



# MONITORING & EVALUATION (M&E) FOR COMMUNITY ENERGY PROJECTS

## **Acknowledgements**

This document has been written by Community Energy London (CEL) Project Officer Jenni Tyyska between February and June 2021.

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## 1. Why M&E?

Community energy groups need to report to their supporters and wider stakeholders the benefits delivered through their projects. This is not only in terms of carbon emission savings or kWh saved/generated, but also the local economy boost, investment raised, volunteer hours donated and so on. This becomes even more important when a group has to submit a funding bid, or report back to a funder on what has been achieved.

Outcomes of successful M&E include [Ref. 1.]:

- Assess and demonstrate your effectiveness in achieving your objectives and/or impacts on people's lives;
- improve internal learning and decision making about project design, how the group operates, and implementation;
- empower and motivate volunteers and supporters;
- ensure accountability to key stakeholders (the community, members and supporters, the wider movement, funders...);
- influence government policy;
- share learning with other communities and the wider movement;
- contribute to the evidence base about effectiveness and limits of community action.

## 2. The Process

M&E should be carried out at three phases in your project: before launch, during your activities and after outcomes have been produced. This allows you to first clarify the aims of your project, define SMART outcomes working towards those aims as well as corresponding measurable indicators for those outcomes, measure and monitor these at relevant points of the project progress and act on the measurement results in an effective and timely manner.

The steps taken in M&E along the project timeline can be seen in the figure below, alongside the descriptions of the project starting situation, inputs, outputs and outcomes and impacts of the projects.

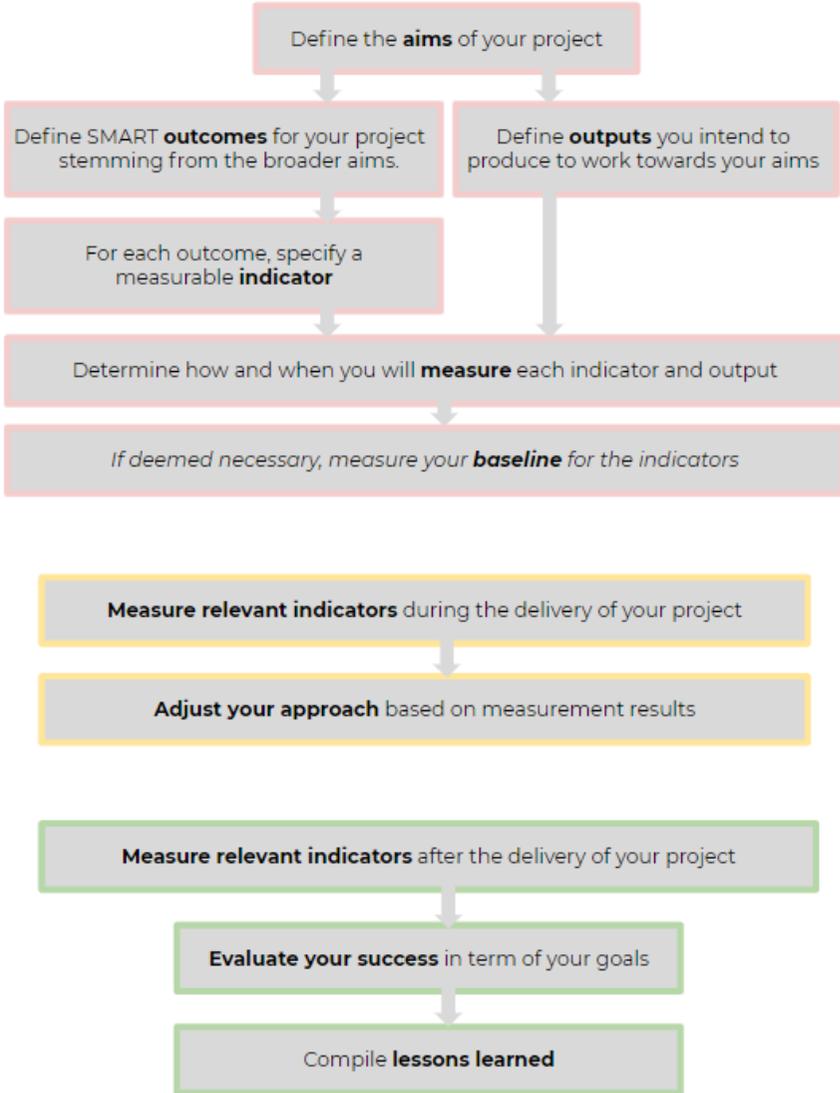
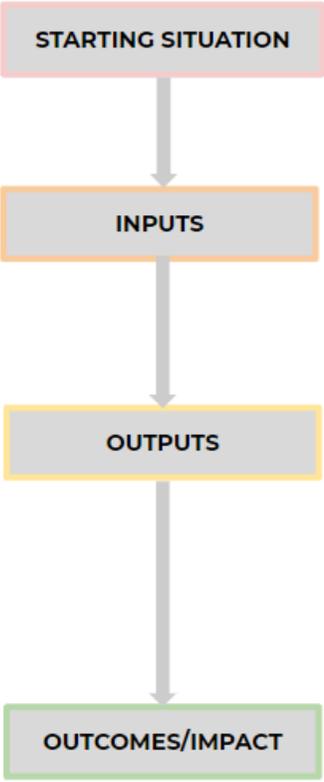
# PROJECT PROGRESS

- What **needs** are there that your project aims to meet?
- What **problems** are you aiming to solve / what **symptoms** to treat?
- What **assets** does your community have?

Volunteers, Staff, Time, Money, Materials, Technology...

- **Delivery of products & services**
  - Renewable energy installed
  - Energy delivered
  - Workshops and training provided
  - Tools & resources developed
- **Who will be reached:** Participants, Members, Community, Decision makers, Customers...

- **Short term:**
  - Learning, Awareness, Changed attitudes, Skills gained
- **Medium term:**
  - Carbon reduction, Economic gains, Changed behaviour, Social action, Policy change
- **Ultimate Impact:**
  - Social / Environmental / Economic / Civic



# MONITORING AND EVALUATION

### 3. OUTCOMES, INDICATORS AND METHODS

The following tables provide a list of outcomes that different types of community energy projects could use for evaluating their success. Each outcome is given indicators that can be used as a sign that progress towards that outcome is being made, and each indicator is given a measurement.

The first section, “Summary - Key Measurables” gives a shortcut for groups to take if you would like simply to get the key measurements to monitor and not spend any more time on considering further or alternative measurements. The section “Detailed Measurables for Different Types of Community Energy Projects” provides tables with more detail for the following types of projects:

- Energy Generation
- Fuel Poverty / Energy Advice
- Heat pump
- LED
- Bio-energy
- Energy storage

These are all suggestions, and if your group would like to read further into creating your own M&E process, the documents on which this table is based on are:

- MESC Project, 2014 . Monitoring And Evaluation Resources For Community Low Carbon Projects [online]. Available at: <https://mescproject.wordpress.com/resources/>
- O'Leary, A. and Speciale, G., n.d. Monitoring And Evaluating Community Energy Reviewing Existing Tools And Outlining A Pilot Standardised Tool [online] Available at: [https://s3.eu-west-2.amazonaws.com/prod-wl-cee/resources/files/Monitoring\\_Evaluating\\_Community\\_Energy\\_website.pdf](https://s3.eu-west-2.amazonaws.com/prod-wl-cee/resources/files/Monitoring_Evaluating_Community_Energy_website.pdf)

The outcomes are divided into following colour-coded categories:

-  = Avoidance of CO2 Emissions
-  = Financial Benefits & Return of Value for the Local Community and Economy
-  = Community Engagement & Representation
-  = Employment, Volunteering & Skills Gained
-  = Supporting the Formation and Growth of New Community Energy Groups
-  = Awareness Raising and Behaviour Change
-  = Empowerment & Other Social Outcomes

### 3.1 KEY OUTCOMES

Outcome	Indicator	Measurement Method	Timing
Avoidance of CO2 Emissions	Capacity of renewable energy installation in kWp OR number of LED lamps installed ect.	Multiply the number of products by the capacity of each product. For LED simply count the number of products installed. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annual/After installation has been finished
	KWhs produced by the renewable energy installation multiplied by the carbon factor of the grid or oil being replaced.	See " <u>Energy Generation / Carbon Reduction Calculator</u> ". Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Monthly
Financial Benefits & Value Returned to Community	Amount in (£) and spent on projects that aim to reduce CO2 emission	Keep continuous records of spending. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Report Annually
	The amount in £ raised and donated on causes that benefit the local community	Keep continuous records of spending. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Report Annually
Employment, Skills Gained & Benefit to Volunteers	Number of paid working hours generated by the project - counting people directly employed by the project as well as hours contracted to local businesses ect.	Keep track of hours paid to people continuously. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Monthly.
	Number of local businesses engaged in the project	Keep continuous records businesses hired. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annual
	Volunteer hours	Keep track of the number of volunteers and the hours they contribute. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Monthly
	Skilling-up volunteers/staff/members: - Hard skills - A stated increase in financial, legal, and technical capabilities	Have volunteers fill in a survey (see " <u>Volunteer/ Member Feedback Form</u> "). Include a summary in Annual Report	Annually, or at the end of each volunteer's involvement with the

	- Soft skills - A stated increase group working skills, public speaking, and confidence	(see " <u>Annual Report Template</u> ")	project.
<b>Awareness Raising &amp; Behavioral Change</b>	Members/ event attendees ect. state that they have an increased understanding of issues related to energy, climate change or community issues.	Have volunteers and members fill in a survey (see " <u>Volunteer/ Member Feedback Form</u> "). Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annually, or at the end of each volunteer's or member's involvement with the project, or after each event.
<b>Community Engagement &amp; Representation</b>	The number of events and the number of people engaged in the events held by the community energy group for members or the broader community.	Sum of the number of attendees at each event - have attendees register to your events or otherwise count them at each event. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	After each event, summary Annually.
	Number of volunteers and members either contributing hours or investment into the project.	Number of contributing individuals. Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annual.
<b>Empowerment &amp; Other Social Outcomes</b>	Stated increase in feelings of acceptance and togetherness in community members.	Have volunteers and members fill in a survey (see " <u>Volunteer/ Member Feedback Form</u> "). Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annually, or at the end of each volunteer's or member's involvement with the project.
	Members state a feeling of empowerment or having control over the project.	Have volunteers and members fill in a survey (see " <u>Volunteer/ Member Feedback Form</u> "). Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annually, or at the end of each volunteer's or member's involvement with the project.

### 3.2 ADDITIONAL OUTCOMES - ALL COMMUNITY ENERGY PROJECTS

Outcome	Indicator	Measurement Method	Timing
<b>Financial Benefits &amp; Value Returned to Community</b>	Creation of Community Fund	Has one been created? Yes/No	Annual
<b>Employment, Skills Gained &amp; Benefit to Volunteers</b>	Employment gained based on skills gained or enhanced whilst working on a community energy project	Questionnaire for team of Directors and volunteers. Include a summary in Annual Report (see <i>"Annual Report Template"</i> )	Annual
<b>Community Engagement &amp; Representation</b>	The number of people that read about the community energy group and engage with them	The number of people on the mailing list, people following you on social media. Include a summary in Annual Report (see <i>"Annual Report Template"</i> )	Annual
<b>Awareness Raising &amp; Behavioral Change</b>	Members state that they have done one or more thing(s) to reduce their own personal carbon footprint.	Survey	Annual
	Members state that they have become more involved in climate/ energy related organising or activism.	Survey	Annual
<b>Empowerment &amp; Other Social Outcomes</b>	Group/project provides opportunities for members to affect decision making.	Are opportunities for meaningful member input provided.	Annual
<b>Supporting the Formation and Growth of New Community (Energy) Groups</b>	Number of groups supported and amount of support provided	Tracking tutoring hours per group. Include a summary in Annual Report (see <i>"Annual Report Template"</i> )	Annual
	Number of new groups formed following mentoring or support from another group. A reported increase in skills and knowledge	Tutoring notes based on feedback from the group supported.	

### 3.3 ADDITIONAL OUTCOMES - ENERGY GENERATION PROJECTS

Outcome/ Output	Indicator	Measurement Method	When to Evaluate?
Financial Benefits & Value Returned to Community	Total savings to sites that host community financed solar PV: The difference between the cost of grid electricity and solar electricity multiplied by kWh consumed	See " <a href="#">Energy Generation / Carbon Reduction Calculator</a> ". Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ")	Monthly/ Annual Summary
	Financial benefits to hosting sites who have charitable aims: The sum of rent payments to site owners who have charitable aims	Keep continuous track of rent payments. Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ").	Ongoing/ Annual Summary

### 3.4 ADDITIONAL OUTCOMES - FUEL POVERTY / ENERGY ADVICE PROJECTS

Outcome	Indicator	Measurement Method	Timing
Community Engagement & Representation	Number of individuals who receive energy advice.	Known from the number of sessions given x number of attendees at each session. Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ").	Ongoing
Awareness Raising & Behavioral Change	Number of individuals who make a change after receiving energy advice. A change could be anything which reduces energy bills, such as: switching suppliers, obtaining Warm Home Discount (WHD) or installing energy efficiency measures.	Survey to individuals who have received energy advice. Collect contact details from attendees and send the survey details in a month's time (see <a href="#">Event feedback Form (2)</a> ). Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ").	After each session/event. Annual Summary.
Financial Benefits & Value Returned to Community	Money saved annually by individuals who have received energy advice and subsequently switched energy suppliers.	Collect details of supplier, energy tariff and annual usage during advice sessions. Follow-up with a survey asking if they have switched suppliers, and the details of the new tariff.(see <a href="#">Event feedback Form (2)</a> ). Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ").	After each session/event. Annual Summary.

### 3.5 ADDITIONAL OUTCOMES - HEAT PUMP PROJECTS

Outcome	Indicator	Measurement Method	Timing
<b>Avoidance of CO2 emissions</b>	KWhs produced by the heat pump installation multiplied by the carbon factor of the grid or oil being replaced	See " <a href="#">Energy Generation / Carbon Reduction Calculator</a> ". Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ")	Annual
<b>Financial Benefits &amp; Value Returned to Community</b>	The difference between the cost per kWh from the original heating system and the cost per kWh of the heat pump multiplied by kWhs consumed plus (or minus) the difference in the cost of maintenance.	Calculate as described in indicator	Annual
<b>Awareness Raising &amp; Behavioral Change</b>	Volunteers involved in the project have an increased understanding of what heat pumps are, how they work and their utility in tackling the climate crisis	Have volunteers and members fill in a survey (see " <a href="#">Volunteer/ Member Feedback Form</a> "). Include a summary in Annual Report (see " <a href="#">Annual Report Template</a> ")	Annually, or at the end of each volunteer's or member's involvement with the project.

### 3.6 ADDITIONAL OUTCOMES - LED PROJECTS

Outcome	Indicator	Measurement Method	Timing
<b>Avoidance of CO2 emissions</b>	A survey to owners of sites (facilities managers or land owners) whereby they are asked whether they would have installed renewable energy in the absence of the community energy group	Survey	Start of project or after installations are finished
	EST CO2 and Cost Saving Calculator can be used to calculate carbon reduction due to a certain kWh reduction in demand	Calculate as described in indicator	Annual/ After installations are finished
<b>Financial benefits to sites that participate in an LED project</b>	The difference between the cost of non-LED lighting and LED lighting (using the EST CO2 and Cost Saving Calculator)	Calculate as described in indicator	Annual/ After installations are finished

### 3.7 ADDITIONAL OUTCOMES - BIO-ENERGY PROJECTS

Outcome	Indicator	Measurement Method	Timing
<b>Avoidance of CO2 emissions</b>	KWhs produced by the renewable energy installation multiplied by the carbon factor of the grid or oil being replaced.	See " <u>Energy Generation / Carbon Reduction Calculator</u> ". Include a summary in Annual Report (see " <u>Annual Report Template</u> ")	Annual
<b>Financial benefits to sites that host community financed biomass</b>	Total savings: The difference between the cost of oil fuel per kWh and the cost of biomass per kWh multiplied by kWhs consumed plus (or minus) the difference in the cost of maintenance	Calculate as described in indicator	Annual/ After installations are finished

## 4. REPORTING & TEMPLATES

Reporting is a key part of M&E - it will summarise the data you have been gathering, and aim to frame in a way interesting to funders, stakeholders and internally. It provides an opportunity for you to inspect and analyse your findings and have a record of your group's activities.

This section includes some template documents for your group to measure some of the key indicators, as well as templates for summarising your findings in annual reporting. The following templates are included:

- *Volunteer / Member Feedback Form* - Give this to project volunteers, members and any individuals contributing time to the project to fill at the point where their involvement with the project is ending, or on an annual basis. Digitise the responses in a google sheet or similar so that data is saved and easy to summarise annually.
- *Event Feedback Form (1)* Give this to individuals to fill in after attending your groups events. Digitise the responses in a google sheet or similar so that data is saved and easy to summarise annually.
- *Event Feedback Form (2)* Give this to individuals to fill in after attending your groups events. Digitise the responses in a google sheet or similar so that data is saved and easy to summarise annually.
  - This form is another version of the above form, geared more towards energy advice and fuel poverty projects.
- *Annual Report Template* -Use this template to summarise the data you have gathered towards your key outcomes and indicators within the year. Feel free to edit the template as you wish, or embed it in your larger annual report.

All of these are examples which you can edit and make your own, or use as they are!

A general piece of advice: keep track of the data you have gathered continuously - save on google sheets or in another format online so it's easily accessible and analysable.

# Volunteer/Member Feedback Form



To be filled in by volunteers involved in the project either annually or as project involvement is coming to an end. The purpose of this document is to measure the success of the project in giving volunteers experience, skills and learning opportunities.

This can be filled in anonymously or with name and contact details filled in.

<b>Name of Project:</b>			
<b>Name of Volunteer:</b>			
<b>Time &amp; Duration of Involvement:</b>	dd/mm/yyyy	dd/mm/yyyy	XX months

How would you rate the increase/ improvement in the following areas as a result of your involvement in the project (place an X into the box corresponding to your evaluation):

	<b>0</b> (No Improvement)	<b>1</b> (Some Improvement)	<b>2</b> (Notable Improvement)	<b>3</b> (Great Improvement / completely new skill sets)
<b>Hard skills:</b>				
Financial Capabilities				
Legal Capabilities				
Technical Capabilities				
Other: _____				
<b>Soft skills:</b>				
Group working skills				
Public speaking				
Facilitation skills				
Confidence				
Other: _____				
<b>Awareness of:</b>				
Climate Change				
Environmental Issues				
Fuel Poverty Issues				
Local Community Issues				
Other: _____				

Answer the following questions with Yes, No or Somewhat by placing an X in the corresponding box:

	<b>Yes</b>	<b>Somewhat</b>		<b>No</b>
Do you feel that your employment prospects have been improved by volunteering with the project?				
Have you gained new employment opportunities after starting volunteering with the project?				
Has your sense of belonging and acceptance in your local community increased during your involvement in the project?				
Have you been provided with ample opportunities to meaningfully affect the course and methods of the project?				
Do you feel ownership of the project?				

What could we do better:

What have you enjoyed the most:

Are there any issues regarding inclusivity, fairness and safety of members and volunteers that you would like to bring up?

Would you like us to be in touch with you regarding any feedback for the project? If yes, leave your email address and/or phone number below.

# Event Feedback Form (1)



To be filled in by event attendees. The purpose of this document is measure our groups success in providing attendees with increased awareness and understanding of issues, learning opportunities, skills gained and other positive social impacts.

<b>Name of Event:</b>	
<b>Date:</b>	
<b>Where did you find out about the event?</b>	
<b>Have you been involved with this group/project before?</b>	

How would you rate the increase/ improvement in the following areas as a result of your involvement in the project (place an X into the box corresponding to your evaluation):

	<b>0</b> (No Improvement)	<b>1</b> (Some Improvement)	<b>2</b> (Notable Improvement)	<b>3</b> (Great Improvement / completely new skill sets)
<b>Skills:</b>				
Financial Capabilities				
Legal Capabilities				
Technical Capabilities				
Other: _____				
<b>Soft skills:</b>				
Group working skills				
Public speaking				
Facilitation skills				
Confidence				
Other: _____				
<b>Awareness of:</b>				
Climate Change				
Environmental Issues				
Fuel Poverty Issues				
Local Community Issues				
Other: _____				

What could we do better:

What have you enjoyed the most:

Are there any issues regarding inclusivity, fairness and safety of members and volunteers that you would like to bring up?

Would you like us to be in touch with you regarding any feedback for the project? If yes, leave your email address and/or phone number below.

## Event Feedback Form (2)



To be filled in by event or project session attendees 1 month (or another time period) after the session. The purpose of this document is to measure our group's success in providing attendees with useful energy advice, raising awareness of energy and community issues and the resulting improvements in your energy bills.

<b>Name of Event:</b>	
<b>Date:</b>	
<b>Where did you find out about the event?</b>	
<b>Have you been involved with this group/project before?</b>	

How would you rate the increase/ improvement in the following areas as a result of your involvement in the project (place an X into the box corresponding to your evaluation):

	<b>0</b> (No Improvement)	<b>1</b> (Some Improvement)	<b>2</b> (Notable Improvement)	<b>3</b> (Great Improvement / completely new skill sets)
<b>Skills:</b>				
Financial Capabilities				
Legal Capabilities				
Technical Capabilities				
Other: _____				
<b>Knowledge of:</b>				
Climate Change				
Energy Issues				
Fuel Poverty Issues				
Local Community Issues				
Other: _____				

Have you made any changes in your life after the event/session?

Have you saved money in your energy bills after attending the event/session? If so, how much approximately?

[Name of Group / Project]  
[Year]

Outcome	Results
<b>Avoidance of CO2 Emissions</b>	<p>As a part of the project, we have installed [XX kWp of Solar Panels] / [XX LED Lamps] ect. since beginning our operations.</p> <p>So far, this has equated to [XXX] kg of Carbon emissions avoided!</p>
<b>Financial Benefits &amp; Value Returned to Community</b>	<p>We have generated £[XX] spent on projects that aim to reduce CO2 emission, and raised £[XX] for causes that benefit the local community.</p>
<b>Employment, Skills Gained &amp; Benefit to Volunteers</b>	<p>This year, we have engaged [X] local businesses in our project, contracting out activities such as [examples]. [X] individuals have been directly employed by our project, and we have had [X] enthusiastic volunteers contribute their time!</p> <p>[XX]% of our volunteers have stated that they have gained increase in their financial, legal, or technical capabilities as a result of being involved with the project [XX]% also said that their soft skills such as public speaking and confidence have increased.</p>
<b>Awareness Raising</b>	<p>[XX]% of our members state that they have an increased understanding of issues related to energy, climate change or the local community.</p>
<b>Community Engagement &amp; Representation</b>	<p>We have engaged [XX] people in our operations as well as public facing events.</p> <p>[XX] people have attended our events over the year. [XX] people have financially contributed, and [XX] volunteers have contributed their time.</p>
<b>Community Cohesion and Empowerment</b>	<p>[XX]% of our members and volunteers stated that their feelings of acceptance and togetherness in the community have increased during their involvement in our project.</p> <p>[XX]% of members stated feeling empowered and having control over the project, having been provided opportunities to affect the course of the project throughout the year. <i>[Describe these opportunities]</i></p>

## 5. CALCULATORS

### Energy Generation / Carbon Reduction Calculations

To calculate carbon reduction due to energy produced by your renewable energy project, you can use the following formula:

*Emissions avoided*

= (Power produced by the installation in kWh) x (Carbon factor of the energy source being replaced)

The up to date carbon factor grid electricity, oil and other power production methods you could be replacing, can be found here:

<https://www.google.com/url?q=https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020&sa=D&source=editors&ust=1620397543986000&usq=AOvVaw1BdENLgqMtAi8JPIAbsxpj>

## Social Return on Investment (SROI)

The SROI is the ratio of the value of your impacts to the value of your inputs. It is a standardised and widely used measure, particularly in the charitable sector, and more broadly where end-products are difficult to monetise, such as improvements in healthcare, increased awareness and environmental impacts. The SROI method has been standardised by Social Value UK ([www.socialvalueuk.org/](http://www.socialvalueuk.org/)). It is used to evaluate how efficiently inputs are turned into impact.

$$SROI = \text{Value of Impact (£)} \div \text{Value of Investment (£)}$$

Here, it is up to your group/project to decide how the value of impact is measured. In the case of Fuel Poverty projects for example, you may multiply the number of people advised by the amount they state their energy bills have decreased, and so on.

Outcome	Value of Investment (£)	Value of Impact (£)	SROI (-)
Avoidance of CO2 Emissions			
Financial Benefits & Value Returned to Community			
Employment, Skills Gained & Benefit to Volunteers			
Awareness Raising			
Community Engagement & Representation			
Community Cohesion and Empowerment			