PROGRESS REPORT FOR THE INCREASING ACCESS TO CLEAN AND AFFORDABLE DECENTRALISED ENERGY SERVICES FOR SELECTED VULNERABLE AREAS IN MALAWI PROJECT FOR THE PERIOD BETWEEN JANUARY TO JUNE 2017

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1.0 INTRODUCTION

The Ministry of Natural Resources, Energy and Mining (MNREM), with financial support from GEF Trust through United Nations Development Program (UNDP), is implementing an Increasing Access to Clean and Affordable Decentralised Energy Services in selected vulnerable areas in Malawi (IACADES) Project. The program became effective in August 2015 through an Inception Meeting of Parties where the Letters of Agreement and the project document was duly signed by the Ministry of Natural Resources, Energy and Mining (MNREM) and UNDP.

The *Increasing Access to Clean and Affordable Decentralised Energy Services in Selected Vulnerable Areas of Malawi* project aims to establish mini-grids as a priority option in Malawi's rural electrification efforts. The project is aimed at 'increasing access to energy in selected remote, rural areas in Malawi by promoting innovative, community-based mini-grid applications in cooperation with the private sector and civil society'. The project has three Components as follows:

Component 1 - Expansion of the Mulanje Electricity Generation Agency (MEGA) Micro Hydro Power Plant (MHPP) and mini-grid scheme: This Component will directly support the implementation of a second 80 kWp micro-hydro powered mini-grid operated by MEGA at Namainja (the Lujeri Micro-hydro power plant - MHPP) and provide institutional support for the development of several other MEGA MHPPs bring the installed capacity of their power production up to 216 kWp by end of project. This Component will also support the institutional capacity of MEGA to help establish it as a self-sustaining entity;

Component 2 - Replication of MEGA model via piloting of new mini-grid schemes in other areas of Malawi: This Component will initiate an open competitive-based mechanism (Request for Proposals – RfP) to select and support the establishment of Public-Private-Partnership (PPP) service delivery platforms for clean energy mini-grids with an emphasis on business models such as Build-Own-Operate (BOO). It is envisaged that Clean Energy Mini-grids with an installed capacity of at least 84 kWp will be supported.

Component 3 - Institutional strengthening and capacity building for promotion of decentralized mini-grid applications across the country: This Component will carry out training and capacity building at sub-national and national levels on Clean Energy Mini-grids and establish a national information clearing house to facilitate mini-grid based rural

electrification. The Component will also make the policy and regulatory changes to mainstream Clean Energy Mini-grids into rural electrification activities and will also synthesise and show-case the lessons from the clean energy mini-grid based rural electrification experience in Malawi to develop a Toolkit for policy makers.

The project will be implemented over the period 2015-18 and is being implemented by the Department of Energy Affairs under a National Implementation Mechanism. The project is expected to establish the foundations for replication of several clean energy mini-grids in Malawi, thereby accelerating efforts to provide universal electricity access to Malawi's rural population.

2.0 PROJECT PROGRESS DURING PERIOD UNDER REVIEW

2.1 PROGRESS OF ACTIVITIES

The Project progress for the period under review will be stated under each of the three components and the two supporting components as in sub sections below:

2.1.1 Component 1: Expansion of the Mulanje Electricity Generation Agency Micro Hydro Power Plant

a) Commissioning of a new 100KWp Clean Energy Mini-grid: During the period under review, MEGA has reviewed the designs on the new micro hydro plant and made changes to the design philosophy changing from construction of conveyance canal to use of pipelines to reduce costs of maintenance due to leakages during operation and maintenance as experienced on the existing scheme as well as reduce the installation period.

Furthermore, MEGA has commenced installation of new Distribution lines to three new communities of Nnessa, Nandolo and Bondo.

b) Operation of MEGA Clean Energy Mini Grid: The existing scheme has been rehabilitated and maintained after the canal was damaged during the rainy season. Household connections have increased from 285 to 327 by end of June.

c) Development of Strategies to improve Business Model Viability: The Project recruited an International Technical Advisor towards the end of 2016 and had the first in country mission in February and among other things had held discussions with MEGA to assess the progress made and viability of interventions aimed at enhancing MEGA Business Model Viability. MEGA would like to increase the productive use of energy for the communities through energy dependent rural enterprises. Community interests and

opportunities had been assessed and a compendium of 32 potential cottage industries was established. The key industries being maize milling, welding, bakery, irrigation and carpentry.

MEGA has identified two lending partners to operate a revolving fund and other partners to provide trainings in entrepreneurship and cooperative formation.

2.1.2 Component 2: Replication of MEGA model via Piloting of New Mini-Grid Schemes in other areas of Malawi

a) Implement Pilot BOO Clean Energy Mini Grids: One 40KW Solar Mini Grid Operator, Community Energy Malawi (CEM), has been approved by PSC for award of a micro grant of up to US$125,000 inform of capital equipment procurement to install the mini grid in Sitolo Village, T/A Mlonyeni in Mchinji District. The International Technical Advisor, Project Management Team and the Technical Advisory Committee all visited the site and held discussions with the communities, District Council Officials and CEM regarding their acceptance of the proposal and their expected roles in the project. The visiting teams were satisfied with the responses from the Community leaders and District Authorities for their expressed support to CEM and the project. During the period under review CEM had received a Technical Assistant Microgrant of US$46,200 to support feasibility studies, technical designs, preparation of specification and Bills of Quantities.

b) The Technical Advisory Committee had received through UNDP a revised proposal for the establishment of a 100KW Micro Hydro Mini Grid at Usingini by Practical Action and its main partner Focus. After reviewing the proposal and the site visit findings the Committee made recommendations to PSC for award of the micro grant. The PSC approved award of the grant to Practical Action comprising US$125,000 in form of a micro-capital grant to procure equipment for the mini grid scheme. Furthermore, the other grant component comprised of Technical Assistant Grant amounting to US$100,000. During the period under review Practical Action accessed the first tranche amounting to US$50,000.

2.1.3 Component 3: Institutional Strengthening and Capacity Building for Promotion of Decentralised Mini Grid Applications

a) Establishment of an Information Clearing House for Mini-grids; The Project engaged LUANAR to conduct a advanced level GIS training to officers and stakeholders as a follow up on the initial training held in the previous reporting period. The second training focused more on geospatial data base development and decision making using GIS multicriteria tools. 26 participants were trained including 6 female participants.

Data for populating the Information Clearing House is in progress. The team has undertaken the pilot assessment for potential mini grid sites in two districts of Balaka and Mchinji.

b) Training and Capacity Building; Two trainings were conducted during the period under review by MZUNI in Standards and regulatory compliance for Mini Grids in Malawi. A total of 46 participants including 18 female participants from policy holders, makers, regulators, standards developers and practitioners (NGOs and private Sector). Furthermore, two 2 tier training were conducted with the first tier targeting District Executive Committee (DEC) members from each of the 28 Districts represented by Directors of Planning and Development, District Environmental Officers, District Monitoring and Evaluation Officers aimed at creating awareness for mini grids and creating tools for the incorporation of Energy and Off-grid rural electrification in the District Planning Processes. A total of 84 officers were trained. The second tier involved engaging 4 extension officers from all the 28 districts in raising awareness for decentralized energy services local planning and deployment models. A total of 112 extension workers were trained.

The Project has supported REIAMA in production of Renewable Energy promotion materials and coordination of the RE sector through Regional Meetings and General Assembly meetings.

c) Policy and Regulatory Changes; MERA has initiated an alignment drive of regulations pertaining to mini grids with that promulgated by the SADC Regional grouping RERA. During the period under review, MERA conducted consultations with stakeholders on the current regulations and areas in the regulatory framework that needed to be reviewed.

d) Knowledge Management and Case Studies / Toolkit Development and Promotion: The Project aims at developing Case Studies for the Diesel powered mini grids on the Island, 6 Solar /Wind Mini grids and MEGA mini grid to provide lessons on the successes and challenges each deployment model was facing. In addition, the Project will develop a toolkit that would guide prospective developers of mini grid with information of potential sites, renewable energy resources assessment and regulatory framework.

During the period under review, with support from the International Technical Advisor, the project has commenced the development of ToRs for recruitment of a local and an international consultant for the consultancy to develop the case studies and tool kit.

2.1.4 Component 4: Monitoring, Learning, Adaptive feedback and Evaluation

During the period under review, the project Accounts were audited by Graham Carr Auditors. With an outcome of an unqualified Audit report.

PSC held two meetings during the period under review among other things reviewed the 2016 annual progress report, approved the 2017 Annual Work Plan. Approved the award of two mini grid Operators namely Community Energy Malawi (CEM) and Practical Action.

TAC held two meetings during the period under review and two field visits to potential mini grid sites of Sitolo in Mchinji and Usingini in Nkhatabay.

3.0 PLANNED ACTIVITIES IN THE NEXT PERIOD

Planned activities for the next period are as follows:-

3.1 Outputs under Component 1:

(a) Commissioning of a new 100KW Clean Energy Mini Grid for MEGA

i. Commencement of new Micro Hydro Scheme Civil works

ii. Continuation of installation of new Transmission and Distribution network to 3 communities

iii. Promotion Activities of productive use of energy

(b) Operation and Management Support of MEGA Clean Energy Mini Grid

i. MEGA connections to households

ii. Power generation and sales from MEGA

3.1 Outputs under Component 2:

a) Implement Pilot BOO Clean Energy Mini Grids

i. CEM Commences Activities for the 40KWp Solar Mini Grid leading to

1. Engineering Designs
2. Detailed Feasibility Studies
3. Environmental Management Plan
4. Development of Specifications and Bills of Quantities
5. Procurement of Goods and Services for installation of 45KW Solar Plant and Distribution network at Sitolo in Mchinji.

ii. UNDP provide procurement support services for the new operators

iii. Activities for Practical Action during the next period

1. Engineering Designs
2. Detailed Feasibility Studies
3. Environmental Management Plan
4. Development of Specifications and Bills of Quantities
5. Procurement of Goods and Services for installation of 100KW Micro Hydro Plant and Distribution network at Usingini in Nkhatabay.

3.2. Outputs under Component 3:

a) Establishment of an Information Clearing House for Mini-grids

i. Website Mini Grid Tab Development

ii. GIS Database development

iii. Update on potential mini grid sites

iv. Support stakeholders to maintain / update RE websites to include mini grid developments

b) Training and Capacity Building

- Finalization of Energy Indicators development for inclusion in the District Development Planning Processes and Guidelines
- Training in in High Voltage Line installation for Mini Grid Operators and RE Software for Design and Monitoring of Mini Grids
- South to South visit for sharing mini grid experiences in Tanzania

c) Policy and Regulatory Changes

- Financial support to Policy Completion

d) Knowledge Management and Case Studies / Toolkit Development and Promotion

- Finalization of ToRs and
- Procurement of Consultants
- Case study development
- Launch of Mini Grid Toolkit

4.0 COMMENT ON FINANCIAL PROGRESS

The Ministry received an advance of **MWK 111,795,000** in addition to the **MWK 33,951,699.54** that was carried forward from the 2016 AWP activities and had spent 97% of this total amount during this period under review. The rate of financial and physical delivery outlook is expected to improve in the next period with the new operators expected to be active.

The break down according to the major activities is as follows in Table 1:

TABLE 1: EXPENDITURE PROGRESS TRACKING

PROGRESS REPORT FOR THE INCREASING ACCESS TO CLEAN AND AFFORDABLE DECENTRALISED ENERGY SERVICES IN SELECTED VULNERABLE AREA IN MALAWI(IACADES) PROJECT AS AT JUNE 2017						
Activity Description from AWP (Atlas Activities)	2017 Openning Bal	Q1 2017 Request	Authorised Request Amount	Actual Project Expenditure	Variance	Progress todate
0000000001. Expansion of Mulanje MEGA		24,650,000.00	24,650,000.00	20,921,220.00	3,728,780.00	85%
0000000002.Replication of MEGA		21,750,000.00	21,750,000.00	-	21,750,000.00	0%
0000000003 : Promote Decentralized MiniGrid	32,897,792.27	58,507,500.00	91,405,292.27	110,156,171.75	-18,750,879.48	121%
0000000004 : Monitoring,learning and adaptive feedback		1,812,500.00	1,812,500.00	3,721,435.80	-1,908,935.80	205%
0000000005. Project Management	1,053,907.27	5,075,000.00	6,128,907.27	6,842,731.74	-713,824.47	112%
Total	**33,951,699.54**	**111,795,000.00**	**145,746,699.54**	**141,641,559.29**	**4,105,140.25**	**97%**

4.2. Management Monitoring

The Ministry convened a SEM and GEF Technical Advisory Committee (TAC) meeting on the 27th January and 26th April 2017 in Mponela. The meeting discussed, evaluated and approved the Progress Reports, CEM Proposal and FOCUS/Practical Action Proposal.

The Programme Steering Committee met on the 3rd February and 23rd June 2017 in Lilongwe.

5.0 Conclusion

The Project is noted to be on track to implement all the activities that have been planned in the 2017 Annual Work Plan even though it will require acceleration of some activities to catch up on the lost time in the first quarter. The finalization of the award of micro grant to CEM and Practical Action should improve the project delivery rate.

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