

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 15th October, 2013

Location: Boardroom, Chancery house 6th floor

Time: 10.00 am

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1.	Mr. N'gan'ga Munyu	REA (Chairman)	CEO
2.	Eng. James murithi	REA	Ag manager
3.	Mr. Yoshiaki SAMEJIMA	JET (JICA Expert Team)	Deputy Team Leader/Micro Hydropower generation
4.	Mr. Ken SHIMOMUKAI	JET	Project coordinator
5.	Mr. Yuka NAKAGAWA	JET	Biogas/Biomass power generation
6.	Mr. Francis Mworia	JET	Assistant officer
7.	Mr. Evans Njenga	JICA	Renewable Energy
8.	Mr. Semekiah Ongong'a	REA (Secretary)	Assistant Engineer-Renewable Energy

Min 1/10/2013 -Constitution of the meeting and adoption of agenda

Chair called the meeting to order at 10.15 am thereafter members introduced themselves and all in concurrence, the following agenda was presented and adopted.

AGENDA

1. Introduction
2. Adoption of the agenda
3. Revised PDM – James Muriithi
4. Progress Report for Lot 1
5. Progress Report for Lot 2
6. Progress Report on Capacity Building
7. Work Plan for the next 1 month
8. A. O. B

Min 2/10/2013 –Revision of the Project Design Matrix (PDM)

The attached PDM was distributed and expounded on to the meeting.

(a) Eng. Muriithi presented the draft PDM he had compiled with the MOE&P's Eng. Kiva. He informed the meeting that they had modified the project purpose to include the second item on capacity building to undertake renewable energy project. However, JICA expressed the difficulty

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

in adding another project purpose. The meeting agreed to modify other parts of PDM, so that the project purpose does not need to be added.

(b) JET proposed anchoring the PDM in the REA's action plan however the Chair informed the meeting that REA as at now did not have an Action Plan.

It was resolved that the models established by the project can be incorporated in the REA's Renewable Energy programme at the operational level in the annual work schedule.

(c) The Chair noted that output indicator no. 3-6 of the PDM, could not be achieved for it would undertake development of MHP and Wind models within the stipulated time frame. He called for the amendment to have a practicable model for MHP, Biogas and Wind in future to ensure linkage between project purpose and output.

It was resolved that output indicator no. 3-6 could not be achieved as it was in the PDM and members agreed on adopting pre-feasibility studies for MHP, Biogas and Wind. However the Chair noted that knowledge transfer should be adequate to allow the C/Ps to independently carry out elaborate feasibility studies after the project.

JICA expressed concern that Activity 3-6 may involve more than a few days for validation depending on the comments arising from the workshop. The Chair noted that it does not involve lengthy process of validation. Eng. James Muriithi seconded that it normally takes only one day. Therefore the meeting agreed to hold the workshop to validate the guidelines.

(d) The Chair recommended the involvement of REA's Corporate Planning department in the consequent meeting to achieve output item no. 4 in the PDM.

Min 3/10/2013 –Progress report for Lot 1 and Lot 2

The report was presented by JET. The attached material was distributed and explained to the meeting. JET noted that Management Committees in the Lot 1 PV projects were sometimes reluctant with their work. The meeting was informed too that lot 1 had faced challenges of insufficient power for refrigeration services. It was resolved that challenges in lot 1 be addressed after design and implementation of lot 2.

The Chair suggested that the monitoring of Lot 1 to be done at least once a month. JET responded that they would consult the team internally for its possibility.

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Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 4/10/2013 –Progress report on capacity building

JICA/REA affirmed that the trainings on technology transfers were on course. The Chair stated that there was need to revise the C/Ps in respective technologies to have an impact on the knowledge transfer. The following revision was adopted;

	C/P	Technology
1.	Semekiah Ongong'a	MHP
2.	Judith Kimeu	
3.	Antony Wanjara	
4.	Caroline Kelly	BIOGAS
5.	Gilbert Gichunge	SOLAR PV/WIND
6.	Colletta Koech	
7.	Hannington Gochi	

The Chair requested to be provided with the monthly details of engagement between REA and JICA

Min 5/10/2013 –A.O.B

(a) JET wanted clarification on involvement of REA's County Representatives on the JICA/REA projects to which the Chair responded that REA's County Representatives could be informed of the projects undertaken in their respective Counties, however responsibility to monitor was solely on the JET and REA's Renewable Energy staff.

(b) JET requested to know the working relationship between REA and MOE&P and under whose docket the Energy Centre was. The Chair stated that since the promulgation of the Kenya's new Constitution, a number of policy drafts and bills have been undertaken and that the 6th Draft Policy on this was available. He confirmed that the Energy centre would be managed by REA. Eng. James Muriithi was tasked to obtain the 6th draft Energy Policy from Mr. Ronoh or Mr. Edward of REA and share with the members.

(c) The meeting agreed that monthly programme schedule would be circulated between JET and C/Ps however weekly reports could be circulated too via email for frequent information sharing. .

(d) REA was informed by JET on the existence of a national stakeholders seminar on MHP scheduled for 24th October 2013. REA was requested to attend.

Min 6/10/2013 –Closing the meeting

There being no other business the meeting ended at 12.15pm




**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

Min 1/10/2013 –Next meeting

Members agreed to hold monthly meetings on Tuesdays of the 3rd Week of every Month. Next meeting shall be held on 19th November 2013.

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Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Chairman ~~_____~~ Ngũgĩ Mwangi

Secretary ~~_____~~ Caroline Kelly, REA

Dr.
Li # 芳, Team Leader, JET

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 10th December, 2013

Location: Boardroom, Chancery house 8th floor

Time: 10.00 am

IN ATTENDANCE

	NAME	ORGANISATION	TITTLE
1.	Mr. N'gan'ga Munyu	REA (Chairman)	CEO
2.	Eng. Ephantus Kamweru	REA	Chief Manager Renewable Energy
3.	Eng. James murithi	REA	Senior Engineer
4.	Judith Kimeu	REA	Assistant Engineer
5.	Colleta Koech	REA	Assistant Engineer
6.	Antony Wanjara	REA	Technician
7.	Caroline Kelly	REA	Assistant Officer-Renewable Energy
8.	Gilbert Gichunge	REA	Trainee Engineer
9.	Penina Karomo	REA	Environment Scientist
10.	Francis Mworja	JET	JET Assistant
11.	Deepak Bista	JET	PV Technologist
12.	Minori Chitani	JICA Kenya	Representative
13.	Ken Shimomukai	JET	Coordinator
14.	Samson Ondiek	REA	Economist
15.	Mr. Semekiah Ongong'a	REA (Secretary)	Assistant Engineer-Renewable Energy

Min 1/12/2013 -Constitution of the meeting and adoption of agenda

Chair called the meeting to order at 10.15 am. Members then introduced themselves and the following agenda was presented and adopted.

AGENDA

1. Introduction
2. Progress of the Project
3. Confirmation of PDM/PO
4. Training in India
5. Projects Schedule up to end of December
6. Evaluation of technical transfer.
7. Resource management
8. A.O.B

Min 2/12/2013 –Confirmation of minutes

The Chair noted that confirmation of minutes was not in the agenda and asked for inclusion of the same.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 3/12/2013 –Progress report

Progress report for the Solar PV lot 1 was presented by Mr. Ken Shimomukai. He informed the meeting that the community financial model that was used to raise money for Operation & Maintenance had not raised as much money as expected and that the system could not be sustainable. To this the Chair asked to know the cost of O&M which the system could not meet. Mr. Antony Wanjara informed the meeting that the largest component of O&M was in Battery purchase and maintenance.

Mr. Ken Shimomukai informed the meeting that there was lack of Financial Analyst to carry out cost analysis of project, to which the Chair appointed Mr. Samson Ondiek of REA.

Environment

Mr. Ken informed the meeting that JICA/REA team was coordinating with the NEMA (National Environmental management Authority) on projects requiring EIA assessment.

Solar PV lot 2

The meeting was informed that preparations for the lot 2 Solar PV Bidding documents were in progress and shall be through very soon. JICA/JET informed the meeting that they have requested for financial estimates to Six (6) companies and Three (3) firms submitted their estimates.

MHP

The meeting was informed that the JET expert was still in Japan and would come back in the Month of January 2014. However it was noted that the JET MHP expert had assigned the counterparts on the Technology a number of responsibilities on data collection before embarking on the next stage of the feasibility study. The meeting was also informed that the MHP expert and Counterparts held a MHP seminar on 25th October 2013 at the 8th floor Chancery building.

Wind

The seminar for wind was held in JKUAT. It was attended by Hannington Gochi (REA) and Dr. Dei (JET).

Biogas

The JET and REA counterpart informed the meeting that an agreement was reached to implement a Biogas project in Nyeri and that an expert was working on its design. The meeting was informed that the Biogas would focus on heating and not electricity generation. Eng. James Mureithi stated that there was budget to undertake the project.

The chair noted that it was paramount to do a report on Isinya Biogas project so as to Cushion and mitigate the possible failures for a similar project in Nyeri.



Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 4/12/2013 – Confirmation of PDM/PO

Mr. Ken Shimomukai on behalf of JICA/JET presented a copy of revised PDM to the meeting. The Chair requested that the copy be circulated to the members for scrutiny and any other amendment. The Chair asked to include in the PDM, a column of the persons who would be undertaking various activities. Mr. Shimomukai responded that a total of Eight (8) experts were to be marked for the outlined activities in the PDM and Eng. Kamweru informed the meeting that he would assign REA counterparts for the respective items.

Min 5/12/2013 – Training in India

The counterparts Mr. Semekiah Ongong'a, Ms. Caroline Kelly and Ms. Penina Karomo presented their training report on the Exposure Visit to Renewable Technologies in India. To this the Chair reiterated that the counterparts should come up with a technology solution to adopt in the renewable Energy Master plan.

Min 6/12/2013-Projects Schedule up to end of December

The meeting resolved that the projects schedule up to end of December 2013 be circulated to the members. The Chair asked Samson to be the financial Counterpart however Eunice Wambui was proposed and Samson was tasked to inform her of the new responsibilities.

JICA/JET also requested for a Community Mobilizer to which the chair stated that a REA person from Corporate Communications would be appointed to take up the new task.

Min 7/12/2013-REA and JICA/JET time engagements.

Mr. Samson requested to know how much of the time JICA would want to have of the REA Counterparts. The chair responded to this that time engagements would be solved by adequate personal planning and communication between the JICA/JET and the C/Ps.

Mr. Shimomukai also requested Two (2) days of C/Ps time per Week to attend to Experts since they are not Country residents and are occasionally required to work on short times and strict schedules.

The Chair asked that emails of the work programme be sent to the C/Ps and copied to him.

Min 8/12/2013-Evaluation of Technical Transfers.

Eng. Kamweru wanted to know if the C/Ps were able to design projects from the technical transfers knowledge received. He too proposed and requested the involvement of experts in design and costing of REA projects with the C/Ps to strengthen the Technical transfers.

To this Chair sought to know if in the Technical transfer programme there was a goal to empower the C/Ps to be able to design. He also asked the experts to work on milestones on Technology transfer.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 9/12/2013-A.O.B

1. The Chair asked to know where the next training would be and proposed that it be held in Japan for C/Ps have had opportunity to train in developing countries like India and it would be paramount to share in the experience of a developed world.
2. Colleta requested that JICA/JET be flexible in their weekly schedules where the C/Ps are involved and stressed on the need for consultation in drawing the work programmes. To this the meeting was informed that the work programmes should be submitted by Wednesday every week to REA and modified/confirmed by Friday every week.
3. Eng. Kamweru proposed also the inclusion of Environmental Social impacts in the technical transfers.

Min 10/12/2013-Confirmation of minutes of the previous meeting.

The minutes of the last meeting were confirmed as true, the deliberations of the meeting held on 15th October 2013. They were proposed by Eng. James Mureithi and Seconded by Mr. Ken Shimomukai. The Chair asked to include action items in the minutes.

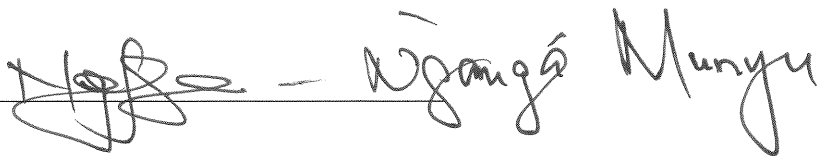
Min 11/12/2013-Ending the meeting and the Next meeting.

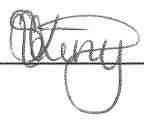
There being no other business the Chair ended the meeting at 11.50am. The next meeting shall be held on 21st January 2014.


Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1.	Circulation of revised PDM (incorporating persons responsible in the activities) to members for final review	Ken Shimomukai (JET), Chief Manager Renewable Energy (Eng. Kamweru)	17 th Dec, 2013
2.	Circulation of weekly work programme.	Ken Shimomukai (JET), Chief Manager	every week by Friday
3.	Coming up with Renewable energy technology solution proposal for rural electrification based on training attended in India.	Semekiah Ongong'a, Caroline Kelly and Penina Karomo	28 th Feb2014
4.	Identification and inclusion of Community Mobilizer (REA) and Financial Analyst (REA) for the JICA/REA Rural electrification project	JICA/JET, CEO, Samson Ondiek Eunice Wambui (Corporate Planning), Lucy Muricho (Corporate Communications)	Immediate

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Chairman  - Ngungu Mungu

Secretary  Caroline Kelly, REA


Team Leader, JET

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 21st, January, 2014

Location: Boardroom, Chancery house 8th floor

Time: 10.00 am

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1.	Eng. Ephantus Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2.	Eng. James murithi	REA	Senior Engineer
3.	Judith Kimeu	REA	Assistant Engineer
4.	Caroline Kelly	REA (Taking minutes)	Assistant Officer-Renewable Energy
5.	Francis Mworira	JET	JET Assistant
6.	Deepak Bista	JET	PV Technologist
7.	Evanson Njenga	JICA Kenya	Consultant
8.	Ken Shimomukai	JET	Coordinator
9	Yoshiaki Samejima	JET	MHP expert
10.	Samson Ondiek	REA	Economist

Min 01/01/2014 -Constitution of the meeting and adoption of agenda

Chair called the meeting to order at 10.15 am. Members then introduced themselves and the following agenda was presented and adopted.

AGENDA

1. Adoption of previous minutes
2. Progress report
3. Upcoming schedule
4. Evaluation of knowledge transfer
5. AOB

Min 02/01/2014 –Confirmation of minutes

The minutes from the previous meeting were proposed by Judith Kimeu and seconded by Ken Shimomukai. The summary is as indicated below;

- A financial analysis to be conducted for lot 1 projects to determine the viability of the financial model.
- Environmental and Social Impact Assessment was conducted for the lot 2 projects the report is awaiting Nema approval.
- Evaluation of bids for Lot 2 projects was conducted on 14th - 15th January 2014 with representatives from both REA (Colleta and Hannington) and MOE&P (Edwin Owiti).

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

- There was concern that there was little correspondence from the counterpart, the expert were concerned that they may not have adequate time to fully conduct technical transfer due to limited time, they therefore urged for cooperation from the counterparts.
- Nyeri high school has been selected as one of the sites for biogas project because it has similar conditions to Mangu High school i.e. adequate feedstock and established sewer system.
- The PDM document has already been signed and a copy was presented to REA.
- The team that went for training and exposure visit in India will come up with a proposal for a technology learnt during the visit.
- Eunice from corporate planning and Lucy from Communication department joined the JICA team as counterparts. Owen from Communication department, representing Lucy joined the JICA team that was undertaking stakeholders meeting in Samburu for Lot 2 projects.
- The chair noted the Experts had limited time for the technical transfer and counterparts are very busy with their regular works; he therefore suggested that counterparts should find time even on weekend for technical transfer despite the busy schedule and compensate for any lost time.

Min 03/01/2014-Progress Report

Financial planning and management

It was noted that the business model might not raise the projected money for operation and maintenance of the Lot 1 projects. Hannington from the JICA team therefore set up a meeting with the stakeholders; MoE&P, MoH, MoE and REA to find out if they will be willing to finance the O&M and way forward to ensure sustainability.

A stakeholders meeting is currently being undertaken with JICA and REA team. The team is compiling data from the community around the project area.

Solar PV

The technical evaluation of Lot 2 bidding was done; the report was forwarded to JICA Kenya for legal and other considerations before the contract is awarded. JICA team was requested to share their evaluation method in light of technical transfer for comparison with the REA, which will be compiled, by Colleta and Hannington.

For reference JET provided the copy to chairperson the part of Tender document "A. Requirements for Technical Proposal, Necessary information for bid evaluation" which was base for Technical evaluation.

It was proposed that Antony should be included in Lot 2 projects since he was actively involved in Lot 1 and had been trained on the Solar PV.

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MHP

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

The expert raised concerns that there has been minimum communication with the counterparts. It was suggested that they immediately arrange for a meeting to share the program of activities and share the data that had been collected. The team was required to visit the area to confirm the actual conditions and collect data on the surroundings.

The chair noted that data collection and feasibility study was not enough, the team should go further and do a detailed design and cost for the project so that when funding is available the project will be implemented with the supervision of the expert this will demonstrate the effectiveness of the technical transfer.

However, Experts noted that extra knowledge and know-how from another expert would be necessary for detailed design, and also time and budget is limited for this particular project.

Biogas

The chair reiterated that caution should be taken on the selected site for implementation to avoid any mistakes that may lead to the system failure, as has been witnessed with the pilot projects.

A report about the rehabilitation recommendations for Isinya pilot project that were proposed by the JICA Expert was presented to the Chief manager, Renewable Energy for considerations.

Min 04/01/2014-Upcoming schedule

The Experts schedule that was presented did not have any activities for the other technologies in the month of January and February, except for solar. This was because the Experts felt they were not getting cooperation from their counterparts. The chair however pointed out that it was important they share the activities and report any activity that was behind schedule for his action.

Activities should also be assigned to counterparts even when the expert was not in the country. The experts were therefore required to send the activities by the end of the week, 24/01/2014.

Weekly schedule are circulated every Tuesday, REA team was requested to make comments before Friday noon, if there are no comments it is assumed that everyone has confirmed the activities, they are therefore required to adhere to the schedule.

Min 05/01/2014-Evaluation of Knowledge transfer

The chair pointed out that technical transfer should not be limited to feasibility study only. It should include a detailed design, costing and implementation of the project. The expert will only be able to evaluate the technical transfer when they supervise the counterpart during implementation of a project.

The Experts indicated that the period for the technical transfer would conclude in October 2014. Monitoring and Reporting will be done by February, 2015, Therefore Experts urged the




Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

counterparts to avail and utilize the opportunity they have during their brief stay in the county.

Min 06/01/2014-A.O.B

1. Part of JICA/JET activities is to make comments on the energy policy, they sought clarification on REA proposed new mandate. They were however informed that the draft document was still in review and no conclusions had been made.
2. JICA/JET wanted the activities of the projects to be included in Renewable Energy performance contract (P.C.). They also wanted a copy of the current departmental P.C, which Eng. Muriithi agreed to share with Experts
3. JICA/JET was requested to give ideas of simple renewable technologies that were successful in their country that can be replicated in rural areas of the country. They were also invited to propose ideas of appropriate technologies that can be included in the Renewable energy strategy document that is being formulated in the department.

Min 07/01/2014-Ending the meeting and the Next meeting.

There being no other business the Chair ended the meeting at 1.00pm. The next meeting shall be held on 18th February 2014 at 10:00am.

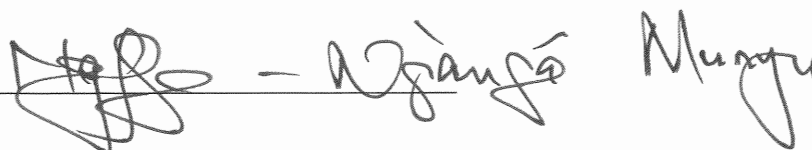
Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1.	Conduct financial evaluation of Lot 1 projects	Eunice Wambui (Corporate planning)	The deadline was not agreed on
2.	Circulation of weekly work programme.	Ken Shimomukai (JET), Chief Manager	Every week by Friday
3.	Circulation of upcoming schedule and activities during the Expert stay in the country.	All JICA Experts	24 th January, 2014

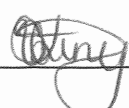
**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

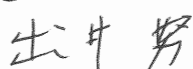
4	Follow up on the EIA study report that was submitted to NEMA for approval	Penninah Karomo	Immediate
5	Coming up with a proposal for technology to be replicated in the county after exposure visit	Semekiah Ongonga, Caroline Kelly and Peninnah Karomo	28 th Feb, 2014
6	Follow up on Experts/ Counterparts activities	Eng. Kamweru	Once the program of activities are shared
7	Proposal for simple Renewable Energy technologies that have succeeded in Japan that can be incorporated in the R.E. strategy document	JICA/JET	Immediate
8	Progress write-up to be prepared by Counterparts	Counterparts	18 th February, 2014
9	Monthly schedule to be prepared by Experts	Experts	18 th February, 2014
10	Departmental Performance Contract to be shared	Eng. Muriithi	The deadline was not agreed on

Chairman



Secretary

 Caroline Kelly, REA



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Team Leader, JET

**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 18th February, 2014

Location: Boardroom, Chancery house 8th floor

Time: 10.00 am

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1.	Nganga_Munyu	REA (Chairman)	Ag. Chief Executive Officer
2.	Eng. Ephantus_Kamweru	REA	Chief Manager Renewable Energy
3.	Minori_Chitani	Jica Kenya	Representative
4.	Tsutomu Dei	JET	Team Leader
5.	Hidehito Wakabayashi	JET	Finance
6.	Yuka Nakagawa	JET	Biogas/Biomass
7.	Peninnah_Karomoh	REA	Environmentalist
8.	Colleta_Koech	REA	Assistant Engineer
9.	Eng. James Murithi	REA	Senior Engineer
10.	Judith Kimeu	REA	Assistant Engineer
11.	Caroline Kelly	REA (Taking minutes)	Assistant Officer-Renewable Energy
12.	Francis Mworira	JET	JET Assistant
13.	Deepak Bista	JET	PV Technologist
14.	Ken Shimomukai	JET	Coordinator
15.	Yoshiaki Samejima	JET	MHP expert
16.	Samson Ondiek	REA	Economist
17.	Antony Wanjara	REA	Technician
18.	Semekiah_Ongonga	REA	Assistant Engineer
19.	Gilbert Gichunge	REA	Engineer, Renewable
20.	Caroline Wambui	REA	Assistant, Corporate Planning
21.	PeninahMacharia	REA	Secretary

Min 01/02/2014-Constitution of the meeting and adoption of agenda

Chair called the meeting to order at 10.15 am. Members then introduced themselves and the following agenda was presented and adopted.

AGENDA

1. Adoption of previous minutes
2. Progress report from REA and JICA
3. Upcoming schedule
4. Evaluation of knowledge transfer
5. Optimization of engagement time
6. AOB

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 02/01/2014–Confirmation of minutes

The minutes from the previous meeting were proposed by Judith Kimeu and seconded by Ken Shimomukai. Matters arising are as summarized below;

- Eunice, Caroline Wambui and Expert had a financial evaluation meeting in the counties in areas where the Lot 1 projects are located with a view to evaluate the structure and management of finances.
- Environmental and Social Impact Assessment conducted for the lot 2 project has obtained Nema Approval.
- Lot 2 has been awarded to Power Point Systems; Joint site visit was done together with the contractor the previous week.
- Expert appreciated effort being made by the counterpart to attend technical transfer meetings but indicated that they (Experts) would be available on weekends and after working hours to compensate for any lost time.
- Nyeri high school biogas progress was not pursued further since a lot of effort was being put on the rehabilitation of Isinya project and Maximization of Mangu project.
- The team that went for training and exposure visit in India are working on a proposal of a technology learnt during the visit, the document should be ready by 28/02/2014.

Min 03/02/2014-Progress Report

Financial planning and management

Experts and counterparts will visit the sites for Lot 1 projects to evaluate the business model and the financial management. They will also conduct another training on financial management since the person in charge who had been trained earlier had left the institutions. A visit to the County Office and other stakeholders; REA, MOE &P and MOH will be scheduled to discuss a way forward on the maintenance.

Solar PV

Award of Tender for Lot 2 was done. Power Point Systems was awarded the works. A joint site visit with contractor, JICA solar Expert and members of the community, was conducted the previous week. Inspection of equipment will be done this time round before the equipment are delivered to the site

The chair therefore noted that it was important that the selected institution sign a memorandum of understanding before the onset of the project to give the school its expected

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

obligation on maintenance and operation. After consultation with JICA Experts, a draft MOU should therefore be prepared and signed during the planning stage.

Solar Expert Mr. Deepak has given the REA counterparts the assignment of collecting the data of the previously installed sites so that they can evaluate the data and determine the causes of their failures. The chairman concurred with the assignment stating that it was important for REA to evaluate their previous project.

MHP

The team visited Kapsabet, one of the project site, to obtain river flow data for planning and design. They have also been doing data analysis obtained from the Meteorological department. REA counterparts are expected to continue with analysis. The chair noted that it was important that future visits engage the county Minister for Energy so that they assist in mobilizing the community and supporting the project.

Biogas

The biogas guidelines, that give information on assessment, planning, design and O&M that is being prepared by the Expert has been shared with the REA counterparts for comments.

It was agreed that preparation of technical specification for Nyeri site should continue despite focus being put on the rehabilitation and maximization of the pilot projects.

Min 04/02/2014-Upcoming schedule

Weekly schedule have been shared regularly as had been agreed in the previous meetings, i.e. every Friday of the new week.

Min 05/02/2014-Evaluation of Knowledge transfer

The general feedback from the counterparts was that the technical transfer was beneficial and there was a lot that had been learnt from the Experts.

There was a suggestion of a training session that focuses on specific technology; the meeting was informed that the project did not have that kind of training component due to a limited budget that was allocated for this project.

The experts were requested to share the references and any other relevant books that was used to prepare the guideline, this would help in building the resource capability of REA.

Min 05/02/2014-Optimization of engagement time

The REA counterparts have availed themselves for the technical transfer though the Experts felt that they should give more time than is the current situation. The chair pointed out that REA counterparts may not find as much time due to other engagement but reiterated on the need to make time on weekends and after work to compensate for any lost time. The Experts were willing to work on these occasions.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 06/02/2014-A.O.B

1. The meeting was informed that there were plans to organize the next overseas counterpart training in Thailand in August 2014. The details of the training and duration could not be provided since they had not been confirmed.
2. The issue of distances of selected lot 2 sites from the national grid was raised (actual distance from Maralal) but it was already discussed between JET and REA previously.
3. The Experts requested for a draft Performance Contract (PC) for the financial year 2013/14, this PC included the JICA project activities incorporated.

Min 07/02/2014 -Ending the meeting and the Next meeting.


There being no other business the Chair ended the meeting at 1.00pm. The next meeting shall be held on 11th March 2014 at 10:00am.


Action Items:


Item No.	Action	Person (s) Responsible	Timeline
1.	Conduct financial evaluation of Lot 1 projects	Eunice Wambui (Corporate planning)	The exercise is underway, they will report progress in next project meeting
2.	Circulation of weekly work programme	Ken Shimomukai (JET),	Every week by Friday
3.	Discuss the content of the MOU for Lot 1 projects	JICA/REA	To be discussed
4	Coming up with a proposal for technology to be replicated in the county after exposure visit	Semekiah_Ongonga, Caroline Kelly and Peninah_Karomo	28 th Feb, 2014
6	Follow up on Experts/ REA counterparts activities	Eng. Kamweru	Weekly

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

7	Evaluation of previous solar projects done by REA	Colleta Koech	A schedule to be agreed on
8	Progress report write-up to be prepared by REA counterparts	REA counterparts	To be presented in the next project meeting

Chairman  — Ngũgĩ Mwangi — 11/3/2014

Secretary  — Caroline Kelly, REA


Team Leader, JET

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 11th March 2014

Location: Boardroom, Chancery house 8th floor

Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1.	Nganga Munyu	REA (Chairman)	Ag. Chief Executive Officer
2.	Eng. Ephantus Kamweru	REA	Chief Manager Renewable Energy
3.	Tsutomu Dei	JET	Team Leader
4.	Hidehito Wakabayashi	JET	Finance
5.	Peninnah Karomoh	REA	Environmentalist
6.	Colleta Koech	REA	Assistant Engineer
7.	Eng. James Muriithi	REA	Senior Engineer
8.	Caroline Kelly	REA (Taking minutes)	Assistant Officer-Renewable Energy
9.	Francis Mworira	JET	JET Assistant
10.	Ken Shimomukai	JET	Coordinator
11.	Samson Ondiek	REA	Economist
12.	Antony Wanjara	REA	Technician
13.	Semekiah Ongonga	REA	Assistant Engineer
14.	Gilbert Gichunge	REA	Engineer, Renewable Energy
15.	Caroline Wambui	REA	Assistant, Corporate Planning
16.	Hannington Gochi	REA	Senior Technician

Min 01/03/2014-Constitution of the meeting and adoption of agenda

Chair called the meeting to order at 10.15 am. The following agenda was presented and adopted.

AGENDA

1. Adoption of previous minutes.
2. Progress Report from REA and JICA.
3. Upcoming Schedule.
4. Report on the progress of assignment left behind by the Experts.
5. Any Other Business.

Min 03/01/2014-Confirmation of minutes

The minutes from the previous meeting were proposed by Antony Wanjara and seconded by Ken Shimomukai. Matters arising are as summarized below;

- The Experts and Counter parts who had visited the Lot1 site for financial analysis were still working on the report which will be presented at the next meeting. They

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

however reported that the revenue raised was not enough to cater for the replacement of the components: charge controllers, Battery and Inverters. Revenue was summarized as follows:

Sn	Facility Name	Total Revenue Since inception (Ksh)
1	Itumtum Primary school	31,420
2	Olemoncho primary school	Not recorded well, 6,870
3	Ilkinyeti Dispensary	18,117
4	Olkinyei Dispensary	Not recorded well, 360

The chair pointed out that the team includes the savings made from the school previous energy cost as part of revenue. While the revenue will be used for the replacement of components, the facility management committee needs to raise visible income. Operator's salary is becoming burdensome in all the facilities, in one of the schools visited, there was a suggestion to pay the operator or use one of their staff in order to reduce the expenditure on salary. The team visited Ministry of Education offices in the project area to seek their cooperation and willingness to replace the components should the revenue collected not enough, it was agreed that the operator's budget would be included in the school's maintenance budget. The amount was however not stated.

A comprehensive report on the visit will be presented in the next meeting.

- The project description report for Lot 2 projects was submitted to NEMA. NEMA has responded with a letter stating that EIA is not required. The Expert contract was terminated, the counterpart was however asked to get involved in the other projects since environmental issues were cutting across all the other technologies.
- Inspection of Equipment at the contractor's facility starts on 21st March 2014, installation works begin on the following week.
- Most of the Experts have left for Japan, but they had left some assignment to be undertaken by the Counterparts, the progress report was presented in the meeting.
- It was agreed that biogas generated from the Nyeri project will be utilized for cooking and not for electricity generation.
- The team that went to the Exposure visit in India presented a report on DC solar charging lamps and Gasifiers for thermal application in schools to increase efficiency of burning firewood.

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Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 03/03/2014-Progress Report

Financial planning and management

Experts and counterparts visited the Lot 1 project sites and reported that the revenue collected so far could not sustain the project and an alternative source of money was necessary to be able to replace the components. During the visit to the county offices some were willing to incorporate replacement of component expenditure in the maintenance budget of the institution. A follow-up meeting had been scheduled at the Ministry Of Health headquarter on 11th March 2014 afternoon with representation from the REA and MOE&P.

Solar PV

The installation for Lot 2 facilities will begin from 24th March, 2014. REA counterpart will join the Expert in the supervision of the installations.

The solar Counterpart, Colleta Koech, was asked to conduct a sampling analysis of the facilities that had earlier been installed with solar system to determine their performance and any challenges that the institutions were facing. She was also supposed to conduct an assessment of other organizations dealing with solar projects, to understand the challenges they are facing in the market.

MHP

Hasururu site in Nandi Hills had been visited for purposes of studying the general reticulation and the load centers for the purposes of the project implementation. It was noted that the estimated power output was 343kW and an estimated demand of 236kW.

Development of grid extension report will be shared with the Experts. The chair also urged the team to develop a detailed analysis including cash flow and compile a report.

Hydrological analysis for the power to be produced was done and the report presented in the meeting.

Biogas

The biogas guidelines, that give information on assessment, planning, design and O&M that is being prepared by the Expert has been shared with the counterparts for comments.

The development of Bills of Quantity for the Nyeri site was underway. The Expert had forwarded part 4 of the manual guideline for comments from the Counterparts.

Wind power

Wind data analysis for Habasweni site was done and a presentation was done at JKUAT during a Renewable Energy conference held at the institution. Site visit was also done in Marsabit. The team had planned a visit to Baragoi site to compare the data that had been done by the Ministry of Energy earlier. The chair indicated that the team should also conduct studies on the REA projects i.e. St. Peterson Memorial and North Horr boys to ensure that they are working optimally. There was a request that the Expert team include the purchase of wind analysis software in the scope of technical transfer. The meeting was however informed that the Excel data entry and analysis that they were using was more effective and the software request would be made to JICA for the comment.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Technology learnt during the exposure visit to India

The team that visited India for the exposure visit to Renewable technology presented two technologies that would be exploited and replicated in the country;

- a) **D.C. solar charging:** This technology was adopted from a model witnessed in India where a village was using direct solar without inverters to charge solar lanterns. This eliminates the cost of batteries and inverters since they will not be required for this model. A small fee would be charged for the charging facility, the money would be used for the maintenance of the lanterns.
There was a general consensus that the model was suitable for off grid areas especially where there was no alternative source of lighting, however the team was requested to incorporate the element of management of the business model and Payback period for the cost of the lanterns. They were also required to come up with a detailed report and a program of implementation.
- b) **Gasifiers for institutions:** This technology was witnessed at the TERI centre in India where they were using wood chips and briquettes as feed for the gasifier. This technology would increase the efficiency of burning firewood that is the main source of energy in institutions in the country. The gasifier is a clean source of energy.
The technology was generally accepted the team was however asked to check the availability of the gasifier in the market, Make comparison with the improved cook stove and incorporate management of tar and leakage of producer gas (CO) that is highly poisonous. They were also required to come up with work plan for implementation and compare the technology with what had been developed in the country.

Min 04/03/2014-Upcoming schedule

Weekly schedule have been shared regularly as had been agreed in the previous meetings, i.e every Friday of the new week.

Min 05/03/2014- Report on the progress of assignment left behind by the Experts.

All the counterparts gave a report on the progress that has been made on the activities left behind by the Experts.

Min 06/02/2014-A.O.B

1. The financial Expert appreciated the cooperation he got from the counterpart during the visit to the county offices for Lot 1 projects. The Expert would prepare a guideline for financial analysis.
2. There was a request for JICA to purchase equipment that would help in analysis of data for small hydro sites

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

3. There was a meeting with the Ministry of Health offices, Nairobi to share with them the progress of Lot 1 and request for provision of budget for maintenance and replacement of components. Hanningtone (REA) together with representation from the MOE&P

Min 07/03/2014-Ending the meeting and the Next meeting.

There being no other business the Chair ended the meeting at 1.00pm. The next meeting shall be held on 29th April, 2014 at 10:00am.


Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1.	Prepare a report on financial analysis after site visit of Lot 1	Eunice Wambui and Caroline Wambui (Corporate planning)	29 th April, 2014
2.	Circulation of weekly work programme.	Ken Shimomukai (JET)	Every week by Friday
3.	Supervision of Lot 2 installation and give a report	Colleta Koech	29 th April, 2014
4	Incorporate comments that were made on the report and present a detailed report including a program of implementation	Semekiah Ongonga, Caroline Kelly and Peninah Karomo	29 th April, 2014
6	Sample solar projects that have earlier been done by REA and report on their performance.	Colleta Koech	Report on progress by 29 th April, 2014
7	Conduct an assessment of organization dealing in Solar panels, Batteries and Inverters	Colleta Koech	29 th April, 2014
8	Feedback on provision of wind data analysis software	JICA Kenya	
9	Progress report write-up to be	REA Counterparts	29 th April, 2014


**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

	prepared by Counterparts		
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CHAIRMAN

Signature: 
 Full Names: Wangari Mungu
 Title: Ag. CEO
 Organization: RETA

JET

Signature: 
 Full Names: TSUTOMU DEI
 Title: TEAM LEADER
 Organization: JET (JICA Expert Team)

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 29th April 2014

Location: Boardroom, Chancery house 8th floor

Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng. Ephantus Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2	Ken Shimomukai	JET	Coordinator
3	Judith Kimeu	REA (Taking Minutes)	Engineer, Renewable Energy
4	Antony Wanjara	REA	Technician
5	Semekiah Ongonga	REA	Engineer, Renewable Energy
6	Gilbert Gichunge	REA	Engineer, Renewable Energy
7	Caroline Wambui	REA	Assistant, Corporate Planning
8	Hannington Gochi	REA	Senior Technician
9	Evanson Njenga	JICA Kenya Office	Consultant
10	Susan Mbataru	JET	Assistant to team leader

Constitution of the meeting and adoption of agenda

Chair called the meeting to order at 10.15 am. The following agenda was presented and adopted.

AGENDA

1. Adoption of previous minutes.
2. Progress Report.
3. Upcoming Schedule.
4. Upcoming counterpart training.
5. Any Other Business.

Min 01/04/2014--Confirmation of minutes

The minutes from the previous meeting were proposed by Antony Wanjara and seconded by Ken Shimomukai. Matters arising are as summarized below;

Min 02/04/2014-Progress Report

Financial planning and management:

Meeting at the Ministry Of Health headquarter on 11th March 2014 afternoon with representation from REA and MOE&P. A request was made to the officials from the Ministry of Health if they could assist in the maintenance of the systems installed in their institutions.

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The response was positive as they were willing to support the project. However, modality was not discussed with the comments that counties have the budget.

Solar PV

For Lot 2 installations inspection of materials was done by the counter parts though not all materials were available at the said time. It was reported that installation had started though the counterparts were not involved. Gilbert and Hannington will be the ones participating in the Lot 2 projects and are scheduled to move to site as from Monday 5th May 2014.

Sample analysis on institutions installed with solar by the MOE&P or REA in the earlier years was not done as earlier agreed. It was agreed that the exercise will be carried out as the solar team carries out inspections for the ongoing solar for schools (Laptop Project).

MHP

The team is currently at the design stage of both the civil structures and the electro-mechanical design. The counterparts reported that they are facing difficulty in the exercise and require the expert to be around to go through the exercise together. To this the team mentioned that a consultative email to Mr. Samejima would be sent by the end of the day.

Biogas

A pre-feasibility study for Nyeri site was underway as per departments Performance contract with the aim of using the gas for Cooking and not electricity generation. Mr. Shimomukai informed the meeting that any questions regarding BQ could be directed to Ms. Nakagawa.

Wind power

The data from Baragoi was still undergoing analysis and the reports will be presented once ready. It was reported that the turbine installed at North Horr Boys' Secondary school has broken down. After implementation, the contractor was not paid the 10% retention fee and it was proposed that the amount could be used to repair the turbine. REA may wish to purchase a wind data analysis software, if Dr. Dei can advise what software is appropriate.

Technology learnt during the exposure visit to India

The team that visited India for the exposure visit to Renewable technology presented technologies that would be exploited and replicated in the country;

- a) **Gasifiers for institutions:** This technology was accepted as the one to be adopted and it was reported that discussions were ongoing with the help of Eng. Muriithi. The team was advised to research on other harmful gases that could be produced from the gasification process.

Min 03/04/2014-Upcoming schedule

Weekly schedules have been shared regularly as had been agreed in the previous meetings, i.e every Friday of the new week.

Min 04/04/2014- Upcoming counterpart training

It was reported that the training would be in Thailand tentatively from 2nd to 15th August 2014. The main areas of training will be solar PV, biogas and financial management. The

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budget is currently being worked by Mr. Shimomukai. The chair requested that the number of participants should be shared in time.

Min 05/04/2014-A.O.B

1. There was a request for JICA to purchase equipment that would help in data collection for small hydro sites.
2. JET experts (Mr. Wakabayashi and Ms. Kitauchi) had inquiries and questionnaires as below.

I. Request for information on sustainable energy model

Judith (REA) came up with a proposal on what Mr. Wakabayashi may be talking about. She suggested that on the item of capital expenditure which involves:

- (i) Initial Expenditure
 - (ii) Replacement Investment
- Should be; build, own and manage

On the issue of budget transfer system which involves

- i. Head Office (available of adequate technical capacity)
 - ii. Project sites
 - iii. Budget for replacement investment
- Should be build, own, manage and transfer.

II. Questionnaire of the current budget status for REA from the point of view of financial management

Ms. Kitauchi requested for some information from REA regarding a feasible model in terms of financial and institutional as below;

(a) Whether MoE&P and REA have authority and responsibility for budget allocation management for PV solar systems owned by other ministries.

-The members responded that each ministry had its own budget allocation management and therefore would not support activities of another ministry.

(b) Whether there is a roadmap of decentralization of MoE&P and REA and what powers (authority the branches had in terms of budget management if any)

- The members responded that MoE&P and REA were already decentralized in terms of representation only and no budget management duties or responsibilities were vested on the branches.

(c) Whether MoE&P had a subsidiary provision system for rural electrification

- The members responded that there was no such provision.

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(d) Whether MoE&P and REA have or will get enough budget for future replacement of the installed systems.

- The members responded that at the moment they do not have budgets and any future replacements should be handled by the ministries owning the facilities. However a lot needs to be done to bring these ministries (MoH, MoEST) on board.

(e) Work description of MoE&P and REA as described in the official documents (laws, decrees, etc)

-It was reported that this information can only be obtained through an official request to the Human Resource Department.

(f) Annual budget for MoE&P and REA for the fiscal year July 2013 to June 2014.

-It was reported that this information can only be obtained through an official request to the Human Resource Department.

(g) Staff allocation: number of officers and supporting staff in each department.

-It was reported that this information can only be obtained through an official request to the Human Resource Department.

(h) Role demarcation with county governments in the field of electrification and management of PV solar systems, who will manage and replacement at schools, dispensaries in terms technical, human resources and financial points.

-It was reported that transition to county governments was still in progress and therefore it is not clear at this point in time where the responsibility lies.

(i) JET requested REA to collect information on mobile phone network extension plan of Safaricom and other companies.

-The meeting was informed that this information can be obtained by JET from mobile network vendors through official communication.

III. Discussion paper on how to utilize corporate budget systems of private firms.

-Ms. Caroline Wambui was requested by Eng. Kamweru to respond to the questions raised.

Min 06/04/2014-Ending the meeting and the Next meeting.

There being no other business the Chair ended the meeting at 11.50am. The next meeting shall be held on 20th May, 2014 at 10:00am.

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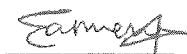
**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1.	Prepare a report on financial analysis after site visit of Lot 1	Eunice Wambui and Caroline Wambui (Corporate planning)	29 th April, 2014
2.	Circulation of weekly work programme.	Eng. Kamweru, Ken Shimomukai (JET)	Every week by Friday
3.	Supervision of Lot 2 installation and give a report	Hannington Gochi	5 th May, 2014
4	Gasifiers for institutions: Come up with a schedule of the activities.	Semekiah Ongonga, Caroline Kelly and Peninah Karomo	20 th May, 2014
5	Sample solar projects that have earlier been done by REA and report on their performance. <i>To be done as they carry out inspection of ongoing solar installations.</i>	Colleta, Hannington, Gilbert, Semekia and Anthony	Report on progress by 20 th May, 2014
6	Feedback on provision of wind data analysis software. <i>JET help REA in sourcing for the right software.</i>	JET and REA	
7	Answer the questionnaire by Mr. Wakabayashi	Caroline Wambui (Corporate Planning)	

CHAIRMAN

Signature:



Full Names:

ENG. EPHTANTUS KAMWERU

Title:


CHIEF MANAGER - RENEWABLE ENERGY

Organization:

RURAL ELECTRIFICATION AUTHORITY OF KENYA (REA)

**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

JET

Signature: 

Full Names: Ken Shimomukai

Title: Project Coordinator

Organization: JET (JICA Expert Team)

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING

Date: Tuesday, 20th May, 2014

Location: Boardroom, Chancery house 8th floor

Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1.	Eng. Ephantus Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2.	Minori Chitani	JICA	Representative
3.	Ken Shimomukai	JET	Coordinator
4.	Francis Mworja	JET	Solar Assistant
5.	Caroline Kelly	REA (Taking Minutes)	Assistant Officer, Renewable Energy
6.	Penninah Karomoh	REA	Environment Scientist
7.	Caroline Wambui	REA	Assistant corporate planning
8.	Semekiah Ongonga	REA	Assistant Engineer
9.	Judith Kimeu	REA	Assistant Engineer
10.	Samson Ondiek	REA	Economist

Min 01/05/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.15 a.m. The following agenda was presented and adopted.

AGENDA

1. Adoption of previous minutes.
2. Progress Report from REA and JICA.
3. Upcoming Schedule.
4. Analysis of knowledge transfer.
5. Optimization utilization of engagement time
6. Any Other Business.

Min 02/05/2014-Confirmation of minutes

The minutes from the previous meeting were proposed by Semekiah Ongonga and seconded by Ken Shimomukai. Matters arising are as summarized below;

- During the meeting to the Ministry of Health head quarters that was attended by Hannington and the JET team, the team promised support but no money was allocated. This indicated that the support might not be monetary.
The Chairman informed the JET team that;
 - Ministries of health activities were devolved in the counties and advised JET to hold meetings with respective executive county ministers for health.



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Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

- There was a need to quantify the estimated budget for Operation and maintenance and the amount that they would like to obtain from the respective counties. To this, Mr. Shimomukai responded that the quantification was done and shared at the monthly meeting (on March 11th 2014).
- JET should clarify the ownership of the project i.e. whether the respective counties will own it.
- REA should prepare an MOU for ownership and maintenance, which will clearly indicate obligations and responsibilities.

The chairman informed JET that REA would have to create a budget for maintaining solar systems in primary schools after installation. Consideration may be made to incorporate maintaining JICA solar projects, but it was not possible to include the dispensaries since health facilities were a function of the county government.

- Analysis of schools that had been installed with solar earlier will be done alongside supervision since they were in the same location as the ones being installed currently. The meeting was informed that JET requested to do the solar analysis in which they would sample at least 5 schools. There was a general feeling that the sample would not be representative and the team should have considered a sample of 100 schools to be able to get a good indicator since these institutions were scattered all over the country.
- The counterparts dealing with wind power had collected data and were working on the analysis report. It was reported that the North Horr wind turbine was not working.
- Follow-up of tasks assigned to Counterparts by Experts, the progress was reported as follows:

Solar: Colleta & Hannington

1. Current status of the past solar PV projects (at least 5)
The activity is on going and the report will be presented in the July meeting since the solar team will be conducting supervision and may not be available for the next meeting on 10th June 2014.
2. Revision of list of installations and capacity by year
The activity to be conducted concurrently with activity (1) on solar above

Possible new scope

3. Current policy on grid-connected PV system
Currently the Feed in Tariff Policy is applicable to all grid connected PV systems
4. Grid code/Distribution code about grid Connected PV system
IEEE/ IEC standards are applied
5. Protection of grid-connected PV system (including Earthing)
IEEE/ IEC standards are applied
6. Types of grid-connected PV system (FIT, net metering, whiling)

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There are no systems installed that are running on FIT terms. Net metering is applicable to one system that was installed by SOS children's home. The system is however not working, as it is not synchronizing between the PV system and the grid power.

Micro-hydro: Judith Semekiah & Antony

1. Consideration of flow rate (by end March)
The assignment had not been undertaken since there was no clear guidance. The counterpart was waiting for the expert to give clear direction. The chairman however reiterated that the counterpart should seek clarification from the expert and proceed with the assignment.
2. Basic design of civil structures (by end May)
The counterpart will prepare technical drawing and engage the expert on the size and capacity of the design. Civil structures should be determined once the size has been determined.
3. Projection of demand (by end March)
The task was completed and report submitted.
4. Basic design of turbine and generator (by end May)
The assignment was completed and report submitted.
5. Confirmation of existing distribution lines (by end March)
6. Plan for distribution lines (by end may)
The activity is ongoing

Wind: Hannington, Colleta

1. Wind analysis of Baragoi By May 25th
The analysis was completed and counterpart was working on the analysis report.

Biogas: Gilbert & Caroline

1. Monitoring and data collection of Mangu HS (By end May)
The activity is ongoing.
2. Rehabilitation of Isinya Girls HS (confirmation of progress)
The tender document was prepared detailing all the technical specifications.
3. Preparation of Pre-FS of Baraton University. (confirmation of progress)
This activity was not in the REA's list of activities for the financial year and should not have been included in the list.
4. Bill of Quantity Preparation of Nyeri High School (to start)

The scope of work for this financial year is a pre feasibility study and this is ongoing.

5. PDM

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Mr. Shimomukai requested that PDM Activity 1-2-3 and 2-2-3 to be done with REA and MOE&P counterparts, to which Eng. Kamweru offered to cooperate.

Min 03/05/2014-Progress Report

Financial planning and management

The activity that was conducted did not indicate all the financial indicators i.e. IRR, NPV, Payback Period it only looked at the income-Expenditure. The stakeholders training conducted focused more on bookkeeping.

Solar PV

Lot 2 installations are ongoing.

MHP

The team is currently doing the design.

Biogas

Research activities are ongoing at Mangu and pre feasibility study on going at Nyeri high school.

Wind power

Data analysis for the wind data collected is ongoing.

Min 04/05/2014-Upcoming schedule

Weekly schedule have been shared regularly as had been agreed in the previous meetings, i.e every Friday of the new week.

Min 05/05/2014-Analysis of knowledge transfer.

- There was a general feeling that the knowledge transfer was satisfactory and all the counterparts had received some meaningful technological transfer.
- The financial management and analysis was however felt that lacked proper guideline especially for someone who was doing it for the first time since key financial indicators were omitted in the transfer. This feeling was going to be shared with the Expert for his comment.
- Ms. Chitani wanted to know the level of workload for the counterparts. To this Mr. Semekiah informed the meeting that the counter parts had so much work because of the laptop program and also in the diesel power plant.
- The counterparts also feel they need to have more engagement time with the experts

Min 06/05/2014-A.O.B

1. The MHP and Biomass counterpart were coming into the country on 13/07/2014 and 19/06/2014 respectively. Counterpart should therefore make time to ensure that they utilize the time effectively.
2. The Expert needed to understand the counterpart workload so that they can be able to schedule the activities and avoid instances of clashing in activities.

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Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

3. The Experts indicated that they needed participation of counterparts in solar inspection and handing over.
4. JICA Experts were requested to give input in environmental and comment on the documents done i.e. licenses, guideline on mitigation and comment.
5. A draft Memorandum of Understanding with the school and dispensary will be prepared and presented in the next meeting.
6. *JET experts (Mr. Wakabayashi and Ms. Kitauchi) had inquiries and questionnaires as below.*

I. Question and first draft of the Model for public facility electrification by solar Pv systems-Institutional Framework for O&M and long term management of the system

It was agreed that corporate planning department will provide answers and get back to JET

II. Questionnaire/Case study for laptop program

It was agreed that corporate planning department will provide answers and get back to JET

Min 07/05/2014-Ending the meeting and the Next meeting.

There being no other business the Chair ended the meeting at 1.00pm. The next meeting shall be held on 10th June, 2014 at 10:00am.

Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1.	Conduct analysis of Institutions installed with solar (REA)	Colleta, Hannington, Semekiah, Antony and Gilbert	10 th June 2014
2.	Circulation of weekly work programme.	Ken Shimomukai (JET)	Every week by Friday
3.	Supervision of Lot 2 installation and give a report	ColletaKoech, Hannington	10 th June 2014
4	A draft MOU in consultation with Legal department on maintenance of solar equipment with the institution	Samson Ondiek	10 th June 2014
5	Update on assignment left by Experts	REA counterparts	10 th June 2014

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**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

6	Feed back on questionnaire left behind by Wakabayashi and Kitauchi	Samson and Caroline (Corporate planning)	10 th June 2014
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CHAIRMANSignature: Full Names: ENG EPHRAIM KIBWERATitle: CHIEF MANAGER - RENEWABLE ENERGYOrganization: RURAL ELECTRIFICATION AUTHORITY (REA)JETSignature: Full Names: Ken ShimomukaiTitle: Project CoordinatorOrganization: JET (JICA Expert Team)

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Tuesday, 10th June, 2014
Location: Boardroom, Chancery house 8th floor
Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Ng'ang'a Munyu	REA (Chairman)	Ag. CEO
2	Eng. James Muriithi	REA	Senior Engineer
3	MinoriChitani	JICA	Representative
4	Ken Shimomukai	JET	Coordinator
5	Francis Mworia	JET	Solar Assistant
6	Tsutomu Dei	JET	Team Leader
7	Judith Kimeu	REA(Taking Minutes)	Assistant Engineer
8	Anthony Wanjara	REA	Technician
9	Caroline Wambui	REA	Assistant corporate planning
10	Lucy Muricho	REA	Senior Communications Officer
11	Samson Ondiek	REA	Economist

Min 01/06/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.15 a.m. The following agenda was presented and adopted.

AGENDA

1. Adoption of previous minutes.
2. Progress Report from REA and JICA.
3. Upcoming Schedule.
4. Optimization solar designs for laptop project.
Any Other Business.

Min 02/06/2014-Confirmation of minutes.

The minutes from the previous meeting were proposed by Judith Kimeu and seconded by Ken Shimomukai. Matters arising are as summarized below;

- REA should prepare an MOU for ownership and maintenance, which will clearly indicate obligations and responsibilities: A draft MOU in consultation with Legal department on maintenance of solar equipment with the ~~institution~~ *facility*
- Analysis of schools that had been installed with solar carlier will be done alongside supervision since they were in the same location as the ones being installed currently. Anthony reported that he had visited 15 schools and observed that maintenance free batteries cannot work in extreme hot areas among other challenges. Together with the other solar counterpart they are to give a report on the findings.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

- Lot 2 installation on six(6) institutions was done but REA counterpart did not carry out supervision of the works. It was reported that the systems were working but have not been handed over to the community. Joint inspection will be done early July when the solar expert is back in Kenya. ^{facility}
- No MOU was done during the handover of Lot 1 installations to the facilities, it was agreed that the ownership of systems installed in lot 1 institutions will remain with REA.

Min 03/06/2014– Progress Report from REA and JICA.

Solar: Colleta & Hannington:

1. Current status of the past solar PV projects
The activity is ongoing and the report will be presented in the July meeting.
2. Supervision of Lot 2 Installations.
 - Joint inspection will be done early July when the solar expert is back in Kenya.
 - Bista solar expert commented that joint inspection is subject to availability of flooded batteries. PowerPoint Systems Ltd is now suggesting procuring them by August.

Micro-hydro: Judith Semekiah & Antony

Judith

1. Consideration of flow rate
Done and the computations are as below
 - The result of river discharge calculation is $Q = 1.33 \text{ m}^3/\text{s}$ (by current meter)
 - Theoretical power output is 343KW
2. Basic design of civil structures (by end June)
Ongoing

Semekiah

3. Projection of demand (done)
 - Estimated power demand is 236.36KW
4. Basic design of turbine and generator (by end May)
Ongoing

Anthony

5. Confirmation of existing distribution lines)
6. Plan for distribution lines (by end may)
The activity is ongoing

Wind: Hannington, Colleta

1. Wind analysis of Baragoi
The analysis was counterpart was working on the analysis report.

Biogas: Gilbert & Caroline

1. Monitoring and data collection of Mangu HS

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Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

- The activity is ongoing.
2. Rehabilitation of Isinya Girls HS
The tender document was prepared detailing all the technical specifications.
 3. Pre feasibility study of Nyeri High School ongoing

Environment: Peninah

1. JET expert contract ended the counterpart to give a report on the technical transfer done.

Financial Management: Caroline & Eunice.

1. Feed back on the last questionnaire sent by Wakabayashi and Kitauchi
Calculation of IRR and NVP for Lot 1 Installations to be done by REA

Min 04/06/2014 Upcoming schedule.

1. The following JET's are coming and the counterparts.
 - a) Yoshiaki Samejima – Micro Hydropower
 - b) Bista Deepak- PV - power generation
 - c) Hidehito Wakabayashi – Financial Management
 - d) Yoko Kitauchi – Community Development/Community monitoring.
2. International workshop
 - a) JICA and REA plan to hold an international workshop in 2015 February to exchange concepts of the rural electrification model using renewable energy.
 - b) Participants will be drawn from 6 countries. The chair proposed that a team be formed to spearhead the preparation.

Min 05/06/2014: Optimization solar designs for laptop project.

- a) Eng Muriithi informed the team that he had a meeting with JICA who had proposed that for the ongoing solar installations for the schools, it would be more efficient if we used 48V system as opposed to the current 12V system.
- b) The advantage of the 48V system was minimized system losses and the charging time of the batteries will also be optimized.
- c) The chair requested Eng. Muriithi and the solar team to do a technical proposal inclusive of the cost implication and present it to the chair.

Min 06/06/2014: Any Other Business.

- a) Shimomukai informed the team that he had booked a meeting with the county officers in charge of health and education in Kajiado and Narok counties. He advised the team that the purpose of the meeting was to share information on the projects installed. The meeting was proposed for 13th June 2014 and 16th June 2014 respectively. His request was for REA and MOE representatives to be present.
- b) Mr. Dei informed the team for the upcoming ninth JKUAT scientific, technological and industrial conference to be held in 13th and 14th November 2014. He requested that REA/JICA should participate in the conference with presentations on solar, wind, biogas and Mini hydro, which was accepted by the chair.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 07/06/2014-Ending the meeting and the Next meeting.

- a) There being no other business the Chair ended the meeting at 12.00pm. The next meeting shall be held on 16th July, 2014 at 10:00am.

Action Items:


Item No.	Action	Person (s) Responsible	Timeline
1	Report on findings after analysis of Institutions installed with solar (REA)	Colletta, Hannington, Semekiah, Antony and Gilbert	16 th July 2014
2	Circulation of weekly work programme.	Shimomukai (JET)	Every week by Friday
3	Supervision of Lot 2 installation and give a report Subject to availability of counterpart (Bista) in the country.	Colleta Koech, Hannington	16 th July 2014
4	A draft MOU in consultation with Legal department on maintenance of solar equipment with the institution	Eng. Kamweru	16 th July 2014
5	Report on environmental technical transfer	Peninah Karomo	16 th July 2014
6	Feed back on the last questionnaire sent by Wakabayashi and Kitauchi	Samson and Caroline (Corporate planning)	13 th June 2014
7	Technical proposal on optimizing solar design for laptop project to be presented to the chair.	Eng. Muriithi	24 th June 2014
8	Circulation of parameters used in solar design of the ongoing laptop project to Bista.	Eng. Muriithi and Anthony	17 th June 2014
8	Attend information sharing meeting at Kajiado and Narok between JET, REA, MoE&P and representatives from counties.	Eng. Muriithi and Ken	13 th JUNE 2014 and 16 th June 2014
10	Communication with representatives from samburu County.	Shimomukai(JET) and Lucy REA	16 th July 2014
11	Invite someone from the MOE&P to attend meeting in Narok and Kajiando	Eng. Muriithi	13 th June 2014
12	Financial management need to be redone on lot 1 sites including calculation of IRR and NVP	Samson and Caroline (Corporate planning)	
13	International Workshop to exchange concepts of rural electrification using renewable energy	JET and REA	

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**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

14	Scientific, technological and industrial conference in JKUAT. (13 th -14 th Nov 2014) Invitation and call for papers	JET and REA	25 th July 2014
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CHAIRMANSignature: Full Names: Ngũgĩ MwangiTitle: Ag. CEOOrganization: REA**JET**Signature: Full Names: TSUTOMU DELTitle: TEAM LEADER / WIND POWEROrganization: JET (JICA Expert Team)

Project for establishment of Rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Wednesday, 16th July, 2014
Location: Boardroom, Chancery house 8th floor
Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng E. Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2	Eng. James Muriithi	REA	Senior Engineer
3	Judith Kimeu	REA	Engineer
4	Peninah Karomoh	REA	Environmental Scientist
5	Ogawa Tadayuki	JICA	Senior Advisor
6	Yuki Masuya	JICA	JICA Officer
7	Evanson Njenga	JICA	Consultant
8	Ken Shimomukai	JET	Coordinator
9	Francis Mworia	JET	Solar Assistant
10	Yuka Nakagawa	JET	Biogas
11	Yoko Kitauchi	JET	Community Development Monitoring
12	Hidehito Wakabayashi	JET	Financial Management
13	Bista Deepak	JET	PV Technology
14	Yoshiaki Samejima	JET	MHP
15	Hannington Mudegu	JET	Project Team Assistant

Min 01/07/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.15 a.m. The following agenda was presented and adopted.

AGENDA

1. Adoption of previous meeting.
2. Progress Report from REA.
3. MOU for ownership and maintenance of the project (REA)
4. Optimizing solar design for laptop project (REA)
5. PDM Progress (JET)
6. Overview of Model from JET
7. International Workshop (REA)
8. Any Other Business.

EK Y.S

Project for establishment of Rural Electrification Model using Renewable Energy in the republic of Kenya

Min 02/07/2014– Adoption of previous meeting.

The minutes from the previous meeting were proposed by Judith Kimeu and seconded by Ken Shimomukai. Matters arising from the action items are as summarized below;

- Report on findings after analysis of institutions installed with solar by REA and MoE&P in past years. No solar counterpart was available in the meeting to give a report.
- Lot 2 installation on six (6) institutions joint inspection is subject to availability of flooded batteries. PowerPoint Systems Ltd is now suggesting procuring them by August.
- A Draft MOU was drafted by Mr. Wakabayashi and shared with legal department of REA for their input.
- Mr. Shimomukai informed the team that he had successfully held information sharing meetings with a team drawn from REA& MoE&P in Kajiado, Samburu and Narok.

Min 03/07/2014– Progress Report from REA and JICA.

Solar: Colleta&Hannington:

1. Current status of the past solar PV projects
The activity is ongoing and the report will be presented in the July meeting.
2. Supervision of Lot 2 Installations.
Joint inspection is subject to availability of flooded batteries. PowerPoint Systems Ltd is now suggesting procuring them by August.

Micro-hydro: Judith Semekiah& Antony

1. Analysis of discharge data.
The team is facing the challenge of unavailability of data; Data from WRMA is not consistent with lots of missing data.
The team has sourced for Rainfall data from KMD(Kenya Meteorological Department)
2. Ms. Judith is working with Mr. Samejima, but Mr. Semekiah and Mr. Anthony are in the field for another assignment.

Wind: Hannington, Colleta

1. Wind analysis of Baragoi
Counterpart was working on the analysis report.

Biogas: Gilbert & Caroline

1. Monitoring and data collection of Mangu HS
The activity is ongoing.
2. Rehabilitation of Isinya Girls HS
The tender document was prepared detailing all the technical specifications.
3. Pre feasibility study of Nyeri High School ongoing

EK Y.S

Project for establishment of Rural Electrification Model using Renewable Energy in the republic of Kenya

Environment: Peninah

The environmental Counterpart informed the team that her report was ready and she will share her report by mail to the team. The report will then be discussed in the upcoming meeting.

Financial Management; Caroline & Eunice.

Calculation of IRR and NVP for Lot 1 Installations to be done by REA

Min 04/07/2014– MOU for ownership and maintenance of the project (REA)

The chair informed the team that Mr. Wakabayashi has drafted an MOU which he shared with legal team for their input. The Draft outlines the ownership and responsibility of each team. It also shows the role of operation and maintenance team.

Min 05/07/2014– Optimization solar designs for laptop project.

- a) Eng. Muriithi informed the team that he had a meeting with JET on the technical proposal of DC system voltage for Laptop program with lighting system of classrooms. He informed the team that there will be minimal change on the materials and equipment as compared to the specifications earlier issued on the tender.
- b) Mr. Bista inquired about the size of component/equipment to be used in Phase III of the laptop project tender. He recommended that the power demand be accurately calculated before choosing the component/equipment size.
- c) The Chair mentioned that power supply for Laptop system and lighting system shall be separated and lighting system shall be DC24V. The chair suggested to compare the costing of previous qualified amount/budget for Laptop system with the newly proposed design for DC48V system (Laptop system) and DC24V system (lighting system).
- d) Eng. Muriithi mentioned that there would be a meeting with MOE&P on 22nd July and the system design will be discussed. The results were said to be shared afterwards.

Min 06/07/2014– PDM Progress (JET)

Mr. Samejima informed the chair that monitoring of Lot 2 activities in the PDM output 1 health service institution and output 2 school models will be commenced in this month. This involves accounts books, cash flow statements and operation and maintenance reports.

Mr. Samejima informed the chair that the Project has a lot of events in October and November, such as;

- Progress and sharing meeting among REA, MoE&P, MOEST, MOH and counties,
- Agreement of financial support,
- Evaluation meeting of pilot projects,
- Presentation in JKUAT conference regarding simple pre-feasibility studies,
- Workshop for validate guideline of MHP, Biogas and Wind, etc.

And he requests further coordination of REA and JET.

EK
Y.S

Project for establishment of Rural Electrification Model using Renewable Energy in the republic of Kenya

Min 07/07/2014– Overview of model (JET)

Ms. Kitauchi shared the team the operation and management model for dispensary and primary schools. From the model the ownership will be with MoH and MoEST with REA being the installer giving technical advice.

The institutions formed a management committee to monthly report on the O&M and the financial condition of the solar system. The management committee also hired a PV system operator to run the system on daily basis.

Min 08/07/2014– International Workshop

The chair was informed that planning for the workshop (planned from February 2nd to 6th 2015) was ongoing with communications department spearheading the planning.

Min 09/07/2014– Any Other Business.

- i. Ms. Masuya informed the meeting that the terminal evaluation will be done early October, and requested for cooperation. She requested the members present to be reminded about outputs rather than activities, and making the model.
- ii. Ms. Nakagawa presented a study on utilization of off grid PV system after grid connection to the institutions earlier installed with standalone systems. A comparison of three cases is ongoing with case 1 being Grid connected PV system with reverse flow (with battery), case 2 being Grid connected PV (without battery), and case 3 being Grid-tie with inverter charger (no reverse-flow). The chair advised that the cases with Non- reverse flow was more applicable in our case.
- III. A list of the equipment procured to JICA Expert Team in June 2014 for technical assistance was presented. The equipment is currently stored in Mombasa Road office. The chair was also informed that the equipment will be handed over to REA at the end of the project.

For safety reason, JET team requested for a lockable shelf with a key for storage of the equipment in Mombasa road office.

- IV. Mr. Shimomukai informed the chair that the trip to Thailand for training will be from 2nd August 2014 to 16th August 2014.

Min 07/06/2014-Ending the meeting and the Next meeting.

- a) There being no other business the Chair ended the meeting at 01.30pm. The next meeting shall be held on 19th August, 2014 at 10:00am.

Action Items:

Item	Action	Person (s) Responsible	Timeline
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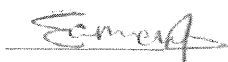
EK YS

Project for establishment of Rural Electrification Model using Renewable Energy in the republic of Kenya

No.			
1	Report on findings after analysis of Institutions installed with solar (REA)	Colletta, Hannington, Semekiah, Antony and Gilbert	19 th August, 2014
2	Circulation of weekly work programme.	Shimomukai (JET)	Every week by Friday
3	Supervision of Lot 2 installation and give a report Subject to availability of flooded batteries	Colletta Koech, Hannington	October
4	A draft MOU in consultation with Legal department on maintenance of solar equipment	Eng. Kamweru	19 th August, 2014
5	Report on environmental technical transfer to be shared by Email prior to discussion during next month's meeting.	Peninah Karomo	19 th August, 2014
6	Financial management need to be redone on lot 1 sites including calculation of IRR and NVP	Samson and Caroline (Corporate planning)	19 th August, 2014
7	Report the progress of preparation of International Workshop to exchange concepts of rural electrification using renewable energy	REA	19 th August, 2014
8	Scientific, technological and industrial conference in JKUAT. (13 th -14 th Nov 2014) Invitation and call for papers	JET and REA	25 th July 2014

CHAIRMAN

Signature:



Full Names:

ENG KAMWERTUS KAMWERU

Title:

CHIEF MANAGER - RENEWABLE

Organization:

REAJET

Signature:



Full Names:

Yoshiaki SAMEJIMA

Title:

Deputy Team Leader/Rural Electrification/Micro Hydropower GenerationOrganization: JET (JICA Expert Team)

Equipment/Component in different DC system volta

S. No.	Items	DC 12V		DC 24V		DC 48V	
		(REA system as reference)		(Calculated)		(Calculated)	
Equipment		Capacity	Remark	Capacity	Remark	Capacity	Remark
1	PV system (W)	1440	120W x 12nos	1920	120W x 16 nos	1920	120W x 16 nos
2	Inverter (kW)	1500	1no	3000	1 no	3000	1 no
3	Batteries (AH, 12V mono block type)	200	9 nos	200	8 nos	200	8 nos
4	Charge Controller (A)	60	2 nos	80	1 no	40	1 no
Cables size		Size (mm ²)	Max. length (m)	Size (mm ²)	Max. length (m)	Size (mm ²)	Max. length (m)
1	(i) For Section PV to Isolator (REA system) (ii) For section PV to Junction box (New system)	Not defined		10	20	10	20
2	(i) For Section Isolator (REA system) (ii) For Section Junction box to CC (New system)	Not defined		25	4	10	4
3	For Section CC to Battery	Not defined		70	3	35	3
Others							
1	Total system correction factor	1.3		1.4		1.4	
2	Days of Autonomy (i) Designed (ii) From the adjusted battery capacity	(i) 3 days		(i) 3 days (ii) 2.5 days		(i) 3 days (ii) 2.5 days	
3	Connections						
	(i) PV modules	2 groups (7 PV module in each group)		2 Series 8 Parallel		4 Series 4 Parallel	
	(ii) Batteries	1 Parallel		2 Series 4Parallel		4 Series 2 Parallel	
	(iii) Charge controller	2 nos. (Both CC connecting to same battery bank)		1no		1no	

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Project for Establishment of Rural Electrification Model using Renewable Energy

PROGRESS OF ACTIVITIES IN PROJECT DESIGN MATRIX (PDM)

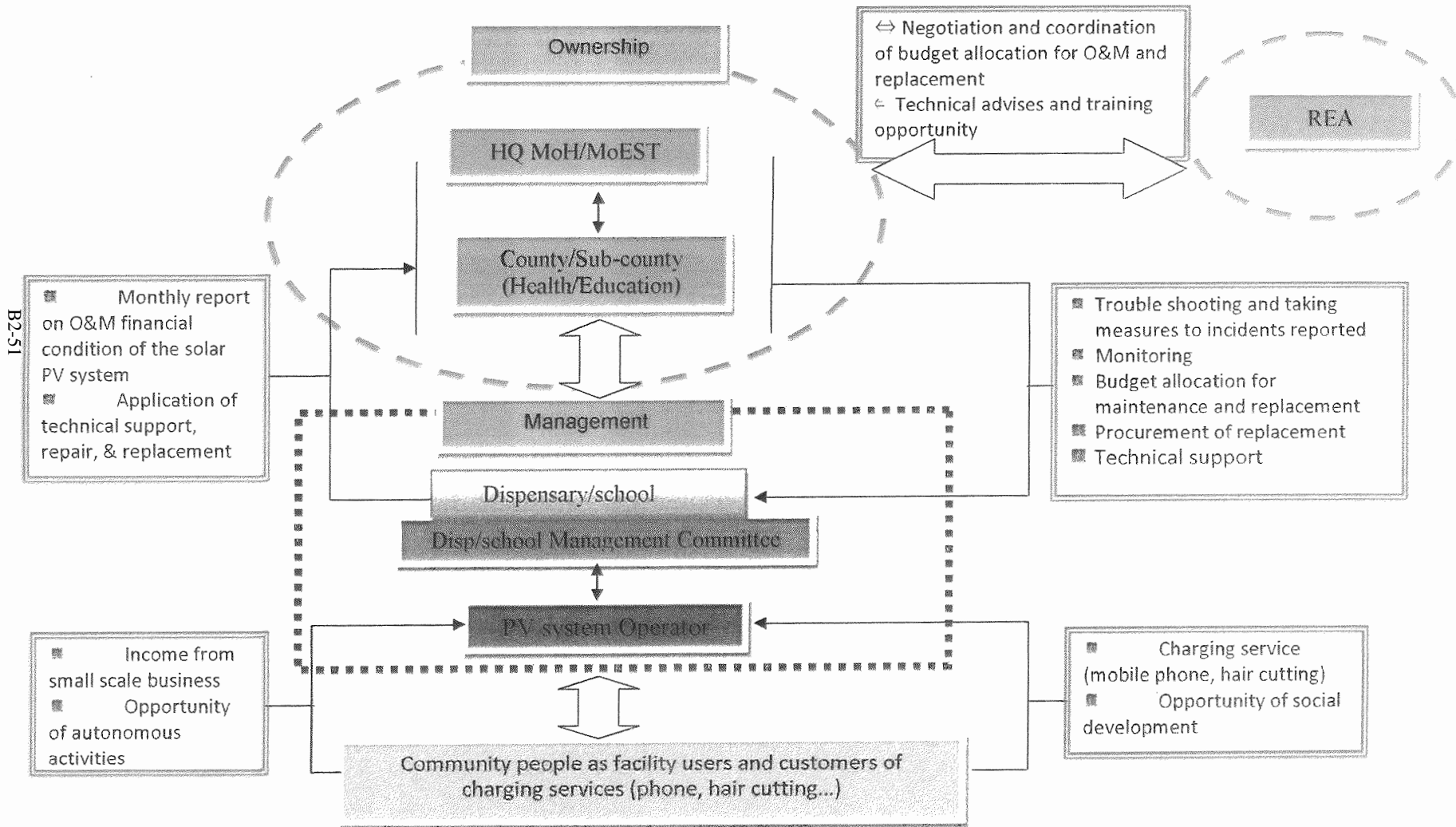
As of 15 July 2014

No.	Activity/ Output	Person in charge	Key Organization	Indicator	Schedule	Progress		
For Preparation								
1	Set up a Working Group	REA	-	-	Oct. 2013 (2nd JCC)	100%		
For All Outputs								
1	A Weekly Project Status Report	JEs & C/Ps	-	Weekly e-mail.	Since Oct. 2012	<i>34 times</i>		
2	Monthly Project Meeting	REA	REA, JET & JICA	Monthly	Since Oct. 2012	<i>8 times</i>		
3	Progress Report	JET	-	Biannualy	Since Sep. 2011	<i>4 reports</i>		
1 For Output 1/ The Health Service Institution Model								
1-1 National Level								
1-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	<i>50% in progress</i>		
1-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOH	At least twice	Nov. 2014	<i>50%</i>		
1-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	<i>40%</i>		
1-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	<i>100%</i>		
1-2 County/ Sub-county Level								
1-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Monitoring starts in July 2014	Lot 1 100% 2 of 2	Lot 2 0% 0 of 3	
1-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Monitoring starts in July 2014	100% 2 of 2	0% 0 of 3	
1-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	Oct. 2014	50% 1 of 2	50% 1 of 2	
1-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Oct. 2014	<i>80%</i>	<i>80%</i>	
1-3 Local/ Institution Level								
1-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Oct. 2014	<i>80%</i>	<i>80%</i>	
1-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%	
1-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of health institution & management committee	Lecture & OJT	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-4	Daily sale records	Operator	-	-	Monitoring starts in July 2014	<i>100% 2 of 2</i>	0% 0 of 3	
1-3-5	Account book & cash flow statement	Nurse, treasurer & chairperson	-	-	Monitoring starts in July 2014	100% 2 of 2	0% 0 of 3	
1-3-6	O&M reports	Nurse & chairperson	-	-	Monitoring starts in July 2014	100% 2 of 2	0% 0 of 3	
1-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	<i>100% 2 of 2</i>	0% 0 of 3	
1-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Dec. 2014	80%	60%	
1-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County medical officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	100% 2 of 2	<i>100% 3 of 3</i>	
1-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County medical officers.	At least once for each pilot facility.	Oct. 2014	0% 0 of 2	0% 0 of 3	
2 For Output 2/ School Model								
2-1 National Level								
2-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	<i>50% in progress</i>		
2-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOEST	At least twice	Nov. 2014	<i>50% 1 time</i>		
2-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	<i>40%</i>		
2-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	<i>100%</i>		
2-2 County/ Sub-county Level								
2-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Monitoring starts in July 2014	Lot 1 75% 3 of 4	Lot 2 0% 0 of 3	
2-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Monitoring starts in July 2014	75% 3 of 4	0% 0 of 3	
2-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	Oct. 2014	50% 1 of 2	50% 1 of 2	
2-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100%	100%	
2-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Oct. 2014	<i>80%</i>	<i>80%</i>	
2-3 Local/ Institution Level								
2-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Oct. 2014	<i>80%</i>	<i>80%</i>	
2-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%	
2-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of school & management committee	-	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	<i>100% 3 of 3</i>	
2-3-4	Daily sale records	Operator	-	-	Monitoring starts in July 2014	50% 1 of 2	0% 0 of 3	
2-3-5	Account book & cash flow statement	Head teacher, treasurer & chairperson	-	-	Monitoring starts in July 2014	100% 2 of 2	0% 0 of 3	
2-3-6	O&M reports	Head teacher & chairperson	-	-	Monitoring starts in July 2014	100% 2 of 2	0% 0 of 3	
2-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	0% 0 of 3	
2-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Dec. 2014	80%	60%	
2-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
2-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County health officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	<i>100% 2 of 2</i>	<i>100% 3 of 3</i>	
2-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County education officers.	At least once for each pilot facility.	Oct. 2014	0% 0 of 2	0% 0 of 3	
3 For Output 3/ MHP, Biogas & Wind								
3-1	Inventory & review of existing studies	JEs & C/Ps	-	-	As needed	MHP 60%	Biogas 80%	Wind 70%
3-2	Guidelines for rural electrification	JEs & C/Ps	-	-	By Oct. 2014	60%	60%	70%
3-3	Technical training / Seminar	JEs & C/Ps	REA & MoE&P	-	By Nov. 2014	50%	50%	50%
3-4	Simple pre-feasibility study	JEs & C/Ps	-	-	By Oct. 2014	20%	80%	50%
3-5	Technical recommendation	JEs & C/Ps	-	-	By Jan. 2015	20%	50%	30%
3-6	Data collection for 3-2 & 3-3.	JEs & C/Ps	-	-	As needed	50%	50%	80%
3-7	Workshops for validate guideline	JEs & C/Ps	REA, MoE&P & other stakeholders	-	Oct. 2014	0%	0%	0%
4 For Output 4/ Policy Recommendation								
4-1	Implement & monitoring of the preparation activities of policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	40%		
4-2	International workshop and Technical transfer workshops	JEs & C/Ps	REA, MoE&P, other stakeholders & donors in energy sector of Kenya & East Africa	1 time of international workshop & 3 times of technical transfer workshops.	By Jan. 2015	30%		
4-3	Policy recommendation	JEs & C/Ps	-	-	By Jan. 2015	40%		
4-4	Collaboration with BRIGHT project	JEs & C/Ps	-	-	As needed	70%		

Note: In the Progress section, *Italic Bold* letters indicate progress since March 2014 (Progress Report 4).

Operation and Management Model for Dispensary and Primary School

Main Target area: Dispensaries and Primary Schools in West Pokot, Samburu, Turkana, Marsabit, Isiolo, Mandela, Wajir, Garissa, Lamu and Tana River counties



Draft Framework of the Institutional Model

The purpose of the model is to ensure that dispensaries and primary schools can enjoy the electricity generated by solar PV system in terms of physical and O&M matters as long as the lifetime of solar panels (20-25 years). It covers all solar PV systems that REA installed and will install.

1. Ownership and responsibility

- * REA installs solar PV system at non-electrified dispensaries and primary schools.
- * REA will do handover the system to Ministry of Health (MoH) and Ministry of Education, Science and Technology (MoEST) after REA installs.
- * MoH/MoEST will be the owner of the solar PV systems as one of assets of the facilities. The counties offices of MoH and MoEST will be in charge of O&M and management of their asset.
- * Dispensary staff members and dispensary management committee will be in charge of O&M under the support of the county MoH/MoEST offices.

2. Roles for O&M and management

- * At the preparation stage, REA shall execute the baseline survey on the basic social and economic conditions as well as the condition of the target facility. They will apply the result to designing the system and O&M structure. Also, REA does hold meetings with county/sub-county offices to exchange information about the facility electrification.
- * MoH/MoEST county offices will be responsible for responding to finance and personnel required for the sustainable system use: budget for O&M and replacement cost and technical support through sub-county office.
- * They will make budget for O&M and replacement to submit to the county government. REA shall give technical support for budgeting (cost and timing of the O&M and replacement).
According to the answer to the expert's question, REA has already started coordination and negotiation with county government for the budget allocation. JET supports REA in exchanging MOU with county health/education offices on this issue. Especially for the education office, JET supports REA in discussion on the O&M and replacement cost of the solar PV systems installed by the Laptop Project.
- * Charging service is important for sustainable activities of dispensary/school management committee. They can earn at least sale by charging service and use the income to their immediate needs such as transportation, distilled water, *and salary of operator if management committee has not decided to pay.*
- * One problem is mobile phone service has not reached many parts of the target areas of the Model. However, hair cutting service is possible business for income generation. Also, once the phone network service arrives at the community people can charge their mobile phones easily. Both can contribute to convenience and social development of target areas.

3. Support from REA

(1) Technical issues

- * REA shall prescribe in their contract with contractors that the training of operator and dispensary management committee members given by the contractor using the JET manual. Also, according to the answer to the expert's question, REA is in the process of contracting local contractors/ technicians to service (regularly) the systems once they are handed over.
- * REA gives health and education officers at national level an opportunity to get TOT in technical issues in collaboration with Kenyan technical institution, e.g. JKUAT.
- * REA coordinates with MoH and MoEST to assign these officers to give officers at county and sub-county levels.

- * County/sub-county office will transfer the technique to operators and also responds to technical troubles. Trained officers will work for maintenance the solar PV systems.

(2) Managerial issues

- * As management committee members are local people, they are not used to doing management issues well. It is the critical problem for sustainable system use in the target ten counties, where the level of social development and public investment is lower than others.
- * In order to keep quality of the power generation, MoH/MoEST county/sub-county offices are in charge of supervision and monitoring the solar PV system management and taking measures to troubles and replacement.
- * Facility and management committee take record of operation and submit monthly report to MoH/MoEST sub-county offices. Then the offices understand the actual situation of the power generation, condition of equipment, financial status and operator's performance, and give advices and takes measures to troubles.
- * JET supports REA to negotiate with MoH and MoEST to give basic managerial training to the management committees using the manual that JET prepares. The subjects of the training focus on reporting system, accounting/financial recording and reporting and also supports committee in by-law making. Local resources, e.g. sub-county officers, shall be considered.

4. Others = to be confirmed at the monthly meeting in July

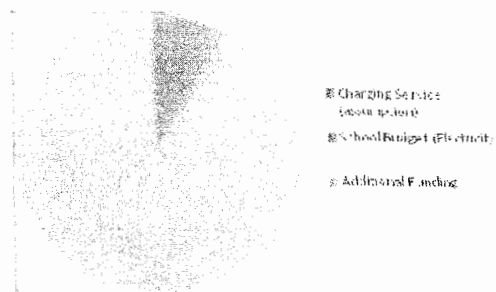
- * At this moment, MoH county office has some amount of budget that can be used for O&M of facility infrastructures. On the other hand, MoEST county office has no or little budget that can be used for this purpose.
However, JET heard that MoEST is preparing O&M cost for the part of solar PV system to be installed by the Laptop Project. JET needs to confirm this information and if it include replacement of battery, inverter and controller.
- * JET wants to confirm if REA will continue electrification of public facilities using solar PV system after the Laptop Project terminates. The Laptop Project is installation of the system at each primary school for at most 50 PCs but not the electrification of entire school.
- * JET also wants to know REA's plan to recover the solar PV systems that REA installed but actually becomes ineffective.

SUMMARY OF THE IDEA OF FUNDING FOR SOLAR PV REPLACEMENTS AT PUBLIC FACILITIES
20140716

O& M/Replacement Fund

School Case --- Marti Primary School (Lot 2: Samburu)

<u>Fund Source</u>	<u>Amount p.a.</u> (Ksh)
(1) Charging Service (assumption)	20,160
(2) School Budget (Electricity)	2,797
(3) Additional Funding	267,858
Total	290,815
Replacement	254,815
Consumables	36,000



(1) Charging Service

The income from charging service is the fund managed freely by the committee. This fund should be for daily or immediate use, i.e. distilled water, stationary and transportation.

(2) FPEF (Free Primary Education Fund)

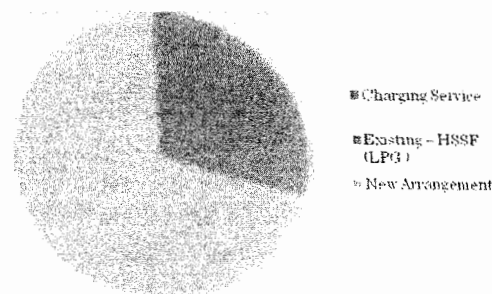
Current FPEF is Ksh 1,020 per pupil in a year. Among Ksh 1,020, electricity fee is Ksh 6.4, which could be reserved as the replacement cost to PV systems.

(3) Additional Funding

Regarding the assumed deficit for replacement, Ksh 267,858, the new funding is necessary by the Education sector. Parent Association is not likely to accept for funding in Samburu/ Lot 2.

Health Case --- Latakweny Health Center (Lot 2: Samburu)

<u>Fund Source</u>	<u>Amount p.a.</u> (Ksh)
(1) Charging Service (assumption)	20,160
(2) Health Budget HSSF (LPG)	7,000
(3) Additional Funding	104,110
Total	131,270
Replacement	95,270
Consumables	36,000



(1) Charging Service

The income from charging service is the fund managed freely by the committee. This fund should be for daily or immediate use, i.e. distilled water, stationary and transportation.

(2) HSSF (Health Sector Service Fund)

Current HSSF for LPG is Ksh 14,000 annually. 50% of LPG fuel cost, Ksh 7,000 is possible to be reserved as the replacement cost to PV systems.

(3) Additional Funding

Regarding the assumed deficit for replacement, Ksh 104,110, the new funding is necessary by the county health sector.

SUMMARY OF THE IDEA OF FUNDING FOR SOLAR PV REPLACEMENTS AT PUBLIC FACILITIES
20140716

Power Package for Estimation of Replacement Cost

Power Package as "Technical Parameters"

The following are the system packages specified for JICA Pilot Project (Lot 2) to guide an installation sizing/costing. Based on REA's design method, the packages are improved by JET.

Power Package

System Type	Load Use	System Capacity (W)
Package 1 (P1)	Charging	240
Package 2 (P2)	Light, Socket (1)	240
Package 3 (P3)	Light, Socket (2)	480
Package 4 (P4)	Laptop	1,920
Package 5 (P5)	Vaccine Fridge	240

JET tries to link the power packages to planning of general system components applied to REA's electrification projects for public facilities, including rehabilitations of the installed PV systems. The system components provided by the power packages are expected to output rough estimation both of capacity and cost estimation at the discussion and planning stage.

As shown below, general parameters are prepared to identify the necessary packages and each number of the packages, which provide capacity and initial cost. Once obtain the initial cost, "O&M and Replacement Cost" will be calculated automatically.

The following tables show the example of estimation of initial cost and replacement cost.

Health

Demand Daily Patients	Grade	Power Package P1~P5	Initial Cost (Total)	O&M Replacement Cost (p.a)	Case from Lot 1/2
5 ~ 25	Dispensary	P1 : 1 P2 : 1	Ksh 1,133,000	Ksh 68,700	South Horr (L2)
25~ 50	Health Center	P1 : 1 P3 : 4 P5 : 1	Ksh 1,684,000	Ksh 131,000	Latakweny (L2)

School

Numbers of pupils	Primary School Grade	Power Package P1~P5	Initial Cost (Total)	O&M Replacement Cost (p.a)	Case from Lot1/ 2
~ 500	Day and/or Boarding	P1 : 1 P3 : 9 P4 : 1	Ksh 3,467,000	Ksh 254,000	Marti Primary (L2)
501~1000	Day and/or Boarding (Large)	P1 : 1 P2 : P3 : P4 :	Ksh 3,359,000	Ksh 178,000	Iltumutumu Primary (L1)

List of Equipment for Technical Transfer

June 16 2014

JICA Expert Team

Equipment in the following table was procured by JICA Expert Team in June 2014 for monitoring and technical transfer activity of renewable energy projects. The equipment is currently stored in REA Mombasa Rd. Office, and used for site monitoring by JET. At the end of the project, those equipment will be handed over to REA.

Name of Equipment	Qty	Sector	Status
AC/DC Digital Multimeter with Clamp	2	Solar	OK
Refractrometer (Density meter for battery acid)	2	Solar	OK
Current Meter	1	Small hydro	OK
Methane Gas Detector	1	Biogas	OK
pH Meter	1	Biogas	OK
ORP Meter	1	Biogas	OK
GPS	1	All	OK
Laser Distance meter	1	All	OK

Objective:

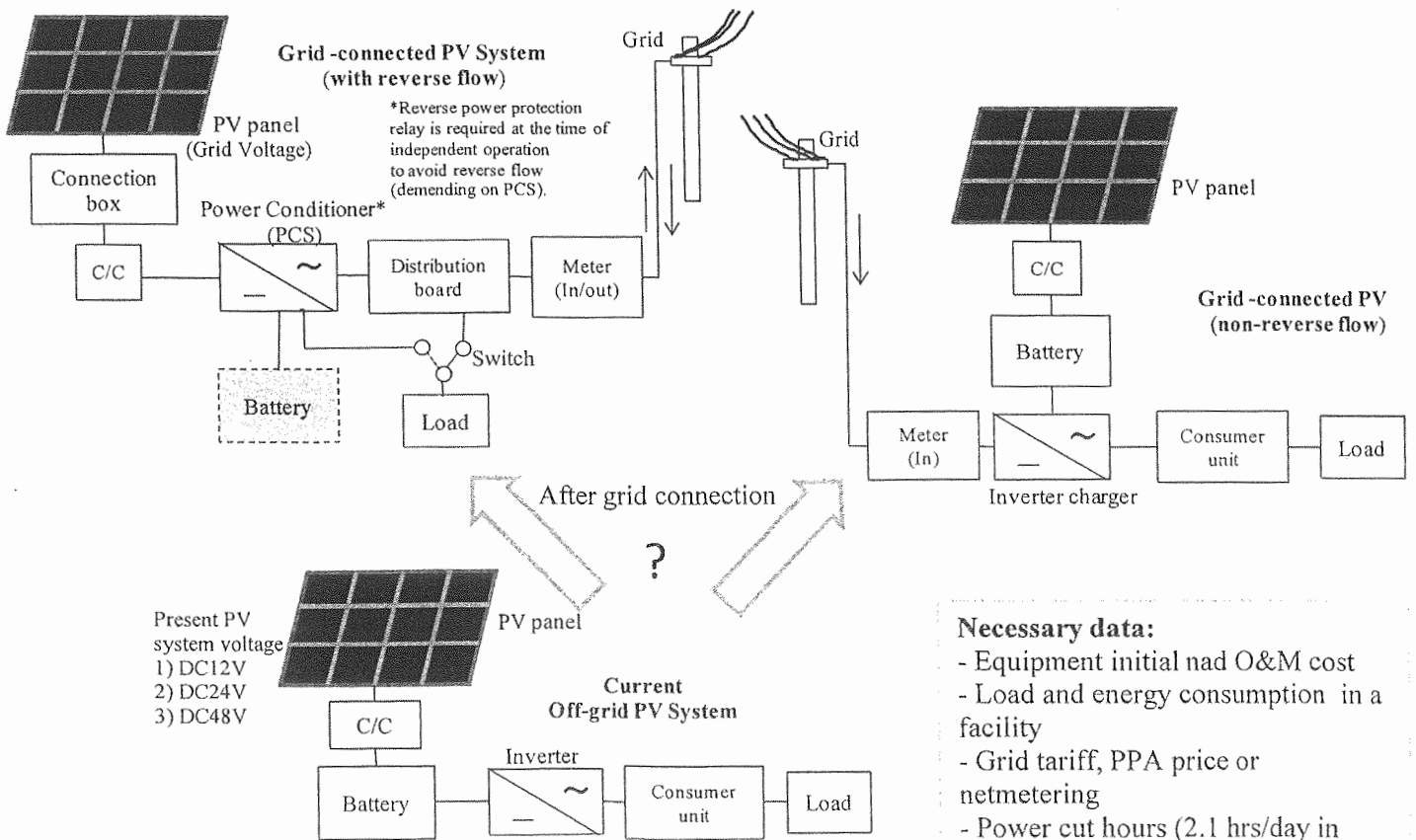
- To figure out the benefit of PV system after grid connection.
- To evaluate and find the optimum methods of off-grid PV utilization after grid connection from options of (i)

Evaluation condition:

- Sample of two or three sites will be selected from pilot projects for the case study.
- Base condition is removal of PV system after grid connection.
- Initial cost of off-grid PV system is NOT considered. Only cost for equipment required for PV system utilization after grid connection is considered.
- Cost for grid extension to the facility such as cables, meter, and transformer is NOT included, since grid connection is assumed to be conducted within general governmental plan regardless of PV system availability in the facility.
- The extended grid is assumed to be three phases. (Reverse flow is possible only with 3phase lines)

Cost and Benefit of Each System Type

Item	Reverse Flow		Changeover (non-reverse flow)
	No battery	with battery back-up	
Initial Cost	- Connection box - Power conditioner - Distribution board	- Connection box - Power conditioner - Distribution board - Battery	- Inverter charger
Operation Cost	- Equipment replacement	- Equipment replacement - Battery replacement	- Inverter charger and battery replacement
Benefit	- Sales of PV energy to KP grid (net metering)	- Sales of PV energy to KP grid (net metering) - Energy supply during power cut	- Electricity supply during power cut - Electricity saving by PV



Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Tuesday, 19th August, 2014
Location: Boardroom, Chancery house 8th floor
Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng E. Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2	Peninah Karomoh	REA	Environmental Scientist
3	Ken Shimomukai	JET	Coordinator
4	Francis Mworio	JET	Solar Assistant
5	Semekiah Ongonga	REA	Assistant Enginner
6	Hannington Mudegu	JET	Project Team Assistant
7	Caroline Kelly	REA(Taking minutes)	Assistant Officer Renewable Energy

Min 01/08/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.15 a.m. The following agenda was presented and adopted.

AGENDA

1. Adoption of previous meeting.
2. Progress Report from REA.
3. Ownership and Maintenance MOU.
4. Optimizingsolar design for laptop project.
5. PDM Progress (JET).
6. Overview of the JICA Model.
7. International Workshop preparation and progress.
8. Any Other Business.

Min 02/08/2014-Adoption of previous meeting.

The minutes from the previous meeting were proposed by Mr. Semekiah and seconded by Mr. Shimomukai. Matters arising from the action items are as summarized below;

- The minutes presented to the meeting did not incorporate JET comments it was agreed that the minutes should be finalized by the end of the week.
- Inspection of Lot 2 still awaits procurement of flooded batteries in August.
- Solar counterparts were not available at the meeting to give a report on the analysis of the previous installed solar systems and if any of the systems was working and in good condition. It was also noted that most of the systems were not functional since they are not properly maintained.
- Eng. Kamweru shared the draft MOU for the schools and Health with the REA legal team, He however only got a feedback on the school MOU and not the Health Facility, the chair also informed the meeting that ministry of health had been devolved to the county government.

 1

EK

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 03/08/2014– Progress Report from REA and JICA.

Solar: Colleta & Hannington:

REA counterparts were not available in the meeting to give an update on the solar projects. The installation of the Lot 2 is awaiting replacement of batteries and charge controllers, to be followed by the inspection.

Micro-hydro: Judith Semekiah & Antony

The team is in the final stage on MHP feasibility study, there was however inconsistency in the data they had obtained earlier, this information is important in the determination of the turbine size and the subsequent civil works. This activity will be completed as soon as the expert arrives.

Wind: Hannington, Colleta

There was no further update since the counterparts were not available at the meeting.

Biogas: Gilbert & Caroline

The tender document for rehabilitation of Isinya is being finalized. The Pre feasibility study report for Nyeri High School is still ongoing

Environment: Peninnah

The team held a meeting with the NEMA official in charge of EIA, this was to ensure that the regulations were applicable and the JICA projects were within the regulations. A project description was also prepared for all the projects. They also visited the Nema county offices to inform them of the meeting that was held at NEMA.

Financial Management: Caroline & Eunice.

The counterparts were not available at the meeting to give an update.

Min 04/08/2014– MOU for ownership and maintenance of the project

Mr. Shimomukai and requested for cooperation for the upcoming schedule and activities including terminal evaluation, 3rd JCC, JKUAT Conference, PDM activities, and validation workshop for micro-hydro, biogas, and wind power. He further proposed that MOU be signed during the 3rd JCC, to which there was no objection. JET finalized the MOU draft and shared it with REA. It was agreed that REA will meet with MOEST and MOH to discuss the content of the MOU. During the JCC, MOEST and MOH will be invited to sign. REA will represent MOEP while JICA will witness the signing. Eng. Kamweru was requested to respond to an email by 20th August that had been sent on 8th Aug on the MOU. Peninnah was also requested to write a letter to MOEST and MOH inviting them to discuss and sign the MOU. JET has already finalized an agreement on maintenance with the school; this agreement will remain valid since they are the immediate beneficiaries of the project.




Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 05/08/2014– Optimization solar designs for laptop project.

JICA had proposed that their model be replicated in REA future projects. JICA model were however done concurrently with the Solar for school projects and their design had been done, this did not give an opportunity for REA to draw lessons from the model project and replicate it. Some components of the model have however been adopted, i.e. the change of voltage to 48V, this will improve the efficiency and the cost of change was minimum. The design will be monitored; MOEP was also keen on the new design and showed interest in adopting it if it works well.

Min 06/08/2014– PDM Progress (JET)

Mr. Shimomukai explained the PDM Progress. Most of the activities were complete. Evaluation will begin in September. Progress and information sharing will be held in Samburu, Kajiado and Narok sites together with REA, MOEP, MOH and MOEST.

Min 07/08/2014– Overview of model (JET)

REA was requested to conduct a demonstration at schools on JICA business model. The chair noted that it was important to conduct a feasibility study to assess the security since most of the schools installed with solar recently were day schools. He also informed the meeting that REA would consider incorporating the charging hut as a business model in future expansion of the system. The revenue obtained would be used in the maintenance of the system.

Min 08/08/2014– International Workshop

JET had prepared the schedule and activities. REA should assess the activities and coordinate and invite officials. Eng Muriithi, Wangari Githii and Lucy had been sent a communication informing them this; they are yet to give feedback.

Min 09/08/2014– Any Other Business.

- I. REA counterparts should communicate with the experts on their responsibility during the JKUAT conference, which will be held in November.
- II. Financial analysis had been done for lot 2 sites for the months of May to August 2014. This demonstrated some income obtained from the project. This money had not been spent yet since the systems are new.
- III. REA should prepare for the next JCC meeting scheduled for October; they should coordinate with MOEP for venue and inviting the principal secretary.
- IV. REA should organize the validation workshop for micro-hydro, biogas, and wind power.




Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 10/08/2014-Ending the meeting and the Next meeting.


- a) There being no other business the Chair ended the meeting at 11.45pm. The next meeting shall be held on 16th September, 2014 at 10:00am.

Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1	Report on findings after analysis of Institutions installed with solar (REA)	Colletta, Hannington, Semekiah, Antony and Gilbert	16 th September, 2014
2	Circulation of weekly work programme.	Shimomukai (JET)	Every week by Friday
3	Supervision of Lot 2 installation and give a report Subject to availability of flooded batteries	CollettaKoech, Hannington	16th Sept, 2014
4	A draft MOU in consultation with Legal department on maintenance of solar equipment with the institution	Eng. Kamweru	16 th Sept, 2014
5	Write a letter to MOEST and MOH inviting them to discuss the MOU and sign	Peninah Karomo	16 th Sept, 2014
6	Financial management need to be redone on lot 1 sites including calculation of IRR and NPV	Samson and Caroline (Corporate planning)	16 th Sept, 2014
7	Follow up on the preparation of international workshop	Eng. Muriithi, Wangari Githii and Lucy Muricho	16 th Sept, 2014
8	Progress report	All counterparts	16 th Sept, 2014
10	Progress of arrangement of 3 rd JCC Meeting	Penninah Karomoh	16 th Sept, 2014
11	Progress of preparation for JKUAT conference	REA counterparts	16 th Sept, 2014

CHAIRMAN

Signature:



Full Names:

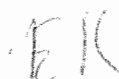
ENG. EPHANTUS KAMWERU

Title:

CHIEF MANAGER - RENEWABLE ENERGY

Organization:

RURAL ELECTRIFICATION AUTHORITY (REA)

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

JET

Signature: 

Full Names: Ken Shimomulcai

Title: Project Coordinator

Organization: JET (JICA Expert Team)



EIC

**Establishment of Rural Electrification Model using Renewable Energy
Tentative Schedule of Major Activities between October & November 2014**

As of 18 August 2014

M/D	Day	Activities				Assignment Schedule				
		General	For Output 1	For Output 2	For Output 3	Dr. Dei 1.40 MM (42days)	Mr. Bista	Ms. Kitauchi 1.20 MM (36days)	Ms. Nakagawa 1.20 MM (36days)	Mr. Samejima 1.53 MM (46days)
Sep. 28	Sun									
Sep. 29	Mon	JICA Evaluation Mission	JICA Evaluation Mission			Departure Narita				
Sep. 30	Tue	JICA Evaluation Mission				Arrival at Nairobi				
Oct. 01	Wed	JICA Evaluation Mission???	1-2-2 Progress & information sharing meeting (REA, MOE&P & Kericho)							
Oct. 02	Thu	JICA Evaluation Mission???								
Oct. 03	Fri	JICA Evaluation Mission???								Departure Narita
Oct. 04	Sat									Arrival at Nairobi
Oct. 05	Sun									
Oct. 06	Mon	JICA Evaluation Mission???	1-2-2 Progress & information sharing meeting (REA, MOE&P & Samburu)	2-2-2 Progress & information sharing meeting (REA, MOE&P & Samburu)						Departure Narita
Oct. 07	Tue	JICA Evaluation Mission???								Arrival at Nairobi
Oct. 08	Wed	JICA Evaluation Mission???								
Oct. 09	Thu	JICA Evaluation Mission???								
Oct. 10	Fri	JICA Evaluation Mission???								Departure Narita
Oct. 11	Sat									Arrival at Nairobi
Oct. 12	Sun									
Oct. 13	Mon									
Oct. 14	Tue	Monthly Meeting?								
Oct. 15	Wed		1-2-2 Progress & information sharing meeting (REA, MOE&P & Narok)	2-2-2 Progress & information sharing meeting (REA, MOE&P & Narok)						
Oct. 16	Thu									
Oct. 17	Fri									
Oct. 18	Sat									
Oct. 19	Sun									
Oct. 20	Mon	National Holiday / Heri's Day								
Oct. 21	Tue									
Oct. 22	Wed		1-1-2 Progress & information sharing meeting (REA, MOE&P & MoH)	2-1-2 Progress & information sharing meeting (REA, MOE&P & MoEST)						
Oct. 23	Thu		1-3-11 Evaluation Meeting at Ilkilyeti							
Oct. 24	Fri									
Oct. 25	Sat									
Oct. 26	Sun									
Oct. 27	Mon									
Oct. 28	Tue		1-3-11 Evaluation Meeting at Narok for three sites in Narok	2-3-11 Evaluation Meeting at Narok for three sites in Narok						3-7 Workshop for Validate Gudeline (MHP)?
Oct. 29	Wed									3-7 Workshop for Validate Gudeline (Biogas)?
Oct. 30	Thu									3-7 Workshop for Validate Gudeline (Wind)?
Oct. 31	Fri									
Nov. 01	Sat									
Nov. 02	Sun									
Nov. 03	Mon									
Nov. 04	Tue		1-3-11 Evaluation Meeting at Maralal for six sites in Samburu	2-3-11 Evaluation Meeting at Maralal for six sites in Samburu						
Nov. 05	Wed									
Nov. 06	Thu									
Nov. 07	Fri									
Nov. 08	Sat									
Nov. 09	Sun									
Nov. 10	Mon									
Nov. 11	Tue	Monthly Meeting?								Move to Doha
Nov. 12	Wed									Arrival at Narita
Nov. 13	Thu									
Nov. 14	Fri									
Nov. 15	Sat									
Nov. 16	Sun									
Nov. 17	Mon									Move to Doha
Nov. 18	Tue									Arrival at Narita
Nov. 19	Wed									
Nov. 20	Thu									
Nov. 21	Fri									
Nov. 22	Sat									
Nov. 23	Sun									
Nov. 24	Mon									
Nov. 25	Tue									
Nov. 26	Wed									
Nov. 27	Thu									
Nov. 28	Fri									
Nov. 29	Sat									
Nov. 30	Sun									

B2-63

Project for Establishment of Rural Electrification Model using Renewable Energy

PROGRESS OF ACTIVITIES IN PROJECT DESIGN MATRIX (PDM)

As of 15 August 2014

No.	Activity/ Output	Person in charge	Key Organization	Indicator	Schedule	Progress		
For Preparation								
1	Set up a Working Group	REA	-	-	Oct. 2013 (2nd JCC)	100%		
For All Outputs								
1	A Weekly Project Status Report	JEs & C/Ps	-	Weekly e-mail.	Since Oct. 2012	<u>36 times</u>		
2	Monthly Project Meeting	REA	REA, JET & JICA	Monthly	Since Oct. 2012	<u>9 times</u>		
3	Progress Report	JET	-	Biannually	Since Sep. 2011	4 reports		
1 For Output 1/ The Health Service Institution Model								
1-1 National Level								
1-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	<u>70% in progress</u>		
1-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P & MOH	At least twice	<u>Oct. 2014</u>	50%		
1-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	40%		
1-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	100%		
1-2 County/ Sub-county Level								
1-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	<u>By Aug. 2014</u>	Lot 1 100% 2 of 2	Lot 2 <u>100% 3 of 3</u>	
1-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	<u>By Aug. 2014</u>	100% 2 of 2	<u>100% 3 of 3</u>	
1-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	Oct. 2014	50% 1 of 2	50% 1 of 2	
1-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Oct. 2014	80%	80%	
1-3 Local/ Institution Level								
1-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Oct. 2014	80%	80%	
1-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%	
1-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of health institution & management committee	Lecture & OJT	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-4	Daily sale records	Operator	-	-	<u>By Aug. 2014</u>	100% 2 of 2	<u>100% 3 of 3</u>	
1-3-5	Account book & cash flow statement	Nurse, treasurer & chairperson	-	-	<u>By Aug. 2014</u>	100% 2 of 2	<u>100% 3 of 3</u>	
1-3-6	O&M reports	Nurse & chairperson	-	-	<u>By Aug. 2014</u>	100% 2 of 2	<u>100% 3 of 3</u>	
1-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	0% 0 of 3	
1-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Dec. 2014	<u>90%</u>	<u>70%</u>	
1-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County medical officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	100% 2 of 2	100% 3 of 3	
1-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County medical officers.	At least once for each pilot facility.	Oct. 2014	0% 0 of 2	0% 0 of 3	
2 For Output 2/ School Model								
2-1 National Level								
2-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	50% in progress		
2-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOEST	At least twice	<u>Oct. 2014</u>	50% 1 time		
2-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	40%		
2-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	100%		
2-2 County/ Sub-county Level								
2-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	<u>By Aug. 2014</u>	Lot 1 75% 3 of 4	Lot 2 <u>67% 2 of 3</u>	
2-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	<u>By Aug. 2014</u>	75% 3 of 4	<u>67% 2 of 3</u>	
2-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	Oct. 2014	50% 1 of 2	50% 1 of 2	
2-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100%	100%	
2-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Oct. 2014	80%	80%	
2-3 Local/ Institution Level								
2-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Oct. 2014	80%	80%	
2-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%	
2-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of school & management committee	-	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
2-3-4	Daily sale records	Operator	-	-	<u>By Aug. 2014</u>	50% 1 of 2	<u>67% 2 of 3</u>	
2-3-5	Account book & cash flow statement	Head teacher, treasurer & chairperson	-	-	<u>By Aug. 2014</u>	100% 2 of 2	<u>67% 2 of 3</u>	
2-3-6	O&M reports	Head teacher & chairperson	-	-	<u>By Aug. 2014</u>	100% 2 of 2	<u>67% 2 of 3</u>	
2-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	0% 0 of 3	
2-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Dec. 2014	<u>90%</u>	<u>70%</u>	
2-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
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2-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County education officers.	At least once for each pilot facility.	Oct. 2014	0% 0 of 2	0% 0 of 3	
3 For Output 3/ MHP, Biogas & Wind								
3-1	Inventory & review of existing studies	JEs & C/Ps	-	-	As needed	MHP <u>80%</u>	Biogas 80%	Wind <u>80%</u>
3-2	Guidelines for rural electrification	JEs & C/Ps	-	-	By Oct. 2014	<u>70%</u>	<u>70%</u>	<u>70%</u>
3-3	Technical training / Seminar	JEs & C/Ps	REA & MoE&P	-	By Nov. 2014	<u>60%</u>	50%	50%
3-4	Simple pre-feasibility study	JEs & C/Ps	-	-	By Oct. 2014	<u>30%</u>	80%	<u>60%</u>
3-5	Technical recommendation	JEs & C/Ps	-	-	By Jan. 2015	<u>60%</u>	<u>80%</u>	<u>60%</u>
3-6	Data collection for 3-2 & 3-3.	JEs & C/Ps	-	-	As needed	<u>60%</u>	50%	80%
3-7	Workshops for validate guideline	JEs & C/Ps	REA, MoE&P & other stakeholders	-	Oct. 2014	0%	0%	0%
4 For Output 4/ Policy Recommendation								
4-1	Implement & monitoring of the preparation activities of policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	40%		
4-2	International workshop and Technical transfer workshops	JEs & C/Ps	REA, MoE&P, other stakeholders & donors in energy sector of Kenya & East Africa	1 time of international workshop & 3 times of technical transfer workshops.	By Jan. 2015	30%		
4-3	Policy recommendation	JEs & C/Ps	-	-	By Jan. 2015	40%		
4-4	Collaboration with BRIGHT project	JEs & C/Ps	-	-	As needed	70%		

Note: In the Progress section, Italic Bold with underline letters indicate progress since 15 July 2014.

REPORT ON ENVIRONMENTAL AND SOCIAL CONSIDERATION FOR LOT 1 & 2 PILOT PROJECTS OF PV SOLAR SYSTEMS

1. Confirmation of progress of revisions of relevant laws and regulations on Environmental management and Environmental Impact Assessment and others if any in accordance with the introduction of the new Constitution, especially the followings;

- ✓ Environmental Management and Coordination Act of 1999 (EMCA)
- ✓ Environmental (Impact Assessment and Audit) Regulation 2003 (EIA/EA Regulation)
- ✓ Others which touch any environmental and social considerations in Kenya

Actions which was taken

We had an appointment with the EIA Unit as NEMA to discuss and confirm the progress of the above

We made sure the relevant laws and regulations (existing ones or newly revised ones) which will be applicable to Lot 1 and 2.

We confirmed from NEMA regarding a “cut-off date” for the laws and regulations applicable to Lot 1 and 2 (if revision of the laws and regulations come in to existence in near future, which (existing ones or new ones) will be applicable for Lot1 and 2)

2. Site visits and Preparation of Project Description Report for Lot 2

A “Project Description Report for Lot 2” was prepared for asking NEMA whether or not the EIA procedures are necessary for Lot 2 pilot project in Samburu County .

1. Tuum Primary School
2. Illaut Primary School
3. South Horr Dispensary
4. Marti Primary school
5. Latakweny Dispensary
6. Angata Nanyuki dispensary

Actions which was taken

We confirmed site selections for Lot 2 (within the month of June 2013the sites was decided by JICA team and REA)

We visited the Lot 2 sites to observe surrounding environmental and social conditions of each site of which outcomes was discussed in the “Project Description Report for Lot 2” (as the same manner we did for Lot 1) after the site selections

We delivered the “Project Description Report for Lot 2” to NEMA HQ with an official REA letter asking whether or not the EIA procedures are necessary for Lot 2 pilot project.

3. Visit NEMA County offices

In addition to Lot 2 site visit as specified in the item 2, we visited NEMA County Offices excising jurisdiction for Lot2 areas to explain Lot 2 pilot project and necessary procedures on EIA and to get relevant information of environmental and social situation in each county areas.

Actions which was taken

We made appointments with NEMA county offices through NEMA HQ considering our site visit schedules.

We made sure the necessary procedures in each county and asked necessary coordination and confirmation between the NEMA HQ’s decision (specified in the item 2) and each country relevant procedures on EIA.

We got the relevant information and data on surrounding environmental and social conditions such as indigenous groups and peoples, and endangered species and so on.

4. Preparation of JICA screening format

In accordance with the JICA Guidelines for environmental and social considerations (April 2004 version) screening formats for Lot 2 was prepared.

Actions which was taken

We prepared the screening formats (site by site) in corporation with the JICA Expert Team and REA officer.

We signed REA's official signature on each format after which all formats shall be submitted to JICA office.

5. Preparation of Progress Report 3

We prepared the Progress report 3 on 23rd July (this is before Mr. Igarashi left Nairobi- Japan) based on the outcomes and discussions mentioned above items (this was referred to the progress report 2).

Actions which was taken

Initial impact was predicted as did in progress report 2 for Lot1

An environmental management plan was discussed and agreed

6. Preparation of Manuals for other renewable energy projects (MHP, Bio-gas, solar, biomass and wind power)

An environmental and social consideration was discussed and agreed in each manual

Actions which was taken

We considered what items to be discussed in each manual and we finalized our document.

**The Project for the Establishment of Rural Electrification Model using Renewable Energy
Income and Expenditure Summaries for Lot 2 Sites (May-August 2014)**

Date: 19th August 2014

Prepared by: Abel Ngoge

Item	Angata Nanyukie		South Horr		Latakweny		Marti		Illaut		Tuum	
	Income	Exp	Income	Exp	Income	Exp	Income	Exp	Income	Exp	Income	Exp
May	500	0	1690	1600	0	0	500	0	0	0	180	0
June	0	0	1420	1000	775	0	1640	0	330	0	540	0
July	800	0	1370	700	1200	0	3380	0	1960	0	900	0
August			570	0					105	0		0
Total	1300	0	5050	3300	1975	0	5520	0	2395	0	1620	0
Net (Kshs.)	1300		1750		1975		5520		2395		1620	
Amount banked (Ksh.)	0		0		0		0		0		800	
Cash at hand	1300		1750		1975		5520		2395		820	
Records up to	7/30/2014		8/13/2014		7/31/2014		7/28/2014		8/5/2014		8/14/2014	

Source: JET Compilation

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Tuesday, 16th September, 2014
Location: Boardroom, Chancery house 8th floor
Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng E. Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2	Eng. James Muriithi	REA	Senior Engineer
3	Peninah Karomoh	REA	Environmental Scientist
4	Ken Shimomukai	JET	Coordinator
5	Abel Ngoge	JET	Assistant Financial management
6	Antony Wanjara	REA	Technician
6	Hannington Mudegu	JET	Project Team Assistant
7	Caroline Kelly	REA(Taking minutes)	Assistant Officer Renewable Energy

Min 01/09/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.15 a.m. The following agenda was presented and adopted.

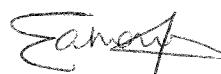
AGENDA

1. Adoption of previous meeting.
2. Progress Report from REA.
3. Report on MOU finalization progress.
4. PDM Progress (JET).
5. JKUAT conference meeting preparation.
6. International Workshop preparation and progress.
7. Any Other Business.

Min 02/09/2014 – Adoption of previous meeting.

The minutes from the previous meeting were proposed by Mr. Antony Wanjara and seconded by Mr. Shimomukai. Matters arising from the action items are as summarized below;

- It was reported that the analysis of the institutions that had been installed with solar previous was supposed to be done jointly by all solar supervisors. Mr. Antony informed the meeting that the institutions he had visited in his area of supervision were functioning except for some institutions had stalled since the institutions could not afford to replace batteries that had reached their expected life (3years).
- Flooded batteries had been procured and the solar JET (Solar PV) was supervising their installation. The meeting was informed that the Samburu county representative would be present to witness the commissioning.
- REA was compiling a list of institutions that had previously been installed with solar this is done in order to come up with a maintenance program. This will also include

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

the schools currently being done by JICA. The dispensaries will however not be included since health facilities have been devolved to the counties.

- It was noted that subjecting the JICA solar projects to IRR and NPV calculations will not be favorable and this may go against the project's objective, which was to create a business model. The project should therefore be classified as a social project. Caroline (corporate planning) was asked to conduct a financial evaluation of any REA project and share it with Mr. Wakabayashi.
- JICA design model could not be replicated in all the schools since contractors expressed their concern in change of design that made it difficult to change the design, the JICA model will however be tried in 2 schools that had been chosen.

Min 03/09/2014 – Progress Report from REA and JICA.

Solar: Colleta & Hannington:

REA counterparts were not available in the meeting to give an update on the solar projects. Replacement of flooded batteries was ongoing and the JET team was on the site monitoring.

Micro-hydro: Judith Semekiah & Antony

The MHP team has reported that there was inconsistency in the data that had been earlier obtained, the team has however been asked to explain the inconsistencies.

Wind : Hannington, Colleta

There was no further update since the counterparts were not available at the meeting.

Biogas: Gilbert & Caroline

The team did not have any update since they had been engaged in the laptop projects for schools. They are however going to update on the progress in the following meeting.

Environment: Peninnah

All the project reports were up to date and all the approvals had been obtained.

Financial Management: Caroline & Eunice.

The counterparts were not available at the meeting to give an update.

Min 04/09/2014– Report on MOU finalization progress

The MOU drafts were ready and awaiting comments from the REA's legal team. Penninah was to schedule a meeting with the Ministry of Health to discuss ownership of the MOU, the national or the county government. Penninah will then arrange a meeting with the county representatives in all the project areas so that they can discuss

Min 05/09/2014– PDM progress (JET).

Mr. Shimomukai explained the PDM Progress indicating that most of the activities were complete. He went on to request REA's cooperation in the remaining activities.



Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 06/09/2014– JKUAT conference meeting preparation

JKUAT reviewed all the abstracts for the renewable technologies and gave their verdict as follows;

- Biogas was accepted for both full paper and oral presentation.
- MHP was accepted as a poster presentation.
- Wind energy was still awaiting feedback as at the time.
- Solar PV was rejected

REA counterparts are required to liaise with the expert and participate in the preparation of the abstracts that had been approved.

Min 07/09/2014– International Workshop

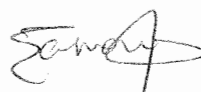
The date and venue have not been picked yet. The meeting was informed that JICA would cater for the cost of the conference and travel expenses for the experts and participants from the invited countries.

Min 08/09/2014– Any Other Business.

- I. Financial income for Lot 1 and 2 installations was presented in the meeting. It is summarized as follows;
 - Itumtum raised the most in all the installation, however much of the money was spent on operator salary leaving very little in the bank account for maintenance.
 - Ikinyeti had indicated that they were going to dedicate one of their staff in the project to reduce the cost on operator fee.
 - Olkinyei was not operating promptly this has affected their revenue collection.
 - Olemoncho lost most of the money collected to the head teacher who left the school with the entire collected amount since the project inception.
- II. It was reported that the team leader would be coming on 29/09/2014, he was going to communicate if they would be any meeting before the scheduled JCC.
- III. REA has set aside a budget for maintenance of all schools installed with solar the budget will also include the ones installed by JICA.
- IV. Terminal evaluation is scheduled for 26/09/2014, once the schedule of activities is finalized it will be shared. Joint evaluation together with REA and JET team would begin in two weeks.

Min 09/09/2014 -Ending the meeting and the Next meeting.

- a) There being no other business the Chair ended the meeting at 11.45pm. The next meeting was not set because of the upcoming JCC.

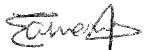



Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Action Items:

Item No.	Action	Person (s) Responsible	Timeline
1	Report on findings after analysis of Institutions installed with solar (REA)	All solar supervisors	16 th September, 2014
2	Circulation of weekly work programme.	Shimomukai (JET)	Every week by Friday
3	Supervision of replacement of sealed batteries.	Colletta Koech, Hannington	16th Sept, 2014
4	A draft MOU in consultation with Legal department on maintenance of solar equipment with the institution	Eng. Kamweru	16 th Sept, 2014
5	Write a letter to MOEST and MOH inviting them to discuss the MOU and sign	Peninah Karomo	16 th Sept, 2014
6	Conduct NPV and IRR calculations for any REA project	Samson and Caroline (Corporate planning)	16 th Sept, 2014
7	Follow up on the preparation of international workshop	Eng. Muriithi, Wangari Githii and Lucy Muricho	16 th Sept, 2014
8	Progress report	All counterparts	16 th Sept, 2014
10	Progress of arrangement of 3 rd JCC Meeting	Penninah Karomoh	16 th Sept, 2014
11	Progress of preparation for JKUAT conference	REA counterparts	16 th Sept, 2014

CHAIRMAN

Signature: 

Full Names: EPITAMUS KAMWERU

Title: CHIEF MANAGER - RENEWABLE ENERGY

Organization: RURAL ELECTRIFICATION AUTHORITY

JET

Signature: 

Full Names: Ken Shimomukai

Title: Project Coordinator

Organization: JET (JICA Expert Team)

PROGRESS OF ACTIVITIES IN PROJECT DESIGN MATRIX (PDM)

As of 15 September 2014

No.	Activity/ Output	Person in charge	Key Organization	Indicator	Schedule	Progress		
For Preparation								
1	Set up a Working Group	REA	-	-	Oct. 2013 (2nd JCC)	100%		
For All Outputs								
1	A Weekly Project Status Report	JEs & C/Ps	-	Weekly e-mail.	Since Oct. 2012	<u>39 times</u>		
2	Monthly Project Meeting	REA	REA, JET & JICA	Monthly	Since Oct. 2012	<u>10 times</u>		
3	Progress Report	JET	-	Biannually	Since Sep. 2011	4 reports		
1 For Output 1/ The Health Service Institution Model								
1-1 National Level								
1-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	<u>85% in progress</u>		
1-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOH	At least twice	Oct. 2014	50%		
1-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	40%		
1-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	100%		
1-2 County/ Sub-county Level								
1-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Aug. 2014	100% 2 of 2	100% 3 of 3	
1-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Aug. 2014	<u>75% 1.5 of 2</u>	<u>33% 1 of 3</u>	
1-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	Oct. 2014	50% 1 of 2	50% 1 of 2	
1-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Oct. 2014	80%	80%	
1-3 Local/ Institution Level								
1-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Oct. 2014	80%	80%	
1-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%	
1-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of health institution & management committee	Lecture & OJT	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-4	Daily sale records	Operator	-	-	By Aug. 2014	100% 2 of 2	100% 3 of 3	
1-3-5	Account book & cash flow statement	Nurse, treasurer & chairperson	-	-	By Aug. 2014	100% 2 of 2	100% 3 of 3	
1-3-6	O&M reports	Nurse & chairperson	-	-	By Aug. 2014	100% 2 of 2	100% 3 of 3	
1-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	<u>33% 1 of 3</u>	
1-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Dec. 2014	<u>95%</u>	<u>80%</u>	
1-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
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2 For Output 2/ School Model								
2-1 National Level								
2-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	<u>85% in progress</u>		
2-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOEST	At least twice	Oct. 2014	50% 1 time		
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2-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	100%		
2-2 County/ Sub-county Level								
2-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Aug. 2014	75% 3 of 4	67% 2 of 3	
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2-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100%	100%	
2-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Oct. 2014	80%	80%	
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2-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Oct. 2014	80%	80%	
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2-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County education officers.	At least once for each pilot facility.	Oct. 2014	0% 0 of 2	0% 0 of 3	
3 For Output 3/ MHP, Biogas & Wind								
3-1	Inventory & review of existing studies	JEs & C/Ps	-	-	As needed	MHP 80%	Biogas 80%	Wind 80%
3-2	Guidelines for rural electrification	JEs & C/Ps	-	-	By Oct. 2014	<u>80%</u>	70%	70%
3-3	Technical training / Seminar	JEs & C/Ps	REA & MoE&P	-	By Nov. 2014	60%	50%	50%
3-4	Simple pre-feasibility study	JEs & C/Ps	-	-	By Oct. 2014	<u>50%</u>	80%	60%
3-5	Technical recommendation	JEs & C/Ps	-	-	By Jan. 2015	60%	80%	60%
3-6	Data collection for 3-2 & 3-3.	JEs & C/Ps	-	-	As needed	60%	50%	80%
3-7	Workshops for validate guideline	JEs & C/Ps	REA, MoE&P & other stakeholders	-	Oct. 2014	0%	0%	0%
4 For Output 4/ Policy Recommendation								
4-1	Implement & monitoring of the preparation activities of policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	40%		
4-2	International workshop and Technical transfer workshops	JEs & C/Ps	REA, MoE&P, other stakeholders & donors in energy sector of Kenya & East Africa	1 time of international workshop & 3 times of technical transfer workshops.	By Jan. 2015	30%		
4-3	Policy recommendation	JEs & C/Ps	-	-	By Jan. 2015	40%		
4-4	Collaboration with BRIGHT project	JEs & C/Ps	-	-	As needed	70%		

Note: In the Progress section, **Italic Bold with underline** letters indicate progress since 15 August 2014.

The Project for the Establishment of Rural Electrification Model
Using Renewable Energy in the Republic Kenya
Lot 1 Income Summary up to August 2014

Attachment B-2

Iltumtum Primary School - Narok

Month	Income -Kshs.	Expenditure - Kshs.	Balance – Kshs.	Bank Deposit	Cash Balance
July/Aug -13	9,320	7,310	2,010	0	2,010
Sep-13	7,930	4,080	3,850	0	3,850
Oct-13	7,570	4,820	2,750	0	2,750
Nov-13	4,540	4,178	362	0	362
Dec-13	5,550	4,270	1,280	0	1,280
Jan-14	7,260	7,580	-320	0	-320
Feb-14	7,850	5,700	2,150	0	2,150
Mar-14	9,610	5,420	5,550	5,550	0
Apr-14	10,980	4,300	6,680	6,680	0
May-14	8,430	5,720	2710	2,000	710
Jun-14	8,850	5,970	2,880	3,130	-250
Jul-14	8,280	6,030	2,250	2,210	40
Aug-14	4,340	0	4,340	0	4,340
Totals	100,510	65,378	36,492	31,652	4,840

Olkinyei Dispensary - Narok

Month	Income -Kshs.	Expenditure - Kshs.	Balance – Kshs.	Bank Deposit	Cash Balance
Aug-13	200	0	200	0	200
Sep-13	1,120	0	1,120	0	1,120
Oct-13	220	0	220	0	220
Nov-13	830	130	700	0	700
Dec-13	160	0	160	0	160
Jan-14	0	0	0	0	0
Feb-14	0	0	0	0	0
Mar-14	0	0	0	0	0
Apr-14	0	0	0	0	0
May-14	900	0	900	800	100
Jun-14	200	0	0	0	200
Jul-14					
Aug-14	0	0	0	0	0
Totals	3,630	130	3,300	3,200	300

The Project for the Establishment of Rural Electrification Model
Using Renewable Energy in the Republic Kenya
Lot 1 Income Summary up to August 2014

Attachment B-2

Olemoncho Primary School - Narok

Month	Income -Kshs.	Expenditure - Kshs.	Balance – Kshs.	Bank Deposit	Cash Balance
Jul-13	2,190	350	1,840	0	1,840
Aug-13	2,740	280	2,460	0	2,460
Sep-13	1,940	3,350	-1,410	0	-1,410
Oct-13	0	0	0	0	0
Nov-13	0	0	0	0	0
Dec-13	0	0	0	0	0
Jan-14	0	0	0	0	0
Feb-14	0	0	0	0	0
Mar-14	0	0	0	0	0
Apr-14	0	0	0	0	0
May-14	600	0	600		600
Jun-14	1,300	180	1,120	0	1,120
Jul-14	1,590	1,510	80	0	80
Aug-14	0	0	0	0	0
Totals	10,360	5670	4,690	0	4,690

Ilkilnyeti Dispensary - Kajiado

Month	Income -Kshs.	Expenditure - Kshs.	Balance – Kshs.	Bank Deposit	Cash Balance
Aug-13	3,320	4,930	-1,610	0	0
Sep-13	2,900	4,400	-1,500	0	0
Oct-13	3,580	4,520	-940	0	0
Nov-13	3,870	4,500	-630	0	0
Dec-13	3,240	4,460	-1,220	0	0
Jan-14	2,900	4,000	-1,100	0	0
Totals	19,810	26,810	-7,000		
Feb-14	0	0	0	0	0
Mar-14	6,740	3,220	3,520	3,350	170
Apr-14	5,980	2,580	3,400	3,200	200
May-14	5,480	2,300	3,180	3,000	180
Jun-14	5,060	3,530	1,530	1,500	30
Jul-14	6,980	2,770	4,210	4,200	10
Aug-14	6,320	0	6,320	0	6,320
Totals	56,370	41,210	15,160	15,250	6,910

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Thursday, 13th November, 2014
Location: Renewable Energy Office, Chancery house 6th floor
Time: 11.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng. James Muriithi	REA (Chairing)	Senior Engineer
2	Semekiah Ongong'a	REA (Co-Chairing)	Assistant Engineer
3	Judith Kimeu	REA(Taking Minutes)	Assistant Engineer
4	Stacey Waudo	REA	Intern, Environment
5	Evans Njenga	JICA	Consultant
6	Ken Shimomukai	JET	Coordinator
7	Yuka Nakagawa	JET	Biogas Expert
8	Yoshiaki Samejima	JET	Deputy Team Leader/ MHP Expert

Min 01/11/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 11.30 a.m. The following agenda was presented and adopted.

AGENDA

1. Review of 3rd JCC Meeting Minutes
2. JKUAT Conference
3. Finalization of Guidelines
4. PDM Progress
5. MOU
6. International Workshop
7. PV Systems Handover
8. AOB

Min 02/11/2014- Review of 3rd JCC Meeting Minutes.

The team went through the minutes of the 3rd JCC meeting held at the ministry (MOE&P) and agreed that the minutes were as discussed.

Min 03/11/2014- JKUAT Conference.

The members were informed that the conference was already in progress as it was running on 13th and 14th November 2014. REA had one presentation verbally about Pre-F/S of wind and the other technologies (Pre-F/S of MHP and biogas) would be posters. It was reported that Mr. Hannington of REA will be doing the verbal presentation in the afternoon and all were invited to attend.

Mr. Njenga requested to share the presentation materials of JKUAT conference for JICA's PR. REA and JET agreed.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 04/11/2014– Finalization of Guidelines.

It was reported that the validation workshop to review the technical guidelines of wind, MHP and biogas was held successfully on 6th November 2014. Recommendations highlighted on that day were being incorporated. It was agreed that the header and the footer of the document should be changed.

Min 05/11/2014 - PDM Progress

The members present were informed that most activities in the PDM were at 90% however the following activities need to be completed.

Progress & Information Sharing Meeting at County Level (Narok)

JET reported that the captioned meeting in Narok had been held without a REA representative. It therefore did not satisfy PDM requirements, and JET asked whether REA wishes to reorganize the meeting again. REA concluded to reorganize the meeting, and asked JET to assist the arrangement. JET will reorganize for a meeting in Narok in January.

Progress & Information sharing Meetings at National Level JET reported that the captioned meetings have been held once but one more set of meetings is required according to PDM, and requested REA to organize the meetings. REA will organize meetings with MoEST and MoH at National level in January.

Min 06/11/2014: MOU

It was reported that the draft MOU was sent to MoH for comments, the members were informed that in the case of MoH, the MOU would be done in two (2) stages with one signed at the national level and the other at county level. JET also reported that the national level MOU with MoH is under review in MoH and REA will investigate the draft MOU for finalization after MoH sends the comment.

It was reported that the Draft MOU to MoEST was not yet sent and Eng. Muriithi was requested to share it with MoEST.

Min 07/11/2014: International Workshop

The team was informed that South Sudan was in the list of countries to be invited. The following highlights were made for the workshop.

1. Official invite letters not yet sent.
2. Emails invites sent out but few countries have confirmed
3. Target participants number is 60 people.
4. Venue to budget constraints will be in Nairobi as opposed to Naivasha (as per JCC Recommendation).
5. Invitations to Kenyan Participants to be done by Mid January.
6. Mr. Shimomukai to discuss with Counterparts from Renewable energy and communications departments on finalizations of the workshop.




Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Min 08/11/2014- PV Systems Handover

Mr. Njenga confirmed that the handover will be done from JICA to REA and then to the respective facilities. He said it would also entail a handover ceremony.

Min 09/11/2014- AOB

As the supportive activity of technical transfer for biogas, Ms. Nakagawa explained that the following were the progress.

1. Finalization of tender document for Isinya Rehabilitation: Comments on BoQ and specs had been sent to REA.
2. Preparation on specs for FS tendering for Nyeri High School: The REA counterpart is to prepare the specs and send to JET for comments.

The counterparts were reminded to fill up the Objective and achievement sheets which will be reviewed in February 2015.

REA inquired about handover of monitoring equipment. JET explained that the handover was planned in February 2015; however, the equipment are already kept in Mombasa Road Office. In case REA need to use some of them, those are available.

Next meeting was scheduled to be held on 9th December 2014.

There being no other business the meeting was called off at 01.00 PM.

CHAIRMAN

Signature: 

Full Names: EPHANTUS KAMWERU

Title: CHIEF MANAGER, RENEWABLE ENERGY

Organization: RURAL ELECTRIFICATION AUTHORITY.

JET

Signature: 

Full Names: Yoshiaki SAMEJIMA

Title: Deputy Team Leader

Organization: JET (JICA Expert Team)

Project for Establishment of Rural Electrification Model using Renewable Energy

PROGRESS OF ACTIVITIES IN PROJECT DESIGN MATRIX (PDM)

As of 10 November 2014

No.	Activity/ Output	Person in charge	Key Organization	Indicator	Schedule	Progress			
For Preparation									
1	Set up a Working Group	REA	-	-	Oct. 2013 (2nd JCC)	100%			
For All Outputs									
1	A Weekly Project Status Report	JEs & C/Ps	-	Weekly e-mail.	Since Oct. 2012	46 times			
2	Monthly Project Meeting	REA	REA, JET & JICA	Monthly	Since Oct. 2012	11 times			
3	Progress Report	JET	-	Biannually	Since Sep. 2011	5 reports			
1 For Output 1/ The Health Service Institution Model									
1-1 National Level									
1-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	90%			
1-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOH	At least twice	By Jan. 2015	50% * No plan of meeting with national level.			
1-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	60%			
1-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2013	100%			
1-2 County/ Sub-county Level							Lot 1	Lot 2	
1-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Oct. 2014	100% 2 of 2	100% 3 of 3		
1-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Oct. 2014	100% 2 of 2	100% 3 of 3		
1-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	4 Nov. 2014: Kajiado 11 Nov. 2014: Narok 14 Nov. 2014: Samburu	75% 1 of 2	50% 1 of 2		
1-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3		
1-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Dec. 2014	80%	80%		
1-3 Local/ Institution Level							Lot 1	Lot 2	
1-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Dec. 2014	80%	80%		
1-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%		
1-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of health institution & management committee	Lecture & OJT	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3		
1-3-4	Daily sale records	Operator	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3		
1-3-5	Account book & cash flow statement	Nurse, treasurer & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3		
1-3-6	O&M reports	Nurse & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3		
1-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	100% 3 of 3		
1-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Oct. 2014	100% 2 of 2	100% 3 of 3		
1-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3		
1-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County medical officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	100% 2 of 2	100% 3 of 3		
1-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County medical officers.	At least once for each pilot facility.	6 Nov. 2014: Kajiado 11 Nov. 2014: Narok 14 Nov. 2014: Samburu	50% 1 of 2	0% 0 of 3		
2 For Output 2/ School Model									
2-1 National Level									
2-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	90%			
2-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOEST	At least twice	By Jan. 2015	50% * No plan of meeting with national level.			
2-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	60%			
2-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	100%			
2-2 County/ Sub-county Level							Lot 1	Lot 2	
2-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Nov. 2014 (Olemoncho)	75% 3 of 4	100% 3 of 3		
2-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Nov. 2014 (Olemoncho)	75% 3 of 4	100% 3 of 3		
2-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	11 Nov. 2014: Narok 14 Nov. 2014: Samburu	50% 1 of 2	50% 1 of 2		
2-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100%	100%		
2-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Dec. 2014	80%	80%		
2-3 Local/ Institution Level							Lot 1	Lot 2	
2-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Dec. 2014	80%	80%		
2-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Dec. 2014	80%	80%		
2-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of school & management committee	-	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3		
2-3-4	Daily sale records	Operator	-	-	Nov. 2014 (Olemoncho)	50% 1 of 2	100% 3 of 3		
2-3-5	Account book & cash flow statement	Head teacher, treasurer & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3		
2-3-6	O&M reports	Head teacher & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3		
2-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	100% 3 of 3		
2-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Oct. 2014	100% 2 of 2	100% 3 of 3		
2-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3		
2-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County health officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	100% 2 of 2	100% 3 of 3		
2-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County education officers.	At least once for each pilot facility.	11 Nov. 2014: Narok 14 Nov. 2014: Samburu	0% 0 of 2	0% 0 of 3		
3 For Output 3/ MHP, Biogas & Wind							MHP	Biogas	Wind
3-1	Inventory & review of existing studies	JEs & C/Ps	-	-	As needed	95%	95%	95%	
3-2	Guidelines for rural electrification	JEs & C/Ps	-	-	By Jan. 2015	90%	90%	95%	
3-3	Technical training / Seminar	JEs & C/Ps	REA & MoE&P	-	By Nov. 2014	85%	85%	90%	
3-4	Simple pre-feasibility study	JEs & C/Ps	-	-	By Dec. 2014	90%	90%	95%	
3-5	Technical recommendation	JEs & C/Ps	-	-	By Jan. 2015	80%	80%	60%	
3-6	Data collection for 3-2 & 3-3.	JEs & C/Ps	-	-	As needed	95%	90%	95%	
3-7	Workshops for validate guideline	JEs & C/Ps	REA, MoE&P & other stakeholders	-	6th Nov. 2014	100%	100%	100%	
4 For Output 4/ Policy Recommendation									
4-1	Implement & monitoring of the preparation activities of policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	70%			
4-2	International workshop and Technical transfer workshops	JEs & C/Ps	REA, MoE&P, other stakeholders & donors in energy sector of Kenya & East Africa	1 time of international workshop & 3 times of technical transfer workshops.	By Jan. 2015	70%			
4-3	Policy recommendation	JEs & C/Ps	-	-	By Jan. 2015	60%			
4-4	Collaboration with BRIGHT project	JEs & C/Ps	-	-	As needed	80%			

Note: In the Progress section, **Italic Bold** blue letters indicate progress since 11th September 2014.

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Tuesday, 16th December, 2014
Location: Boardroom, Chancery house 8th floor
Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng E. Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2	Peninah Karomoh	REA	Environmental Scientist
3	Ken Shimomukai	JET	Coordinator
4	Judith Kimeu	REA	Assistant Engineer
5	Semekiah Ongonga	REA	Assistant Engineer
6	Kioko Maithyia	REA	Communication Officer
7	Hannington Gochi	REA	Senior Technician
8	Caroline Kelly	REA(Taking minutes)	Assistant Officer Renewable Energy

Min 01/08/2014-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.30 a.m. The following agenda was presented and adopted.

AGENDA

1. PDM Progress (JET).
2. International Workshop preparation and progress.
3. Any Other Business.

Min 01/12/2014- PDM Progress (JET)

Most of the activities in the PDM matrix were complete as had been indicated in the summary report that was presented at the meeting.

Min 02/12/2014- International Workshop

Preparations for the workshop were underway and the following update was presented at the meeting;

- REA shall be allocated 20minutes to make a presentation on projects that have been done in Renewable Energy in the country and particularly mention the JICA projects.
- There will be a presentation from Kenya Renewable Energy Association (KEREAA). REA should therefore make a formal invitation to KEREAA requesting them to make a presentation.
- There was a suggestion that counterparts make presentation on the various technologies learnt but this was not possible since the time allocated for presentation could not allow for every counterpart to make their presentation and the program could not be altered at this advance stage.



1



Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

- Tanzania, Uganda and Burundi had confirmed their attendance for the event, the other countries contacted had not confirmed attendance as yet, Communication department was tasked with the responsibility to ensure that they contact them through their embassies and obtain a response from them.

Min 03/12/2014– MOU for ownership and maintenance of the JET solar projects

MOU for health had been drafted and shared with the ministry of health, the document was awaiting their comments before it being finalized. The MOU for schools was still under preparation.

Min 10/08/2014-Ending the meeting and the Next meeting.

- There being no other business the Chair ended the meeting at 11.45pm. The next meeting shall be held on 13th January, 2015 at 10:00am.

Action Items:

CHAIRMAN

Signature: 

Full Names: EPHANTUS KAMWERU

Title: CHIEF MANAGER, RENEWABLE ENERGY

Organization: RURAL ELECTRIFICATION AUTHORITY

JET

Signature: 

Full Names: Ken Shimomukai

Title: Project Coordinator

Organization: JET (JICA Expert Team)

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

Meeting: REA - JICA PROJECT MANAGEMENT MEETING
Date: Tuesday, 13th January, 2015
Location: Boardroom, Chancery house 8th floor
Time: 10.00 a.m.

IN ATTENDANCE

	NAME	ORGANISATION	TITLE
1	Eng E. Kamweru	REA (Chairman)	Chief Manager Renewable Energy
2	Evans Njenga	JICA Kenya	Consultant
3	Ken Shimomukai	JET	Coordinator
4	Yoko Kitauchi	JET	Community development & monitoring
5	Tsutomu Dei	JET	Team leader
6	Yoshiaki Samejima	JET	MHP Expert
7	Bosibori Abaya	REA	Communication assistant
8	Minori Chitani	JICA Kenya	REP Energy
9	Caroline Kelly	REA(Taking minutes)	Assistant Officer Renewable Energy

Min 01/12/2015-Constitution of the meeting and adoption of agenda

The Chair called the meeting to order at 10.30 a.m. The following agenda was presented and adopted.

AGENDA

1. International Workshop preparation and progress.
2. MOU
3. PDM Progress (JET).
4. Any Other Business.

Min 02/01/2015 International workshop preparation and progress

Preparation of the workshop was underway the following update was presented at the meeting;

- Invitation letters were drafted and signed by the CEO to be emailed to the various countries; communication department was tasked with the responsibility to ensure that all the invited countries get their invitations.
- The meeting expressed that the workshop should have included presentation from other countries other than East African so that Kenya would gain from their experience in renewable energy.
- The program had been amended to include JICA presentation for 10-20 minutes, it was noted that it was important that JICA makes a presentation since they were the

Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

main sponsors of the workshop. It was also reported that REA CEO would not be available for the meeting since he was engaged in other projects.

- REA should make a presentation focusing on the JICA projects and the Ministry of Energy make a presentation on Renewable energy projects in the country. JICA was requested to give their experience in projects they have done in other countries. Technical matters will however not be discussed in the workshop forum.
- Counterparts should present on the technologies learnt during the project period. Each counterpart will be allocated 15 minutes. Jet team and counterparts will be involved in preparing a presentation jointly. More time will be allocated for Kenya to allow the counterparts make their presentation.
- Only two people from Uganda and Burundi had sent their passport. It was reported that there are JICA offices in Ethiopia and Rwanda, which will be used to obtain a representative from their country to attend the workshop.
- Arrangement for booking air ticket for participants were underway therefore confirmation for attendance should be made by 22/01/2015 to enable preparation of booking the tickets. Presentation materials for all the participants should be sent in advance, incase of any handouts materials they should also sent earlier too.
- Invitation of the media to cover the event was not favorable but JICA would invite the media if they were really interested.
- The workshop plans to host 60 people; 15 REA, 5 MOE 5 JET, 5 JICA, others would be drawn from the following; KEREKA, Strathmore, and other participants in the renewable energy. The list of attendees should be finalized to enable planning.

Min 03/ 01/2015 Memorandum Of Understanding

- The MOU draft has been forwarded to the Attorney General's office for their comments. Ken has been in contact with the ministry of health and following up the matter, it was noted that the finalization has taken a long time. Ken was advised to find out the contact person at the AG's office. REA is maintaining all the schools and therefore there would be no need for MOU.
- JICA prepare a maintenance document, tender and a contract. JET should have shared a document based on the Japan systems of the various solar components. In this regard they were requested to share a tender document for maintenance, A sample contract for maintenance. It was reported that technical issues have been incorporated in the guideline manual and could be referred to when making the contract.
- Monthly reporting model for the systems should be considered when making the maintenance contract. REA intends to use a contractor to conduct monitoring of the




Project for establishment of rural Electrification Model using Renewable Energy in the republic of Kenya

system quarterly and give reports. Contractors will be allocated regions for easy management.

- O&M for the JICA project will be integrated in the maintenance programme.
- A request will be made to JICA Tokyo for the maintenance tender document but REA team should share the tender document on solar, structure of REA maintenance team to enable them provide a guideline.

Min 01/12/2014– PDM Progress (JET)

Most of the activities in the PDM matrix were complete as had been indicated in the summary report that was presented at the meeting. Mr. Shimomukai requested REA for cooperation on Activity 1-1-2, 1-2-3, 2-1-2 and 2-2-3.

PDM activity for community development requires participation from REA counterpart who should accompany the JET team to complete the activity. This is a one-day activity. The final arrangement will be made and communicated in advance to enable participation by the REA team.

Min 04/12/2014 – Any Other Business.

- I. Meter installation piloting has not been started since the focus is on the completion of project. JICA can share any ideas they may have on the meters.
- II. Guideline documents had been submitted in December but there has been no feedback from the various counterparts. Comments should however be made by end of next week to enable finalize the manuals.
- III. 13/01/2015 monthly meeting is the last monthly meeting for the project. The last JCC is scheduled for 13/02/2015 at 10am at the ministry of energy. The chairman should inform the CEO REA to attend. All the counterparts should also attend.
- IV. Meeting with the ministry of health and education on 19/01/2015 has been schedule and REA participation and MOE is required.
- V. JCC date should be confirmed by the MOE.
- VI. A symbolic handing over ceremony for the projects should be planned as it had been scheduled on 4/02/2015. REA CEO is requested to participate. JICA CEO will be present. This will be the final ceremony schedule during the international workshop activities.

Min 10/08/2014 -Ending the meeting and the Next meeting.

- a) There being no other business the Chair ended the meeting at 12.00 noon. The next shall be the JCC, which will be held on 13th February 2015 at 10:00am.

**Project for establishment of rural Electrification Model using Renewable
Energy in the republic of Kenya**

CHAIRMAN

Signature:

Ephantus

Full Names:

EPHANTUS KAMWERU

Title:

CHIEF MANAGER, RENEWABLE ENERGY

Organization:

RURAL ELECTRIFICATION AUTHORITY

JET

Signature:

Di

Full Names:

TSUTOMU DEI

Title:

TEAM LEADER / WIND

Organization:

JET (JICA Expert Team)

Project for Establishment of Rural Electrification Model using Renewable Energy

PROGRESS OF ACTIVITIES IN PROJECT DESIGN MATRIX (PDM)

As of 12th January 2015

No.	Activity/ Output	Person in charge	Key Organization	Indicator	Schedule	Progress		
For Preparation								
1	Set up a Working Group	REA	-		Oct. 2013 (2nd JCC)	100%		
For All Outputs								
1	A Weekly Project Status Report	JEs & C/Ps	-	Weekly e-mail.	Since Oct. 2012	52 times		
2	Monthly Project Meeting	REA	REA, JET & JICA	Monthly	Since Oct. 2012	13 times		
3	Progress Report	JET		Biannually	Since Sep. 2011	5 reports		
1 For Output 1/ The Health Service Institution Model								
1-1 National Level								
1-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	100%		
1-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOH	At least twice	By Jan. 2015	50%		
1-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	70%		
1-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2013	100%		
1-2 County/ Sub-county Level								
1-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Oct. 2014	100% 2 of 2	100% 3 of 3	
1-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	By Oct. 2014	100% 2 of 2	100% 3 of 3	
1-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	No REA officer attended at the second meeting in Narok. A supplementary meeting is planned in Jan. 2015.	75% 3 of 4	100% 1 of 2	
1-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Jan. 2015	90%	90%	
1-3 Local/ Institution Level								
1-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Jan. 2015	90%	90%	
1-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Jan. 2015	90%	90%	
1-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of health institution & management committee	Lecture & OJT	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-4	Daily sale records	Operator	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3	
1-3-5	Account book & cash flow statement	Nurse, treasurer & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3	
1-3-6	O&M reports	Nurse & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3	
1-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	100% 3 of 3	
1-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Oct. 2014	100% 2 of 2	100% 3 of 3	
1-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
1-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County medical officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	100% 2 of 2	100% 3 of 3	
1-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County medical officers.	At least once for each pilot facility.	By Nov. 2014	100% 2 of 2	100% 3 of 3	
2 For Output 2/ School Model								
2-1 National Level								
2-1-1	Review policies, studies, surveys & projects	JEs & C/Ps	-	-	As needed	100%		
2-1-2	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & MOEST	At least twice	By Jan. 2015	50%		
2-1-3	Policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	70%		
2-1-4	Proposal for the disposal of solar panels, etc.	JEs & C/Ps	-	-	Feb. 2014	100%		
2-2 County/ Sub-county Level								
2-2-1	Submission of account book & cash flow statement.	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Olemoncho has not submitted the second report.	75% 3 of 4	100% 3 of 3	
2-2-2	Submission of O&M report	Management committee	-	At least twice for Lot 1 At least once for Lot 2	Olemoncho has not submitted the second report.	75% 3 of 4	100% 3 of 3	
2-2-3	Progress & information sharing meetings	JEs & C/Ps	REA, MoE&P, & County	At least twice.	No REA officer attended at the second meeting in Narok. A supplementary meeting is planned in Jan. 2015.	50% 1 of 2	100% 2 of 2	
2-2-4	Baseline survey at target facilities & communities	JEs & C/Ps	-	-	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100%	100%	
2-2-5	Capacity & needs assessment of county officers	JEs & C/Ps	County medical officers	-	By Jan. 2015	90%	90%	
2-3 Local/ Institution Level								
2-3-1	Capacity & needs assessment	JET	Target communities and other stakeholders	-	By Jan. 2015	90%	90%	
2-3-2	Sustainable financial plan	JEs & C/Ps	-	-	By Jan. 2015	90%	90%	
2-3-3	Sufficient financial training	JEs & C/Ps	Operator, staff of school & management committee	-	Lot 1: May 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
2-3-4	Daily sale records	Operator	-	-	Nov. 2014 (Olemoncho)	100% 2 of 2	100% 3 of 3	
2-3-5	Account book & cash flow statement	Head teacher, treasurer & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3	
2-3-6	O&M reports	Head teacher & chairperson	-	-	By Oct. 2014	100% 2 of 2	100% 3 of 3	
2-3-7	Agreement of financial support	JEs & C/Ps	Agencies and/or organization	-	Lot 1: Mar. 2014 Lot 2: Oct. 2014	100% 2 of 2	100% 3 of 3	
2-3-8	Detailed plans (System design & sustainable O&M)	JEs & C/Ps	REA & MoE&P	OJT	By Oct. 2014	100% 2 of 2	100% 3 of 3	
2-3-9	Stakeholders meeting	JEs & C/Ps	Management committee & owners	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: Feb. 2014	100% 2 of 2	100% 3 of 3	
2-3-10	Information sharing meeting	JEs & C/Ps	Facility users & County health officers.	At least once for each pilot facility.	Lot 1: Jun. 2013 Lot 2: May 2014	100% 2 of 2	100% 3 of 3	
2-3-11	Evaluation meeting	JEs & C/Ps	Management committee, owners, facility users & County education officers.	At least once for each pilot facility.	11 Nov. 2014: Narok 14 Nov. 2014: Samburu	100% 2 of 2	100% 3 of 3	
3 For Output 3/ MHP, Biogas & Wind								
3-1	Inventory & review of existing studies	JEs & C/Ps	-	-	As needed	95%	95%	100%
3-2	Guidelines for rural electrification	JEs & C/Ps	-	-	By Jan. 2015	95%	95%	95%
3-3	Technical training / Seminar	JEs & C/Ps	REA & MoE&P	-	By Nov. 2014	100%	100%	100%
3-4	Simple pre-feasibility study	JEs & C/Ps	-	-	By Jan. 2015	90%	95%	95%
3-5	Technical recommendation	JEs & C/Ps	-	-	By Jan. 2015	90%	95%	90%
3-6	Data collection for 3-2 & 3-3.	JEs & C/Ps	-	-	As needed	95%	95%	95%
3-7	Workshops for validate guideline	JEs & C/Ps	REA, MoE&P & other stakeholders	-	6th Nov. 2014	100%	100%	100%
4 For Output 4/ Policy Recommendation								
4-1	Implement & monitoring of the preparation activities of policy recommendations	JEs & C/Ps	-	-	By Jan. 2015	85%		
4-2	International workshop and Technical transfer workshops	JEs & C/Ps	REA, MoE&P, other stakeholders & donors in energy sector of Kenya & East Africa	1 time of international workshop & 3 times of technical transfer workshops.	By Jan. 2015	70%		
4-3	Policy recommendation	JEs & C/Ps	-	-	By Jan. 2015	70%		
4-4	Collaboration with BRIGHT project	JEs & C/Ps	-	-	As needed	90%		

Note: In the Progress section, ***Italic Bold blue letters*** indicate progress since **8th December 2014**.

Schedule/Programme of International Workshop

Made by REA/JET

January 12th, 2015

Date	February 2015				
	2nd (Mon)	3rd (Tue)	4th (Wed)	5th (Thu)	6th (Fri)
Activity	Movement from each country	International Workshop on Rural Electrification using Renewable Energy (Tentative programme is attached)	Site Visit (Iltumtum)	Site Visit Olkaria Geothermal Plant	Closing
Stay	Nairobi	Nairobi	(Naivasha)	Nairobi	

Time	Proceeding	Responsibility
08:30 - 09:00	Arrival, Registration	
09:00 - 09:20	Opening Remark	Ag.CEO, Mr.Munyu (REA)
09:20 - 09:40	Presentation by JICA	JICA HQ. Mr.Sato
09:40 - 10:00	Presentation by Burundi	
10:00 - 10:20	Presentation by Ethiopia	
10:20 - 10:40	Question & Feedback	
10:40 - 11:00	Coffee Break	
11:00 - 11:20	Presentation by Rwanda	
11:20 - 11:40	Presentation by Sudan	
11:40 - 12:00	Presentation by Tanzania	
12:00 - 12:30	Question & Feedback	
12:30 - 13:30	Lunch Break	
13:30 - 13:50	Presentation by Uganda	
13:50 - 14:20	Presentation by Kenya	
14:20 - 14:40	Question & Feedback	
14:40 - 15:00	Coffee Break	
15:00 - 16:00	Discussion of Rural Electrification Using Renewable Energy in African Country	
16:00 - 16:10	Way Forward and Closing	