

**Scottish Government**

**Malawi Development Programme 2015-2018**

**End of Year Report – Part 1 of 3**

This narrative report should be submitted together with your updated logframe and financial report.

**PLEASE READ ATTACHED GUIDELINES BEFORE COMPLETING THE FORM**

<b>1. Basic Project Information</b>		
Complete the information below for management purposes. Please indicate in the relevant section whether any changes to your basic project information (e.g. partners, geography, project dates or budget) have occurred during this reporting year. Explanations should be provided in section 3.		
1.1	<b>Project Reference Number</b>	<b>M/15/R/020</b>
1.2	<b>Reporting Year</b>	<b>From: 1/04/2017 To: 31/03/2018</b>
1.3	<b>Project Year (e.g. Year 1)</b>	<b>Year 3</b>
1.4	<b>Name of Lead Organisation (Grant Holder)*</b>	<b>University of Strathclyde</b>
1.5	<b>Name of Partner(s)*</b>	<b>United Purpose Malawi (UP) Centre for Water, Sanitation, Health and Appropriate Technology Development (WASH TED)</b>
1.6	<b>Name of Project*</b>	<b>Sustainable Off-grid Electrification of Rural Villages (SOGERV)</b>
1.7	<b>Project Description*</b>	<p>The overarching aim of the Sustainable Off-grid Electrification of Rural Villages (SOGERV) project has been the Sustainable Energy for All goal of increasing energy access in Malawi – electricity access is currently only 9% overall, and 1% in rural areas.</p> <p>We work in 4 villages in Chikhwawa that currently lack access to electricity at homes, schools, health centres and businesses. Through a needs-based process, this project has set up sustainable community energy suppliers to deploy appropriate RET for target households, businesses, schools and health centres in rural Chikhwawa District, Malawi.</p>
1.8	<b>Project Country/ Region*</b>	<b>Malawi – South East Africa</b>
1.9	<b>Project Start &amp; End Date*</b>	<b>Start: 1/4/2015 End: 31/3/2018</b>
1.10	<b>Total Project Budget*</b>	<b>£599,028</b>
1.11	<b>Total Funding from IDF*</b>	<b>£599,028</b>
1.12	<b>IDF Development</b>	<input type="checkbox"/> Health <input type="checkbox"/> Education <input type="checkbox"/> Civic Governance

**1. Basic Project Information**

Complete the information below for management purposes. Please indicate in the relevant section whether any changes to your basic project information (e.g. partners, geography, project dates or budget) have occurred during this reporting year. Explanations should be provided in section 3.

	<b>Priorities</b> Please tick the box next to the development priority/priorities that your block grant aims to address	<input type="checkbox"/> Sustainable Economic Development	<input checked="" type="checkbox"/> Renewable Energy
1.13	<b>Supporting Documentation</b> Check box to confirm key documents have been submitted with this report	<b>Proposed Revised Logical Framework, if applicable</b> (see Q3.2) <input type="checkbox"/>	
	Please list any further supporting documentation that has been submitted	<b>End Year Financial Report</b> <input checked="" type="checkbox"/>	
1.14	<b>Response to Previous Progress Reviews</b>	<b>Scottish Government's comments on previous reports (state which report) :</b> N/A	<b>Action taken since the last report:</b> N/A
1.15	<b>Date report produced</b>	30 April 2018	
1.16	<b>Name and position of person(s) who compiled this report</b>	Name, Position: <b>[REDACTED]</b> University of Strathclyde Research Associate & SOGERV Project Lead	
1.17	<b>Main contact details for project, if changed</b>		

Signed by           **[REDACTED]**           Date   30/04/2018  

Designation on the Project:   **SOGERV Project Lead**  

**2. Project Relevance****2.1 Project Beneficiaries**

	<p>Does the project remain relevant to the context and the beneficiaries with whom you are working? Please justify this in a short paragraph below.</p>
	<p>Yes. The Project is aimed at providing access to modern energy in 4 villages in rural Malawi which do not currently have access to electricity. Through our project work and wider engagement it is clear that access to electricity is clearly still a major development challenge in Malawi with significant need for off-grid households, businesses and public facilities. The project is directly addressing this by providing sustainable renewable energy services.</p>
2.2	<p><b>Gender and social inclusion</b> Please describe how your project has worked to ensure that women and girls, and other vulnerable groups (as appropriate) benefit from the project. Describe any challenges experienced in reaching vulnerable people and how these have been overcome.</p> <p>Women and children benefit from increased access to electricity at several levels. SOGERV has targeted households, schools, health centres and business for renewable energy access. Schools with sufficient lighting are enabling school going girls to study at night. Household systems are displacing expensive (dry-cell battery) and relatively dirty/dangerous lighting sources (kerosene and candles). At health facilities, the ability to properly diagnose illnesses, and for some locations, to have lighting for giving childbirth directly benefits women and children.</p> <p>In addition to the expected impacts, SOGERV has sought to involve women in the development process itself. SOGERV has explicitly involved women in the needs assessment process and community level decision making to ensure their demographic is represented. Furthermore, we have integrated gender-specific monitoring within our M&amp;E system so we can assess the impact of the intervention on women.</p> <p>With all installations completed we are now analysing impact using real M&amp;E data. Numbers are reported in the logframe and later sections but, in summary, community engagement has seen good gender balance, for example: numbers of school students studying has good female representation and our Thendo energy committee has a 50:50 ratio with key leadership roles held by women. It is interesting that household products are selling particularly well. We intend to complete some evaluation work in the next 6 months to gauge who in the household is benefitting most from these products.</p> <p>We have observed that when recruiting for energy entrepreneurs and when engaging with small business customers, the demographic is majority male. We recognize that specific gender targeted energy literacy and business start-up support is required to alter this pattern, and the effect of these efforts will take time to come to fruition. We aim to conduct such engagement during our extension period.</p>
2.3	<p><b>Accountability to stakeholders</b> How does the project ensure that beneficiaries and wider stakeholders are engaged with and can provide feedback to the project? What influence has this had on the project? What challenges have been experienced in collecting and acting on beneficiary feedback?</p> <p>As described in previous reporting, the project has been consultative and inclusive by</p>

	<p>design, involving various stakeholders to ensure buy-in is achieved at all levels.</p> <p>As we have moved through our implementation stages, we had significant feedback from the communities that:</p> <ul style="list-style-type: none"> <li>• Prices for purchase/hire of small entrepreneur systems were unaffordable</li> <li>• Prices for cash purchase of larger PSP products were a barrier</li> <li>• Some larger businesses wanted a greater level of energy supply than the stand alone systems that we could supply</li> </ul> <p>This feedback highlights the rapid changes can occur in perceived ability to pay in the time between market assessment and implementation.</p> <p>Our response has been to implement a monthly repayment system for PSPs, introduce a rental tariff for larger stand-alone systems (as opposed to purchase) and to introduce 'wired connections' to larger businesses from our main energy stations.</p> <p>Ongoing engagement and training in the community by the SOGERV field staff has kept a high degree of beneficiary engagement. SOGERV management staff have been engaging with District Government, the Department of Energy Affairs and other stakeholder renewable energy forums in order to disseminate the SOGERV findings and raise awareness of projects (as detailed in later sections of the report). The team have engaged with wider sustainable energy initiatives at a national level. Sharing knowledge and experiences with key stakeholders such as CEM, MEGA, UNDP and Practical Action.</p>
--	--

<b>3. Progress and Results</b>		
<p>This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.</p>		
3.1	<b>Changes to Project Status</b>	
	<p>Has the focus or delivery of your project changed significantly over the last financial year? If so, please explain how and why, and attach copies of all relevant correspondence with the Scottish Government.</p>	
	<p>No significant change to focus. In terms of delivery, there has been a significant incident with the Kandeu community energy business. This has been reported previously. The incident report is attached here for reference.</p>	
3.2	<b>Changes to the Logical Framework</b>	
	<p>If changes have been made to the logframe since the previous financial year please describe these below. Please also provide evidence (e.g. copies of correspondence) that these changes have been agreed with the Scottish Government. If you would like to make changes to your logframe, but these have not yet been approved by the Scottish Government, please describe and justify in detail the requested changes below – and highlight the proposed changes in the revised logframe.</p>	
	<b>Result Area/ Indicator</b>	<b>Proposed/ Approved Change (please clarify and evidence below)</b>
		<b>Reason for Change</b>
		<p><b>No new changes to the Log Frame</b></p>

### 3. Progress and Results

This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.


**3.3 Gaps in Monitoring Data**  
 If baseline or monitoring information is not available, please provide an explanation below. Where monitoring data has been delayed (since previous report), please provide an indication of when and how it will be made available to the Scottish Government.

**N/A**

**3.4 Project Outputs**  
 In the table below, please list each of your project outputs, and provide further detail on your progress and results over this reporting period. Describe any delays or other challenges that you have experienced and how these have been addressed, and provide information about any unexpected results. Progress should be supported with evidence (such as links to monitoring data in line with logical framework, case studies, web-based information, reports etc) where possible.

**Output 1: The following renewable energy services being utilised in 4 villages in Chikhwawa:**

- 4 School-based PV Systems,
- 4 Health-based PV Systems,
- 4 Entrepreneur managed charging Stations,
- 240 Solar Lanterns,

Output Indicator	Progress against Planned Milestone/Target
1.1 no. of community buildings (health centres, schools, or other community structures) gaining access to renewable energy (ref SG Indicator 6.1)	A total of 4 community buildings now have PV systems installed. These comprise of : <ul style="list-style-type: none"> <li>o 2 classroom blocks at Mandrade Primary School and Gola primary school.</li> <li>o 2 health centre buildings at Mandrade health post and Gola dispensary.</li> </ul>
1.2 no. of Households gaining access to renewable energy (ref SG Indicator 6.2)	795 households are utilising renewable energy technologies
1.3 no. of businesses and services provided by gaining access to renewable energy or improved cooking technologies (ref SG Indicator 6.3)	10 small businesses have been established using Renewable Energy Products supplied by SOGERV

**Output 2: 4 community energy providers in place with managers trained and support by district engagement agreements**

Output Indicator	Progress against Planned Milestone/Target
2.1 no. of Community Energy providers established	3 community energy providers have been established and these comprise of :

### 3. Progress and Results

This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.

	<ul style="list-style-type: none"> <li>• 1 entrepreneur operating the charging kiosks at Mandrade</li> <li>• 1 entrepreneur identified and trained to operate the charging kiosk at Gola.</li> <li>• An energy committee established at Thendo to operate the charging kiosk.</li> </ul> <p>Following the incident at Kandeu (reported on separately) an energy committee is being formed and the energy service will be re-established with support from the entrepreneur at Mandrade.</p>
2.2 no. of people trained to support Community Energy providers	<p>In this reporting period, the following training has occurred.</p> <p>A total of 41 people trained in business management and renewable energy and these include:</p> <ul style="list-style-type: none"> <li>○ 2 franchisees (Gola and Thendo)</li> <li>○ 1 franchiser (Global solar)</li> <li>○ 10 VDC members (Kandeu and Mandrade)</li> <li>○ 2 Teachers (Mandrade)</li> <li>○ 1 Health surveillance assistant (Mandrade)</li> <li>○ 3 SOGERV project staff</li> <li>○ 1 Entrepreneur (Gola)</li> <li>○ 2 teachers (Gola)</li> <li>○ 2 health surveillance assistants (Gola)</li> <li>○ 1 CBO representative (Gola)</li> <li>○ 2 Business committee representatives (Gola)</li> <li>○ 2 VDC Members (Gola)</li> <li>○ 12 energy committee members (Thendo)</li> </ul>
2.3 no. of district engagement agreements signed and operating according to terms	<p>An extensive process of district council engagement has taken place during the project, leading to Memorandums of Understanding (MoU) signed by the District Commissioner. However, during this engagement it has become clear that the capacity of Chikwawa DC (staff skills and budget resource) to provide long term support to community energy projects is limited.</p> <p>This learning has fed into the District Energy Officer work of Community Energy Malawi and also SOGERV's national level policy work.</p>
<b>Output 3: Sustainable economic model developed and operational for each community energy project</b>	
<b>Output Indicator</b>	<b>Progress against Planned Milestone/Target</b>
3.1 Short (1 - 5 yr) and Long-Term (5 - 10 yr) Financial forecasts (dis-	Short term financial forecasts have been completed for Mandrade, Gola and Thendo using detailed M&E data on business performance.

### 3. Progress and Results

This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.

<p>aggregated by each project) considering all sources of income, expense, and lifetime of asset base.</p>	<p>Using the longer term data available for Mandrade, a generic long term business plan for all the community energy business has been developed.</p> <p>UoS have secured £25,000 of external funding to complete further detailed sustainability and business modelling for the SOGERV community energy providers – this activity will run from April 18 to July 18.</p>
<p>3.2 No. of Community Saving and Loans schemes setup</p>	<p>During the last quarter, VSL training was conducted in Gola and Thendo where 50 people from 5 different VSL groups were trained in each community.</p> <p>This brings a total number of trained VSL groups to 20 (5 VSL groups in each community (Kandeu, Mandrade, Gola and Thendo). All the VSL groups have been linked to the charging kiosks in order to enable them access solar products.</p>
<p>3.3 No. operational business plans that were created to address identified renewable energy market opportunities</p>	<p>Business plans are now operational for Mandrade, Gola and Thendo. Kandeu is under review.</p>

**Output 4: A technical support process for 4 community energy projects is designed and is reinforcing a high reliability of operation, an effective warranty and maintenance regime, and is informed by remote monitoring**

Output Indicator	Progress against Planned Milestone/Target
<p>4.1 Identified marketable energy applications (based on business plans in 3.3) in communities have specific engineering designs in place and verified by qualified personnel</p>	<p>Technical designs for all systems in all locations are complete and have been implemented.</p>
<p>4.2 no. of remote monitoring units installed and operating</p>	<p>The 8 remote monitoring units and base station which had been set up have encountered some technical issues – they are currently with the technical team in WASHTED and support is being received from the supplier. UoS have investigated and believe this to be minor software issue and expect the systems to be on-site by mid-May (with in-country support from UoS staff).</p> <p>We note that import and set up of an international RM solution has been a challenging learning experience. Multiple barriers have been encountered. This has been discussed in KE workshops with other stakeholders and will be written as a learning paper during the extension period.</p> <p>Also, during the extension period WASHTED and UoS intend to deploy a locally built solution utilizing an RM system initially developed for MREAP.</p>



### 3. Progress and Results

This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.

4.3 % down time (in hrs/hrs total - per month) for all installed systems

2 system faults occurred, leading to approximately 10 days of lost service. This is calculated as <2% downtime. SOGERV systems are operating at around 98% reliability.

4.4 no. of solar lanterns returned and % replaced under warranty

During this quarter, 15 SM100 lanterns (5 from Gola and 10 from Thendo) and 12 OV pilot lanterns (from Thendo kiosk) were returned. The lanterns have been sent to Sunny Money for replacement under warranty.

#### Output 5: Build local research and knowledge exchange capacity for community energy between research institutions, local/regional/national government, and support of existing community energy networks and toolkits.

##### Output Indicator

##### Progress against Planned Milestone/Target

5.1 No. of community renewable energy communication activities including: workshops/conferences held, video, photo, media, and policy briefings

SOGERV Project Learning Dissemination Workshop, 20th March 2018, Lilongwe. Attended by a range of Stakeholders and DoEA representatives.

National Commission for Science and Technology Conference on Research and Innovation: A catalyst for sustainable development, 27th - 29th September, 2017, Mangochi. 2x SOGERV presentations made.

SOGERV has an active online presence at <https://strath-e4d.com/category/sogerv> where multiple photo projects, case studies and policy briefings have been published.

A draft SOGERV policy brief is attached – a final version will be published by end of May 2018.

During the extension period, a video project will be developed.

5.2 Updates and/or Additions to the Malawi Community Energy Toolkit

A detailed review of the toolkit took place and a report completed.

The review highlighted updates to be added to the toolkit: (i) depth of stakeholder consultation at the inception of the project, (ii) Solar PV system monitoring methods and application (iii) PV sizing methodologies (iv) PV technology consideration (i.e. the solar PV is evolving and maturing rapidly as PV demand grows) and (v) Solar PV community engagement and ownership model.

Material related to these updates has been developed (included in publications). The process to incorporate these updates will be discussed with CEM during the extension period.

5.3 Research products (published papers, reports, data analysis) based on community energy data from projects

Current published reports include:

- Baseline study
- Needs Assessment for Phase 1 and Phase 2
- Market Assessment for Phase 1 and Phase 2
- Procurement Guidance
- Warranty and Maintenance Agreement
- Solar PV technical design document
- RM specification report
- Solar PV validation document



### 3. Progress and Results

This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.

		<ul style="list-style-type: none"> <li>•</li> </ul> <p>Current Data Sets include:</p> <ul style="list-style-type: none"> <li>• Baseline (2015)</li> <li>• Needs Assessment (2015 and 2016)</li> <li>• Market Assessment (2016)</li> </ul> <p>Other Publications:</p> <ul style="list-style-type: none"> <li>• Conference paper presented at the Global Humanitarian Technology Conference 2016 “Sustainability Analysis of Off-grid Community Solar PV Projects in Malawi”</li> <li>• 2 academic paper’s on SOGERV published by WASHTED and presented at NCST conference Sept 2017.</li> <li>• Contribution to District Energy Officer Policy Brief</li> <li>• 2 related academic conference papers presented at IEEE Power Africa conference in Ghana, June 2017.</li> </ul>
3.5	<b>SOGERV Outcome: 4 sustainable community energy projects operating in Chikhwawa providing access to affordable, local, renewable sources of off-grid electrification</b>	
1: Units - total electricity supplied in KWh	16kW installed capacity. Approximately 7051 kWh energy delivered over the project duration.	
2: no. of community energy project funds with net positive income	3 Funds with positive income are in place. <ul style="list-style-type: none"> <li>• In this quarter, Mandrade charging station made a total income of MK1,758,150 and expenses amounting to MK1,243,303. Mandrade charging station has been in business for 13 months and has made a total income of MK5, 801,640 and expenses of amounting to MK2, 246,945. Income realised is mainly from lantern sales, battery rentals and sales, phone charging, and monthly rentals from stand alone PV systems.</li> <li>• Thendo charging station realized a total income of MK639,300 and made expenses of MK520,570 during the quarter. Thendo charging station has now been in operation for 5 months. Accumulatively the business has made total income of MK1,223,700 and expenses totaling MK813,000. Sales are made from lantern sales and phone charging.</li> <li>• Gola charging station made total income of MK767,450 and expenses of MK395,250 during the quarter. The kiosk has been in operation for 5 months and has cumulatively made income of MK 1,171,825 and expenses totaling MK407, 750. Income is realized from lantern sales and phone charging.</li> </ul>	

### 3. Progress and Results

This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.

#### 3.6 SOGERV IMPACT: The main impact goal is to: increase access to affordable, reliable, sustainable and modern energy for all SDG 7), specifically in Chikhwawa, Malawi.

1: no. of people (disaggregated by gender and excluded groups) DIRECTLY benefitting from access to renewable energy, specifically:

- school students,
- health post/centre patients,
- businesses with access and customers,
- households with access
- teachers and health workers

#### **Mandrade primary school**

This quarter, cumulatively, 1758 students (1,132M; 626F) spent 180 hours studying at night at Mandrade primary school using the PV system. On average 20 students (13M; 7F) spent two hours of study per day. Eight teachers are working at the school and are also utilising the power through phone charging, studying and lesson preparations.

#### **Gola primary school**

Cumulatively, 2145 students (1167M; 978F) spent 210 hours of study during the quarter. On average 35 students (19M; 16F) spent 3.5 hours of study using renewable energy per day for 60 days. There are 11 (8M; 3F) teachers working at the school and they are also utilising the power through phone charging and lesson preparations.

**Mandrade and Gola Health Clinics** - 6 employees utilising RE.

#### **Households using Portable solar products**

Cumulatively 795 households are using portable solar products through solar lanterns and portable batteries.

**Total Customers:** 3229.

Note: Original targets for households and customers were 241 and 10950 respectively. The household target has been exceeded and total customers has fallen short. The large target for total customers was dominated by mobile phone charging. It seems more households are purchasing systems and charging at home – a positive development.

#### **Businesses with access to renewable energy**

Ten businesses are benefiting from PV systems and wired connections. These are the 3 charging stations, 4 wired connections and 3 stand alone entrepreneur systems.

#### **People employed at business places**

Seven people are employed at business places utilising renewable energy. Three people are employed in Mandrade, two in Thendo and two in Gola.

Regarding data on improved school results, this will be available when district level school monitoring is completed.

2: No. of people (disaggregated) INDIRECTLY

773M, 633F pupils attending schools that utilise an operational solar PV system

<b>3. Progress and Results</b>				
This narrative report on project performance and results will be reviewed together with your revised and updated Logical Framework (or if not yet approved your original Logical Framework). See Guidelines (Annex 1) for details.				
	benefiting from access to basic electricity supply	19,358 men and 19,619 women with access to health centre (Mandrade and Gola Cathement area)		
3.7	<b>Risk Management</b> If progress towards delivering activities and outcomes is slower than planned or there have been delays in the delivery of the project, please explain: a) What the issues have been and whether they were highlighted on your risk register? b) What actions have been taken in response to these issues?			
	<b>Issue/ Risk</b>	<b>On risk register</b>	<b>Action Taken</b>	<b>Outcome</b>
	Delays to community energy installations prevent sufficient financial M&E data being collected and hence financial forecasting and business modelling is limited.	No	Installation delays hampered Year 2; however, installations have been efficient and smooth In Year 3. The comprehensive data from Mandrade and Kandeu is being used with early data from Gola and Thendo to extrapolate financial forecasts and business models.	Short term financial forecasts and business modelling have been completed for all communities. The extension period will allow further data collection and more detailed business modelling.
	Fraudulent activity by community energy provider stops business activity in a community	No	As per detailed report. Re-engagement with community, formation of a committee and supervision by Mandrade community energy provider.	The community energy business is set to be relaunched in May.
	Software issues on remote monitoring equipment cause further delay to collecting technical data.	No	RM provider engaged and consultant conducting software upgrades. WASHTEd prepped to complete install. UoS staff member travelling to Malawi to support.	RM installs to be complete by end of May.

<b>4. Sustainability</b>	
4.1	<b>Partnerships</b> Provide a brief description of the roles and responsibilities of all partners, including in M&E. Have roles and responsibilities changed or evolved? Please provide a brief assessment of your partnership, including its strengths, areas for improvement and how this will be addressed. This section should be completed by lead partners based in Scotland and Malawi.
	The University of Strathclyde is lead UK grant holder and is responsible for overall project management. The University is involved in all aspects of the project but specifically supports

	<p>learning outputs, dissemination activities, technical designs, and market assessments.</p> <p>WASHTED is the lead for the district engagement and local technical support activities.</p> <p>United Purpose is the lead for the community engagement, project implementation, and individual business support. They have lead in the community sensitization, needs assessment, market assessment field work, and support of the community based energy providers. UP implement M&amp;E systems, UoS and WASHTED analyse and report the data.</p> <p>There is a strong working relationship between the partners. There is a high degree of respect between team members and open environment for discussion of any issues. Future collaborations are planned.</p>
4.2	<p><b>Exit Strategy</b></p> <p>Describe the key components of your exit strategy and outline progress towards achieving it. Provide any other achievements or progress towards ensuring that your project remains sustainable in the longer term (including in relation to local ownership and capacity, and resourcing). Describe any challenges and how these will be addressed.</p> <p>The principle behind the SOGERV exit strategy is to establish viable business models that underpin the community energy services being provided.</p> <p>The key components are (progress):</p> <ul style="list-style-type: none"> <li>• High quality energy system installations that meet local needs (completed).</li> <li>• Establishing local management with ownership of the businesses (3 community based energy providers established. 1 due to be relaunched imminently. 2 Entrepreneurs and 3 Energy Committee)</li> <li>• Developing sustainable business models (short term financial forecasts are positive and community energy provider business model has been established).</li> <li>• Capacity building on renewable energy in Village savings and loan groups which will catalyse demand for energy products and support the businesses set by franchiser, thereby indirectly supporting maintenance of the institution systems (Demand has proven to be strong in all communities. VSL groups have been engaged and trained across the communities).</li> <li>• Establishing a support agreement for local education and health installations – energy business receives a monthly maintenance fee to provide technical support when required (This has been partially achieved. Only the larger health clinic (Gola) and schools (Mandrade and Gola) have sufficient resources to provide maintenance fees).</li> </ul> <p>Key Challenges:</p> <ul style="list-style-type: none"> <li>• Financial support from district government has not been obtained – the communities are expected to support their own education and health facilities. Some progress has been made in obtaining district support and SOGERV is working closely with the wider policy movement towards decentralised energy governance. Our case study is being offered as a key learning opportunity and justification for district energy officers with budgetary support</li> <li>• Ability to pay for energy services in Chikhwawa is among the lowest in Malawi. Establishing a sustainable community energy business model here is extremely challenging. The financial model and product offering has been adjusted as learning takes place.</li> </ul>

## 5. Learning and Dissemination

## 5. Learning and Dissemination

5.1

### Lessons Learned

Describe briefly any lessons learned during this reporting period, and how it will influence the project and your work moving forward.

Key lessons arising from SOGERV are:

- Community energy providers can establish sufficient revenues for sustainable 5-10 year business modelling; however, achieving sufficient revenue to enable repayment of initial set up capital is unlikely.
- Even the most successful community energy provider is highly vulnerable to economic and environmental shocks – operating under the umbrella of ‘parent’ organisation that spreads risk across multiple assets is desirable.
- A purely commercial model for an umbrella ‘parent’ organisation is unlikely to be attractive for most Renewable Energy companies in Malawi (Franchiser model).
- A supportive ‘enabling environment’ at a district and national level is essential.

These lessons have been disseminated via stakeholder KE workshops (including Social Enterprise Energy Providers, DoEA and Industry) and are being fed into CEM’s District Energy Officer work.

United Purpose is developing its capacity to act as a ‘parent’ organisation and ramp up its support for community energy projects.

The SOGERV partners are incorporating these lessons into the 6 month extension work and future collaborations.

5.2

### Innovation and Best Practice

Summarise briefly any examples of innovations/ innovative approaches or best practice demonstrated by your project during this reporting period. Please explain why these are innovative or best practice, and detail any plans to share these with others.

The SOGERV learning outlined above is pointing to a model for community based rural electrification that is highly innovative. Community energy providers, operating under the umbrella of Social Enterprise parent organisation, supported by improved capacity at the District Council level.



During the extension period this model will be further developed using SOGERV learning. In addition parallel funding has been obtained (£50,000) for supporting research on the Social Enterprise business model, and Social Impact investment for energy projects.

5.3

### Dissemination

Summarise briefly your efforts to communicate project lessons and approaches to

<b>5. Learning and Dissemination</b>	
	<p>others (e.g. local and national stakeholders in Scotland and Malawi, academic peers etc). Please provide links to any learning outputs.</p>
	<ul style="list-style-type: none"> <li>As described above and in our reporting against Output 5 – dissemination is built in to SOGERV.</li> </ul>
<b>5.4</b>	<p><b>Wider Influence</b> Briefly describe any intended or unintended influence on development outcomes beyond your project. For example influence on local and national policy, contribution to debate on key development issues, uptake by other projects etc.</p>
	<p>The SOGERV team have been heavily engaged at a national level in the energy sector. Contributing to multiple workshops and conferences. During the project, the team have supported the development of a draft Renewable Energy Strategy and have continued with policy engagement during the project lifespan. Team members have also been supporting the work of CEM on the piloting of District Energy Officers, feeding in SOGERV learning and participating in a several workshops.</p>

<b>6. Financial Report</b>	
<p>The narrative report below should be provided in conjunction with the Budget Spreadsheet report (see Annex 2). Please fill in the Budget Spreadsheet to: (a) confirm actual spend for the year and justify any significant disparities between programmed expenditure and actual expenditure within the financial year, (b) detail programmed spend for next year.</p> <p>Please note that any carry-over of funds to the next financial year should have been agreed with the Scottish Government by January 31<sup>st</sup> of the current financial year.</p>	
<b>6.1</b>	<p><b>Project Underspend</b> Please note whether the project has reported a significant underspend, and whether the Scottish Government has agreed to this being carried forward. If this has been agreed, please provide copies of or links to relevant correspondence. Please indicate whether the underspend is the result of currency fluctuations or other issues with project delivery.</p>
	<p>The project has reported an underspend of £13,247 for this financial year.</p> <p>At 31st March 2018, the total project spend = £585,778 against programmed budget of £599,032.</p> <p>The underspend consists primarily of a UoS staff underspend of £14,877, offset by a small aggregate overspend in the UP partner budget. The UP partner spend has elements of overspend and underspend that aggregate to a total overspend of £1630. The most significant overspend items were capital (£2712) and in-country travel (£2669). Most significant underspend items were staff (£1982) and running costs (£1417). UP is prepared to absorb this overspend.</p> <p>The forecast underspend was estimated as £15,000 and was agreed to be carried forward into the extension period – allocated to additional UoS learning outcome activities.</p> <p>Therefore, UoS propose to carry forward the £14,877 underspend in the extension period, as agreed. There will be no other carry forward of under or over spend. With the exception of the UoS salary line, all other budget lines will reset to the proposed extension period budget. UP and WASH TED will complete the proposed extension period activities as set out in the extension application. If the SG would prefer an alternative approach, UoS are happy to revise this suggestion in line with any guidance given.</p>



	<p>NOTE: The financial reporting provided here represents the actual project spend by all partners. However, internally to the project, we have a funds transfer delay that has resulted in UoS retaining £52,459 of funds owed to UP. This has arisen because UP, as a large NGO, utilise their own GBP reserves to conduct project activities and then invoice in arrears. Due to a delay in issuing their final invoice, these funds are still awaiting transfer. This is being addressed urgently by both parties. This has not been reported as an underspend, as the funds have indeed been spent on the agreed activities and the project delivery has been on track. All that remains is to complete the balance transfer from UoS to UP to backfill their project account.</p>
6.2	<p><b>Cost Effectiveness and Efficiency</b> Please detail any efforts by the project to reduce project costs, whilst maintaining the quality of the project – for example through managing projects costs, efficient resourcing, working with and learning from others etc.</p> <p>United Purpose has saved costs by hiring a vehicle at a lower cost than originally planned. In addition, CU has rented office space in a government building at a lower cost compared to private property, saving costs.</p> <p>Strathclyde has saved costs on in-country T&amp;S by utilising an available Strathclyde owned project vehicle in-country, lower than expected accommodation costs and lower international flight costs.</p>
6.2	<p><b>Co-finance and Leverage</b> Please provide details of any co-finance or leverage that has been obtained for the project during the reporting period, including how the funds/ resources will contribute to delivering more and/or better development outcomes.</p> <p>No co-finance or leverage arrangements are present.</p>

<b>7. IDF Programme Monitoring</b>					
The list of IDF programme indicators are listed below. With reference to Q46 on your application form, please report on progress for the IDF programme indicators that you have committed to tracking in your original proposal, including the 'Poverty and Vulnerability Indicators', which are obligatory for all Scottish Government funded projects.					
<b>1. IDF Programme – Poverty and Vulnerability (compulsory)</b>					
1.1	<b>Indicator 1.1 Total number of people directly benefitting from the project</b>				
	Baseline	Female	Male	Total	Brief description (e.g. small-holders)
	Information in Section 3: <b>SOGERV IMPACT</b> SOGERV IMPACT				
	State the evidence that supports the progress described				
1.2	<b>Indicator 1.2 Total number of people indirectly benefitting from the project</b>				
	Baseline	Female	Male	Total	Brief description (e.g. small-holders)
	Information in Section 3: <b>SOGERV IMPACT</b> SOGERV IMPACT				



## 7. IDF Programme Monitoring

The list of IDF programme indicators are listed below. With reference to Q46 on your application form, please report on progress for the IDF programme indicators that you have committed to tracking in your original proposal, including the 'Poverty and Vulnerability Indicators', which are obligatory for all Scottish Government funded projects.

State the evidence that supports the progress described

### 2. IDF Programme – Civic Governance and Society (optional)

2.1 Indicator 2.1 Number of formal legal institutions supported to improve citizens' access to justice and human rights

Baseline	Total	Brief description (e.g. paralegal service)
----------	-------	--

NA	NA	NA
----	----	----

State the evidence that supports the progress described

NA

2.2 Indicator 2.2 Number of people who have directly benefitted from improved access to judicial and paralegal services

Baseline	Adult Female	Adult Male	Child Female (< 18 yrs)	Child Male (< 18 yrs)	Total	Brief description (e.g. widows)
----------	--------------	------------	-------------------------	-----------------------	-------	---------------------------------

NA	NA	NA	NA	NA	NA	
----	----	----	----	----	----	--

State the evidence that supports the progress described

NA

2.3 Indicator 2.3 Number of organisations with increased awareness of good governance and human rights

Baseline	Total	Brief description (e.g. paralegal service)
----------	-------	--

NA	NA	NA
----	----	----

State the evidence that supports the progress described

NA

2.4 Indicator 2.4 Number of people with increased awareness of good governance and human rights

Baseline	Female	Male	Total	Brief description (e.g. small-holders)
----------	--------	------	-------	--

NA	NA	NA	NA	NA
----	----	----	----	----

State the evidence that supports the progress described

NA

2.5 Indicator 2.5 Number of people who are engaged in advocacy for improving citizens' rights

Baseline	Female	Male	Total	Brief description (e.g. small-holders)
----------	--------	------	-------	--

NA	NA	NA	NA	NA
----	----	----	----	----

State the evidence that supports the progress described

NA

### 3. IDF Programme – Education (optional)

3.1 Indicator 3.1 Number of schools with improved management and resourcing for provision of quality education

Baseline	Total	Brief description (e.g. primary school)
----------	-------	---

NA	NA	NA
----	----	----

State the evidence that supports the progress described

## 7. IDF Programme Monitoring

The list of IDF programme indicators are listed below. With reference to Q46 on your application form, please report on progress for the IDF programme indicators that you have committed to tracking in your original proposal, including the 'Poverty and Vulnerability Indicators', which are obligatory for all Scottish Government funded projects.

	NA						
3.2	<b>Indicator 3.2 Number of children/ learners benefitting from improved management and resourcing of schools</b>						
	Baseline	Female	Male	Total	Brief description (e.g. girls, visually-impaired)		
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
NA							
3.3	<b>Indicator 3.3 Number of people trained in improved school inspection and/ or improvement services</b>						
	Baseline	Female	Male	Total	Brief description (e.g. government staff)		
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
NA							
3.4	<b>Indicator 3.4 Number of new teachers qualified to provide quality education that is safe, equitable and accessible to all children</b>						
	Baseline	Female	Male	Total	Brief description (e.g. primary)		
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
NA							
3.5	<b>Indicator 3.5 Number of people entering into higher education</b>						
	Baseline	Adult Female	Adult Male	Child Female (< 18 yrs)	Child Male (< 18 yrs)	Total	Brief description (e.g. secondary, vocational)
	NA	NA	NA	NA	NA	NA	
	State the evidence that supports the progress described						
NA							
<b>4. IDF Programme – Health (optional)</b>							
4.1	<b>Indicator 4.1 Number of health professionals with up-to-date skills, knowledge and qualifications in essential healthcare</b>						
	Baseline	Female	Male	Total	Brief description (e.g. nurses)		
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
NA							
4.2	<b>Indicator 4.2 Number of women <u>who have access to</u> improved maternal and neonatal healthcare services</b>						
	Baseline		Total		Brief description		
	NA		NA		NA		
	State the evidence that supports the progress described						
NA							
4.3	<b>Indicator 4.3 % births assisted by a skilled provider</b>						
	Baseline		Total		Brief description		

## 7. IDF Programme Monitoring

The list of IDF programme indicators are listed below. With reference to Q46 on your application form, please report on progress for the IDF programme indicators that you have committed to tracking in your original proposal, including the 'Poverty and Vulnerability Indicators', which are obligatory for all Scottish Government funded projects.

	NA	NA	NA				
	State the evidence that supports the progress described						
	NA						
4.4	<b>Indicator 4.4 Number of people directly reached by improved essential health services</b>						
	Baseline	Adult Female	Adult Male	Child Female (< 18 yrs)	Child Male (< 18 yrs)	Total	Brief description (e.g. malaria)
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
	NA						
4.5	<b>Indicator 4.5 Number of people who have access to improved essential health services</b>						
	Baseline	Adult Female	Adult Male	Child Female (< 18 yrs)	Child Male (< 18 yrs)	Total	Brief description (e.g. maternal health)
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
	NA						
4.6	<b>Indicator 4.6 Number of institutions with improved essential health services</b>						
	Baseline		Total		Brief description (e.g. district clinic)		
	NA		NA		NA		
	State the evidence that supports the progress described						
	NA						
4.7	<b>Indicator 4.7 Number of people with increased awareness of determinants of health</b>						
	Baseline	Adult Female	Adult Male	Child Female (< 18 yrs)	Child Male (< 18 yrs)	Total	Brief description (e.g. malaria prevention)
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
	NA						
<b>5. IDF Programme – Sustainable Economic Development (optional)</b>							
5.1	<b>Indicator 5.1 Number of people supported to establish or improve business/ economic activities</b>						
	Baseline	Female	Male	Total	Brief description (e.g. agriculture marketing)		
	NA	NA	NA	NA	NA		
	State the evidence that supports the progress described						
	NA						
5.2	<b>Indicator 5.2 Number of people accessing credit</b>						
	Baseline	Female	Male	Total	Brief description (e.g. widows)		
	NA	NA	NA	NA	NA		

## 7. IDF Programme Monitoring

The list of IDF programme indicators are listed below. With reference to Q46 on your application form, please report on progress for the IDF programme indicators that you have committed to tracking in your original proposal, including the 'Poverty and Vulnerability Indicators', which are obligatory for all Scottish Government funded projects.

	State the evidence that supports the progress described				
	NA				
5.3	<b>Indicator 5.3 % increase in household income</b>				
	Baseline	Female	Male	Total	Brief description (e.g. vegetable farming)
	NA	NA	NA	NA	NA
	State the evidence that supports the progress described				
	NA				
5.4	<b>Indicator 5.4 Number of small holder farmers supported to adopt environmentally sustainable agricultural practices</b>				
	Baseline	Female	Male	Total	Brief description (e.g. vegetable farming)
	NA	NA	NA	NA	NA
	State the evidence that supports the progress described				
	NA				
5.5	<b>Indicator 5.5 % increase in agricultural yield</b>				
	Baseline	Female	Male	Total	Brief description (e.g. maize)
	NA	NA	NA	NA	NA
	State the evidence that supports the progress described				
	NA				
<b>6. IDF Programme – Renewable Energy (optional)</b>					
6.1	<b>Indicator 6.1 Number of public institutions e.g. clinics, schools accessing renewable energy</b>				
	Baseline			Total	Brief description
	0 Institutions with Renewable Energy in 4 SOGERV villages			2 institutions now have renewable energy	Solar PV
	State the evidence that supports the progress described				
	<b>Data Source:</b> (SOGERV baseline study)				
6.2	<b>Indicator 6.2 Number of households accessing renewable energy</b>				
	Baseline	Female	Male	Total	Brief description (e.g. solar)
	795 households utilizing portable solar products.				
	State the evidence that supports the progress described				
6.3	<b>Indicator 6.3 Number of individual lamps/ lanterns sold</b>				
	Baseline		Total		Brief description (e.g. lantern)
	No individual lanterns available in project locations. An estimated 9 of 241 (3.7%) homes have access to		795		PSP ranging from basic lantern to large house system.

## 7. IDF Programme Monitoring

The list of IDF programme indicators are listed below. With reference to Q46 on your application form, please report on progress for the IDF programme indicators that you have committed to tracking in your original proposal, including the 'Poverty and Vulnerability Indicators', which are obligatory for all Scottish Government funded projects.

	(crude) renewable energy, through small (<5W) solar panels		
	State the evidence that supports the progress described		
6.4	<b>Indicator 6.4 Number of community based 'mini-grids' that have been established</b>		
	Baseline	Total	Brief description
	NA	NA	
	State the evidence that supports the progress described		

## Annex 1: Guidance Notes: End of Year Report

<ul style="list-style-type: none"> <li>• This report is to be completed by all project managers/leaders at the end of the financial year.</li> <li>• Please complete this form electronically.</li> <li>• Once complete please send this reporting form, by email to your Scottish Government project manager.</li> <li>• The report should be submitted by the end of April following the financial year to which the report relates.</li> </ul>	
Question	Guidance
<b>Basic Project Information</b>	
1.1	The project reference number was given to you by the Scottish Government in your grant offer letter – please refer to it in all correspondence. This is a number unique to your project and helps the Scottish Government track information relating to your project within the system.
1.2	Insert the financial year for which you are reporting
1.3	Insert the year of your project (i.e. Year 1, 2 or 3)
1.4	Insert the name of your lead organisation responsible for managing the grant (based in Scotland). Please make a note if this has changed during this financial year. Reasons for changes should be reported in section 3.
1.5	Insert the names of your partner organisations in Scotland and Partner countries. Please make a note if this has changed during this financial year. Reasons for changes should be reported in section 3.
1.6	Insert the name of your project in the space provided. This should correspond with the name given in your grant offer letter. Please make a note if this has changed during this financial year. Reasons for changes should be reported in section 3.
1.7	Provide a brief project description as per your grant offer letter.
1.8	Insert the geographical area in which your project is being implemented. Please make a note if this has changed during this financial year. Reasons for changes should be reported in section 3.
1.9	Insert start and end dates. The start date is the date you received your first tranche of funding.
1.10	Insert the total project budget (including funding from other sources). Please make a note if this has changed during this financial year. Reasons for changes should be reported in section 3.
1.11	Insert the total amount of funding received through the IDF for this project.
1.12	Indicate the theme that your project addresses (tick as many boxes that apply.)
1.13	Confirm that supporting documentation has been included with your report. Please tick those boxes that apply. Confirm whether any changes have been made to the logical framework, and whether the LF submitted has been approved by the Scottish Government (or is pending approval). <b>Reports that do not include all required documentation will not be considered complete.</b>
1.14	Please reference previous (actionable) feedback that you have received in your last MY and EY report, and describe any action that has been taken in response/ since then.
1.15	Insert the date that your report was produced.
1.16	Insert the names and positions of the key person(s) involved in preparing your report.
1.17	It is essential that you let us know if any of your contact details have

	changed, either in Scotland or in Malawi.
<b>Project Relevance</b>	
2.1	Provide a brief update on the context in which your project is working, and describe briefly how your project remains relevant to your project beneficiaries.
2.2	Working towards gender equity and social inclusion is considered essential to any projects funded through the IDF. Please describe briefly how your project is delivering this.
2.3	Please describe briefly how beneficiaries are engaging with the project (if at all) and what effect that is having, as well as any challenges in engaging with them.
<b>Progress and Results</b>	
3.1	If your Project has changed significantly in the focus of its delivery since your last report, please explain how and why, attaching copies of all relevant correspondence you have had with the Scottish Government about this. Please also describe and explain any changes to basic project information here.
3.2	If your Logical Framework has changed over the last Financial Year please detail and explain these here. This enables us to more quickly understand the changes and your progress, based on the most up-to-date information.
3.3	An update on any delays or challenges in monitoring will help us to understand the information presented in the report and logframe.
3.4	<b>For this question you will need to refer back to your most up-to-date APPROVED logical framework.</b> Looking again at the <i>output indicators</i> outlined, please comment on the progress made towards achieving these during the reporting period, including any challenges and how these were overcome. This should include a narrative (where relevant) as well as quantitative data – indicating clearly the milestones (including dates) and progress to date using the same measurement unit (e.g. number/percentage) provided for the baseline etc. should be outlined using a percentage or number. E.g. By end March 2016, 5 wells have been dug in the last year against a milestone target of 4.
3.5	<b>For this question you will need to refer back to your most up-to-date APPROVED logical framework.</b> Looking again at the <i>outcome indicators</i> outlined in your original application, please comment on the progress made towards achieving these during the reporting period, including any challenges and how these were overcome.
3.6	<b>For this question you will need to refer back to your most up-to-date APPROVED logical framework.</b> Please comment on the overall impact of the project to date, including any challenges and how these were overcome.
3.7	If progress towards delivering activity and outcomes has been slower than planned, please use this space to indicate the reasons why and whether any of the risks outlined in your application have impacted on the project.
<b>Sustainability</b>	
4.1	Provide a brief update on how your partnership is working and evolving.
4.2	Detail briefly your progress towards ensuring that your project will be sustainable in the longer term. We would like you to refer back to your exit strategy in your application form) as well as reflect on other elements of sustainability.
<b>Learning and Dissemination</b>	
5.1	The Scottish Government is very interested to hear of lessons you may have learnt during any aspect of the project and may use your experience in future policy consideration.



5.2	The Scottish Government is very interested to hear of any innovations or examples of best practice, and how projects are sharing good practice more widely.
5.3	The Scottish Government would like to know how the work of the project is being communicated more widely to a range of stakeholders in Scotland and beyond.
5.4	The Scottish Government would like to know if your project (whether intended or unintended) is likely to have an influence on policy.
<b>Financial Reporting</b>	
6	<b>For this question, you will also need to complete the summary page of the budget spreadsheet.</b> Please use the budget headings on the spreadsheet to provide a detailed breakdown of actual expenditure incurred during the financial year to which this report relates, against expenditure planned as well as expected expenditure for the next financial year. Please outline any reasons for any discrepancy in the budget spend. <i>N.B If the budget spend is more than 10% different from the original estimate please use the additional tabs on the budget spreadsheet to provide more detail.</i>
6.1	It is important for us to understand and learn from how projects budget, including reasons for underspend.
6.2	The Scottish Government is interested in how projects are working efficiently and effectively.
6.3	Please detail if the project has succeeded in sourcing additional funds to enable it to extend its work.
<b>IDF Programme Monitoring</b>	
7	The Scottish Government needs to understand who is being reached by the IDF and how therefore it is essential that projects contribute to programme monitoring.

**Annex 2: Budget Spreadsheet Report**