project implemented activities as envisaged? To what extent have those activities contributed to achieving the project objectives?
- What factors have contributed to achieving/not achieving the intended results?
- To what extent have the project implementation modalities been appropriate to achieve the overall objectives?
- To what extent has the project managed to implement activities across the target project locations?
- To what extent do external factors, such as logistical or security constraints, have impact on project implementation?
- To what extent is the project logic, concept and approach appropriate and relevant to achieving the objectives?

Impact:

- What is the wider perception of the project, its image, applicability and performance? Are project communications effective in positively promoting the project to a wider audience?
- What are the results (or preliminary results) of the intervention in terms changes in the lives of beneficiaries against set indicators?

Sustainability

- What are the Implementing Partner's resources, motivation and ability to continue project activities in the future?
- Is there adequate all-party commitment to the project objectives and chosen approach?
- To what extent is there constructive cooperation among the project partners? What are the levels of satisfaction of government counterparts, donors and beneficiaries?
- What has been the quality of execution of the implementing partner, and if applicable where are there specific areas for improvement?
- What is the likelihood that the project results will be sustainable in terms of systems, institutions, financing and anticipated impact?
- What is needed for the project intervention to be adapted/replicated further?

Conclusions and Recommendations:

- The MTE will include a section of the report setting out the MTE's evidence-based conclusions, in light of the findings.
- What corrective actions are recommended for the design, start-up phase, managerial arrangements and project implementation, including sustainability, of the project? An actionable recommendation table should be put in the report's executive summary.
- What actions are recommended to follow up or reinforce initial benefits from the project?
- What are the main lessons that can be drawn from the project experience that may have generic application?

Evaluation Target Groups and sources of information:

The consultant should strive to reach as many people as possible, ensuring diversity of various stakeholder groups, as well as to review existing reports and data for an enriched evaluation.

A provisional list of stakeholder groups that should be consulted during the evaluation is given below and will be updated once the consultant is on board:

- Government of Afghanistan: MRRD, and its various departments including relevant Directorates, DRRD.
- Beneficiaries: MRRD and its various departments including relevant Directorates, DRRD, targeted rural communities/CDCs
- International Organizations: Korean Embassy, GIZ, USAID other relevant stakeholders
- Donor: Republic of Korea

- UNDP Country Office
- ASERD Project Staff in Kabul and Nangarhar

Expected Outputs, Deliverables and Timelines:

The following key deliverables are expected from this assignment:

- **Evaluation inception report**—An inception report should be prepared by the evaluators before going into the fully-fledged data collection exercise. It should detail the evaluators' understanding of what is being evaluated and why, showing how each evaluation question will be answered by way of: proposed methods, proposed sources of data and data collection procedures. The inception report should include a proposed schedule of tasks, activities and deliverables for each task or product. The inception report provides UNDP and the consultant evaluator with an opportunity to verify that they share the same understanding about the evaluation and clarify any misunderstanding at the outset. The Evaluation inception report should outline a clear overview of the mid-term review approach, including:
 - The purpose, objective, and scope of the review
 - The approach should include a summary of the data collection method, and the criteria on which the methodologies were adopted
 - A proposed work plan including a schedule of tasks, activities, and deliverables
 - A mid-term review matrix, specifying the main review criteria and the indicators or benchmarks against which the criteria will be assessed
 - Any limitations for the mid-term review
- **Initial findings presentation**— An initial findings presentation and report, presented on the last day of the MTE mission.
- **Draft evaluation report**—Full draft report and annexes should be submitted, UNDP and key stakeholders in the evaluation will review the draft evaluation report to ensure that the evaluation meets the required quality criteria. See section below 'Suggested Template for the Mid-Term Evaluation Report'.
- **Final evaluation report** - Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final MTE report

Deliverables/Outputs

Inputs

Payments

Deliverable 1: Submission and Acceptance of MTE Inception Report: MTE team clarifies objectives and methods of Midterm Review;

Deliverable 2: Submission and Acceptance of Initial Findings Presentation and report: Initial Findings presented on the last day of the MTE mission;

Inception Report **due 1 week** after signature of contract

Initial Findings Presentation and report to be presented **on final day of mission** to Afghanistan (**9 working days in Kabul and 3 working days in Nangarhar**)

40%

Deliverable 3: Submission and Acceptance of Draft Final Report: Full report with annexes

Due 1 week (7 days home based) after submission of initial findings presentation and report

30%

Deliverable 4: Submission and Acceptance of Final Report: Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final MTE report; **Expected to be completed within 1 week of receiving UNDP comments on draft.**

Due 3 weeks (21 days home based) after the submission of the Draft Final Report

30%

Total

100%

Working Arrangements:

The Consultant will work under the overall substantive guidance of the Head of the Livelihood and Resilience Unit with the PSRT Unit (for evaluation process and methodology) and overall logistical coordination with ASERD Project Manager and or designated L&R Programme Officer.

Duration of the Work

The whole assignment is foreseen for a period of two months with maximum of 35 working days. The tentative assignment for both tasks is as follows:

INDICATIVE TIMEFRAME

ACTIVITY

4 working days after signing the Contract

- Document review and preparing MTE Inception Report within 7 days of start of assignment
- Telephone and in person interviews with key project stakeholders, Project Manager, and UNDP Country Office

12 days

- Mission to Afghanistan to conduct meetings and interviews with Project stakeholders including governmental and project personnel and UNDP Country Office.
- **Initial findings report and presentation** to be presented to stakeholders on final day of mission.

4 working days

- Analyze the data and submit **Draft MTE Report** to UNDP Afghanistan Livelihoods and Resilience Unit and Project Manager

5 working days

- Detailed comments to the draft MTE report sent to the consultant by UNDP focal point.
- Conference Call on the Draft MTE with the consultant and UNDP

10 working days

- Incorporate audit trail from feedback on Draft Report

- Finalization of **Final MTE report** following all revised comments

Duty Station

The ASERD project works in two provinces, Kabul and Nangarhar. The consultant will be guided by the reporting requirements of this assignment. Options for site visits to Nangarhar should be provided in the Inception Report, following discussions with UNDP Afghanistan and the Project Manager.

The consultant is expected to be in Afghanistan for a period of 15 days in a single visit and remainder of the time will be home based for desk review, report writing and editing.

Evaluation Competencies and Ethics:

The Evaluation will follow UNDP and UN Evaluation Group (UNEG) guidelines on the ethical participation of beneficiaries and children. In addition, all participants in the study will be fully informed about the nature and purpose of the evaluation and their requested involvement. Only participants who have given their written or verbal consent (documented) will be included in the evaluation. Specific mechanisms for feeding back results of the evaluation to stakeholders will be included in the elaborated methodology. All the documents, including data collection, entry and analysis tools, and all the data developed or collected for this consultancy are the intellectual property of UNDP-Afghanistan and project IP, Ministry of Rural Rehabilitation and Development (MRRD). The Evaluation team members may not publish or disseminate the Evaluation Report, data collection tools, collected data or any other documents produced from this consultancy without the express permission of and acknowledgement of UNDP and MRRD.

Documents to be consulted:

ASERD Project Document and revised Nangarhar Project document including annexes and Annual Workplans and project budget revisions, project reports including Annual Project Reports (APR), Quarterly Project Report (QPR), Back to Office reports, ad-hoc project activity progress reports, report or other documents produced by Implementing Partner, Meeting minutes including: Project Board and Technical working group meeting minutes, Terms Of Reference, including for the Technical Working Group, procurement for Job Creation, TORs for project personnel including UNDP staff and NTA modality, correspondence with the donor, any other materials that the consultant considers useful for this evidence-based review.

Sample Evaluation Matrix:

The evaluation matrix is a tool that the consultant evaluator will create as a map and reference in planning and conducting an evaluation. It also serves as a useful tool for summarizing and visually presenting the evaluation design and methodology for discussions with stakeholders. This will complement the Project's M&E plan for each indicator.

Management of the Evaluation:

The consultant is responsible for ensuring that the evaluation function is fully operational, and that evaluation work is conducted according to the highest professional standards.

Suggested Template for the Mid-Term Evaluation Report:

Executive summary

- Should include Recommendation Summary Table

Purpose of the evaluation

- Restate the purpose of the UNDP mid-term project evaluation
- How this evaluation fits into project cycle and project planning/review activities

Evaluation methodology

- Methods used
- Workplan

Background

- Country context (policy, institutional environment with relevance to ASERD programme intervention)
- Project rationale
- Project status (implementation, financial)

Evaluation:

- Evaluation Questions should be answered under the headings as outlined in the TOR
- Relevance
- Efficiency
- Effectiveness
- Impact
- Sustainability
- Any other pertinent issues that need addressing or which may or should influence future project direction and UNDP engagement in the country.

Conclusions and Recommendations:

- The MTE will include a section of the report setting out the MTE's evidence-based conclusions, in light of the findings.
- What corrective actions are recommended for the design, start-up phase, managerial arrangements and project implementation, including sustainability, of the project? A recommendation table should be put in the report's executive summary.
- What actions are recommended to follow up or reinforce initial benefits from the project?
- What are the main lessons that can be drawn from the project experience that may have generic application?

Annexes

To include, at minimum:

- Evaluation Follow-up Matrix (sample template provided)
- List of people interviewed/focus group discussions, etc
- Tools/questionnaires used

The contractor shall submit a price proposal as below:

- **Daily Fee** - The Consultant shall propose a daily fee which should be inclusive of his/her professional fee, local communication cost, insurance (inclusive of medical health and medical evacuation etc.), equipment, and other costs required for performance of the contract but excluding travel, visa and DSA. The number of working days for which the daily fee shall be payable under the contract is **35 working days** over a contract duration of **2 months**.
- **DSA** - The Consultant shall be separately paid the DSA as per applicable UNDP rate for stay in Kabul and travel to other locations as per actual number of nights spent in Kabul or other locations. Deductions from DSA shall be made as per applicable UNDP policy when accommodation and other facilities are provided by UNDP. An estimated provision in this regard shall be included in the contract. The consultant need not quote for DSA in Financial Proposal.
- **Accommodation in Kabul** - The Consultants are NOT allowed to stay in a place of their choice other than the UNDSS approved places in Kabul, Afghanistan. UNDP will provide accommodation to the Consultant for the duration of the stay in Afghanistan in UNDSS approved places. Deductions in this regard shall be made from DSA payment as per applicable UNDP Policy.
- **Travel** - The Consultant shall include lumpsum cost of travel per trip for Home-Kabul-Home (estimated **1** trip) in the Financial Proposal. Any other travel for work, originating from Kabul shall be payable by UNDP separately as per applicable Policy.
- **Visa** - UNDP shall facilitate visa requirements and reimburse the visa cost, if any.

Payment schedule - Payments towards remuneration/fee shall be linked to deliverables and shall be made on certification of completion of deliverables and submission of certified timesheet. Payment towards travel shall be made on an instance of actual travel and shall be cost-reimbursable limited to the amount quoted in Financial Proposal. Payments towards DSA, Visa, etc. shall be cost-reimbursable, as specified above.

Competencies

Competencies:

- Demonstrates integrity by modeling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Maturity combined with tact and diplomacy;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favoritism.

Required Skills and Experience

Academic Qualifications:

- Master's Degree in political science, sociology, international development, international relations, international economics, law, public administration, social science, evaluation,

Experience:

- At least 10 years of working experience in evaluation and social research, with at least 5 years working experience with developing countries and a demonstrated understanding of the challenges and opportunities faced by post conflict countries;

- Proven experience in evaluating projects/programmes of UN or development agencies (preferably UNDP).
- Strong analytical and research skills with sufficient understanding of quantitative/qualitative methods and data analysis;
- Familiarity with UNEG evaluation norms, guidelines and processes required.
- Experience in evaluating rural energy development projects is an advantage.
- Work experience related to rural energy services and power mini-grids is an advantage.
- Experience working in Afghanistan is an advantage.

Language:

Fluency in written and spoken English is a requirement. Knowledge of Dari, Pashto is an advantage

Special skills requirements

- Shows ability to communicate and to exercise advocacy skills in front of a diverse set of audience
- Focuses on impact and result for the client and responds positively to feedback;
- Demonstrates openness to change and ability to manage complexities;
- Consistently approaches work with energy and a positive, constructive attitude;
- Ability to work collaboratively with colleagues in a multi-cultural and multiethnic environment;
- Builds strong relationships with clients and external actors;
- Ability to work independently with strong sense of initiative, discipline and self-motivation.

Proposal Evaluation Method and Criteria:

The award of the contract shall be made to the individual consultant whose offer has been evaluated and determined as:

- Responsive/compliant/acceptable; and
- Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

Technical Criteria weight 70%;

Financial Criteria weight 30%.

Only candidates obtaining a minimum of 49 points (70% of the total technical points) would be considered for the Financial Evaluation.

Technical Criteria (70 points)

Technical Proposal (30 marks)

- **Technical Approach & Methodology (20 marks)** - Explain the understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. The

Applicant should also explain the methodologies proposed to adopt and highlight the compatibility of those methodologies with the proposed approach.

- **Work Plan (10 marks)** - The Applicant should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan.

Qualification and Experience (40 marks) [evaluation of CV]:

- General Qualification (15 marks);
- Experience relevant to the assignment (25 marks);

Documents to be included when submitting the proposals:

Interested individual consultants must submit the following documents/information to demonstrate their qualifications in one single PDF document:

- Duly accomplished confirmation of Interest and Submission of Financial Proposal Template using the template provided by UNDP (Annex II);
- Personal CV or P11, indicating all experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references.
- Brief description of why the individual considers him/herself as the most suitable for the assignment;
- A methodology, on how they will approach and complete the assignment and work plan as indicated above.

Annexes (click on the hyperlink to access the documents):

- **Annex 1 - IC Contract Template** (for information)
- **Annex 2 - Financial Proposal Template using the template provided by UNDP** (to be completed by consultant at application stage)
- **Annex 3 - IC General Terms and Conditions** (for information)
- **Annex 4 - RLA Template** (if consultant wishes to be recruited through an employer) - (for information)

Interview questions for KII

Interview questions for Project Management, UNDP/MRRD

General

- i) Have you been able to regularly visit project areas in the districts to monitor progress of the project? Please share any constraints that you have faced in this regard.

Project Design

- i) In relation to the problem addressed by the project, what is the relevance of the project strategy?
- ii) Were lessons from other relevant national and international projects properly incorporated into the project design?
- iii) How does the project address country priorities on alternative energy sector? Was the project concept in line with the national sector development priorities and plans of the country to address the gap on alternative energy sectors.
- iv) The local perspectives of those who would be affected by project decisions, those who could/ would affect the outcomes, and those who could contribute information or other resources to the process, taken into consideration in the design process ? Kindly share the experiences/ example
- v) Were relevant gender issues raised in the project design?
- vi) Does the project budget include funding for gender-relevant outcomes, outputs and activities?
- vii) Are the project's results framework targets set up to guarantee a sufficient level of gender balance in activities (e.g. quotas for male and female participation)?
- viii) Were there any critical gaps in the design of the project, which were not addressed?
- ix) Have significant changes of interest happened in the country/local/global context since the design of the project? Do they support or undermine the objective of the project?
- x) If there are major areas of concern, recommend areas for improvement.
- xi) How has ASERD contributed to emission reduction agenda in Afghanistan in the broader context?

Results Framework/Log frame

- i) Are the project objectives, outcomes, and components clear and practical? Can they be achieved within the stipulated time frame?
- ii) Did the project logframe capture intended or desired results adequately? If not, what needed to be changed?
- iii) Are the project's results framework indicators disaggregated by sex and wherever possible by age and by socio-economic group (or any other socially significant category in society)?
- iv) Have there been any changes to the logframe? If yes, what has been changed?
- v) How has the logframe been used to monitor results of the project and bring about course corrections?

Progress Towards Results

- i) How do you view the adequacy and quality of training from ASERD and response? Is this training helping government officials and villagers?
- ii) How was the quality of improved cook stove project distributed to the beneficiaries?
- iii) How was the quality of solar pump distributed to the beneficiaries?
- iv) Did the project conduct any assessment in reduction of co2 level in the project implemented site?
- v) Project installed solar hot water system in the maternity clinic, could you kindly share the function of system and quality of the such system
- vi) What is the impact of the subsidized 80% in improved cook stove system?
- vii) The proeject has formulated rural renewable standard, could you kindly the contribution of such standard and implications of it.
- viii) The quality of the training and usefulness of the training?

- ix) Did the project face any delayed in contracting process? If yes, how long, and what was the implications of it and how the project overcome that? if not overcame what is the plan to overcome those.
- x) What is the delivery rate of the project?
- xi) How is the functioning of solar hot water system?
- xii) How was the improved cook stove fabrication training for cook stove manufacturer – how is the impact of the training
- xiii) How long does it take to prepare Afghanistan Rural Renewal Energy Strategy was developed? Could you share a little more on it. How difficult was it to approved the strategy endorsed by the concerned ministry?
- xiv) Has the project already developed the action plan – for Afghanistan RRES
- xv) To what extent the project success in financial sector de-risking
- xvi) How effective Development of the project Management Information System and integration of it into ministry system.
- xvii) What were major issues project has faced during this implementation stage?
- xviii) What are the major intended impact and un-intended impact of the project
- xix)i) Has solar water heater provided in the clinic help the women to improve and comfortable service? Please provide examples of the improvements.
- diversified or being diversified due to the work of the project including irrigation infrastructure?
- xx) Identify, if possible, legal, cultural, or religious constraints on women's participation in the project.
- xxi) What can the project do to enhance its gender benefits?
- xxii) Do you see any issues in achieving all the results of the project end?

Management Arrangements

- i) Are the management arrangements in the project document adequate, clear, and effective? Would you like to propose any changes based on the project experience so far?
- ii) Is decision making transparent and timely? Any recommendations?
- iii) What do you think about the quality of execution by MRRD and participation by other partners such as, NEPA, MEW?
- iv) Do the Executing Agency/Implementing Partner and/or GEF Partner Agency and other partners have the capacity to deliver benefits to or involve women? If yes, how?
- v) What is the gender balance of project staff? What steps have been taken to ensure gender balance in project staff?
- vi) How has the project been supported by GEF? Areas for improvement?

Work Planning

- i) Has project faced any delays in start-up? What have been the causes? What has done to resolve the issues? ii) Have there been any issues in the preparation of annual work plans? Are the plans sufficiently disaggregated by province and district? Iii) Are plans linked with logframe outcomes? What shows that plans include lessons from previous years?

Finance

- i) What are the financial controls in place to reduce error and fraud, ensure timeliness, and ensure quality of information? What is the level of compliance with the financial controls?)

Project-level Monitoring and Evaluation Systems

- i) What information system is used to collect and process monitoring and progress data? Is this system consistent with requirements of MRRD , UNDP
- ii) What are the participation and information sharing mechanisms in relation to monitoring and evaluation activities?
- iii) What is the follow-up process on monitoring and evaluation findings?

Iv) Is M&E constrained by financial resources? Any suggestions?

Stakeholder Engagement

i) What kinds of partnerships have been established for ASERD? How these partnerships have been leveraged to meet the objectives of the project?

ii) What is level of acceptance of the AESRD and project objectives among Government partners? What is the level of participation of the Government partners for efficient and effective implementation of the project?

iii) What has been the contribution of the project in building public awareness on rural renewal energy?

Reporting

i) Has the reporting been adequate to meet the reporting requirements of the Project Board?

ii) What has been done by the project to share lessons learned and ensure internalization of those lessons? What sort of mechanism has been adopted to share the lessons learnt by the project with the other concerned line ministries.

Communications

i) How does ASERDP maintain communication with its stakeholders? Is someone left out? What is feedback mechanism?

ii) Does the project has the developed communication strategy and communication plan.

iii) Does communication contribute to better implementation of the project and achievement of results?

iv) What are the means of public awareness used by the project? What is being communicated through these means and to whom?

Sustainability

Financial sustainability

i) At this point, what is the likelihood of availability of financial and economic resources after the project funding ends? Other public or private funds?

ii) Will the communities be able to maintain infrastructure works after the project support ends? What has been done and what needs to be done to this end?

Socio-economic risks to sustainability

i) Are there any social or political risks that may jeopardize sustainability of project outcomes?

ii) What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?

iii) Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?

iv) Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future.

Institutional Framework and Governance risks to sustainability

i) Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits?

ii) Are required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place?

Interview questions for beneficiaries

i) Have you heard about the ASERD project? What do you know about the project and how did you come to know about it?

ii) When did the MRRD project staff come to your community for ASERD activities?

iii) What has been done under ASERDP in your community? Please list activities and works.

Iv) Have you received any training or advocacy material to raise awareness about impact of Co2 emission?

v) Do project activities respond to the needs of women?

Progress Towards Outcomes Analysis

- i) Has anyone in your CDCs or community received training from ASERDP? How have they used the information? How?
- ii) How do you view the impact of the project in terms of reducing pollution in the community? are poor women benefit from improved cook stove distributed by the project?
- iii) Please provide examples of the improvements/likely improvements in the lives of the people from solar hot water system install in the clinic
- iv) Is there any potential negative impact on gender equality and women's empowerment? What can the project do to mitigate this?
- v) Have you participated at improved cook stove fabrication training? How was it ?
- vi) What are the major positive impacts have your observed after using improved cook stove in your community?

Management Arrangements

- i) What is the process for selection of beneficiaries of improved cook stove interventions and solar pump distribution?
- ii) What is the degree of women's participation in the project activity?
- iii) Did you receive subsidy in improved cook stove?
- iv) Do the villagers have sufficient technical know-how to maintain and operate the solar pump or solar water heater or improved cook stove?

Checklist for Focus Group Discussion

1. How did ASERD support you?
2. Do project activities respond to the needs of the communities and in particularly women?
3. What is the process for selection of beneficiaries?
4. How did you contribute to the project activities, what is the degree of women's participation in the project activity?
5. Have you received any trainings or awareness programmes?
6. How is the quality of ICS provided? Are the imported better than the locally manufactured ones? (for ICS beneficiaries only)
7. How do you view the impact of the project? Are poor/needy people benefitting from the project?
8. Please provide examples of the improvements/likely improvements in the lives of the people from ASERD activities.
9. What changes have the project brought to people's lives? What are the major positive impacts that you have observed after ASERD's support?
10. Is there any potential negative impact (socio-economic and environmental) of the project? If any, how can the project mitigate?

Evaluation Matrix

Evaluation criteria	Guiding questions	Primary data source
1. Relevance	Is the project design appropriate to address the substantive problem that the project is intended to address?	MRRD and UNDP CO senior management
	How useful are the project outputs to the needs of the target beneficiaries?	Programme team, beneficiaries
	What is the value of intervention in relation to the national and international partners' policies and priorities (including SDG, One- UN and UNDP Country Programme Document, Corporate Strategic Plan; ANPDF/NPPs, etc)?	Programme team, MRRD and UNDP CO senior management, donor
	Are the project objectives consistent with substantive needs, and realistic in consideration of technical capacity, resources and time available for a good model to be replicated and scale up?	Programme team, MRRD and UNDP CO senior management
2. Effectiveness	Are the project's objectives and outcomes clearly articulated, feasible, realistic?	Programme team
	Are the underlying assumptions on which the project intervention has been based valid? Is there a clear and relevant Theory of Change?	Programme team
	If there were delays in project start-up, what were the causes of delay, and what was the effectiveness of corrective measures undertaken? Do start-up problems persist?	Programme team
	To what extent has the project implemented activities as envisaged? To what extent have those activities contributed to achieving the project objectives?	Programme team
	What factors have contributed to achieving/not achieving the intended results?	Programme team, beneficiaries
	To what extent have the project implementation modalities been appropriate to achieve the overall objectives?	Programme team, beneficiaries
	To what extent has the project managed to implement activities across the target project locations?	Programme team, MRRD
	To what extent do external factors, such as logistical or security constraints, have impact on project implementation?	MRRD and UNDP CO senior management
	To what extent is the project logic, concept and approach appropriate and relevant to achieving the objectives?	Programme team
3. Efficiency	To what extent were project start-up activities completed on schedule?	Programme team
	How well is the project managed, and how could it be managed better?	Programme team, UNDP/LRU, MRRD
	Is there an appropriate mechanism for monitoring the progress of the project? If yes, is there adequate usage of results/data for programming and decision making?	Programme team, UNDP/PRSU
	What is the project status with respect to target outputs in terms of quality and timeliness?	Programme team, MRRD and UNDP/LRU senior management
	What is the potential that the project will successfully achieve the desired target and initiatives could be replicated?	MRRD and UNDP/LRU senior management
	What are the potential challenges/risks that may prevent the project from producing the intended results?	Programme team
4. Impact	What is the wider perception of the project, its image, applicability and performance? Are project communications effective in positively promoting the project to a wider audience?	MRRD and UNDP/LRU senior management
	What are the results (or preliminary results) of the intervention in terms changes in the lives of beneficiaries against set indicators?	Beneficiaries
5. Sustainability	What are the Implementing Partner's resources, motivation and ability to continue project activities in the future?	MRRD senior management

	Is there adequate all-party commitment to the project objectives and chosen approach?	MRRD and UNDP/LRU senior management
	To what extent is there constructive cooperation among the project partners? What are the levels of satisfaction of government counterparts, donors and beneficiaries?	Donor, MRRD and UNDP/LRU senior management
	What has been the quality of execution of the implementing partner, and if applicable where are there specific areas for improvement?	UNDP/LRU senior management
	What is the likelihood that the project results will be sustainable in terms of systems, institutions, financing and anticipated impact?	Beneficiaries, MRRD and UNDP/LRU senior management
	What is needed for the project intervention to be adapted/replicated further?	MRRD and UNDP/LRU senior management

ANNEX - 3

List of people met/interacted

Name	Position	Organization
Ms Sorayo Buzurukova,	Senior Deputy Resident Representative (Programmes)	UNDP Afghanistan
Mr Popal Habibi	Deputy Minister (Programmes)	Ministry of Rural Rehabilitation and Development, GoIRA
Mr Ziaulhaq Amarkhil	Governor	Nangarhar Province
Mr Wookyung Chung	Chief of Development Cooperation section	Embassy of Republic of Korea in Afghanistan
Ms Nilofer Malik	Programme Analyst /Head of Unit (a.i.)	Livelihood and Resilience Unit UNDP
Mr Ram Gobinda Yadav	CTA	ASERD
Mr M Ajmal Sinwari	NPM	
Mr Haroon Shams	DPM	
Mr Ahmad Rasoli	Programme Development Specialist	
Mr Haroon Haand	Policy Development Specialist	
Mr Sarwar Fayyaz	Senior Electrical Design Engineer	
Mr Abdul Sami Ghiacy	Electrical Design Engineer	
Fakhurddin Fakhri	Technical Specialist	
Mr Mohinrahman Khatibi	Electrical Engineer	
Mr Abdul Auhoor Mehri	Capacity Development Specialist	
Mr Addullah Akbari	Reporting and Communication Specialist	
Mr Yousuf Walizsada	Finance Officer	
Mr Eng Shafiqullah Shahil	Engineer	ASERD Field Office - Jalalabad
Mr Waliullah Hamdard	Engineer	NEPA
Mr Rohullah Amin	Director for Climate Change	
Mr Ahmad Shoaib Jahah	Forestry expert	AREU
Mr Maroof Ziaey	Chief Executive Officer	
Mr Farzad Awali	Board Member	Energy Engineering Department Kabul University
Mr Hameedullah Zaheb	Associate Professor	
Mr Hedayatullah Karimy	Assistant Professor	Standard and Code Development Department, ANSA
Mr Ghulam Sarwar Hamgam	Director	
Mr	Director	Eastern Province Rural Rehabilitation and Development Dept, MRRD
Ms Fahima	PD 5, Khusal Khan Mina, Kabul	ICS beneficiaries
Ms Latifa	PD 6 Darul Rahaman, Kabul	
Ms Noor Zia Khulistani	PD 17, Tahiya Maskan, Kabul	
Mr Mohammad Amal	Sufun, Dari-e-Noor	Shemol beneficiaries
Mr Abdul Ahmel	Sufun, Dari-e-Noor	
Mr Shagasi	Mjkandol, Dari-e-Noor	
Mr Hajratullah	Lamatak, Dari-e-Noor	
Mr Gafoor	Chawal, Dari-e-Noor	
Mr Qadim	Shemol, Dari-e-Noor	
Mr Malababa	Shemol, Dari-e-Noor	
Mr Mohammad Niaz	Kandak, Dari-e-Noor	
Mr Abdul Latif	Lghak, Dari-e-Noor	
Mr Allah Nazor	Rambakot, Dari-e-Noor	
Dr Nasrut	Q Shah, Dari-e-Noor	Solar water heater beneficiary
Mr Abdul Hadi	Janapoor, Dari-e-Noor	