


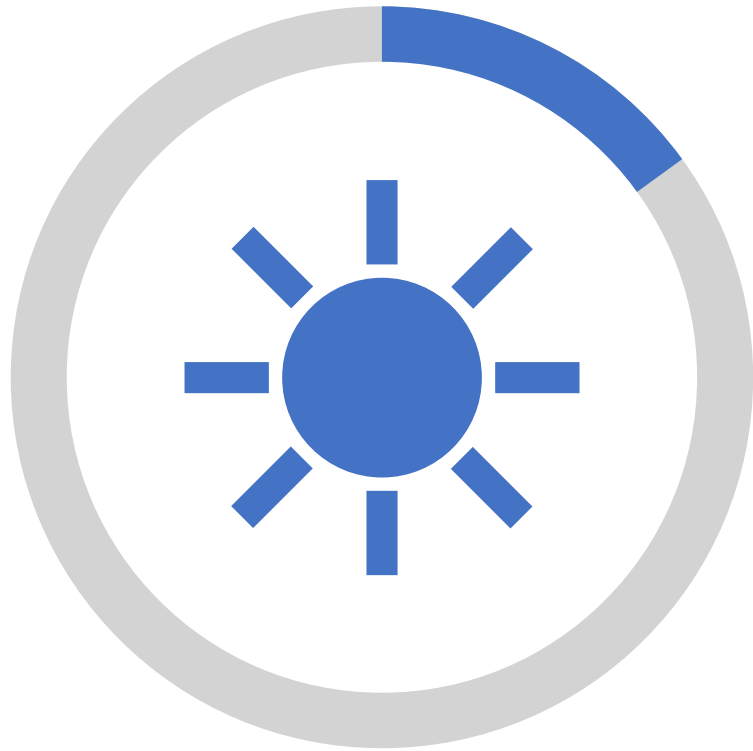
Climate  
Action  
Preston  
Solar  
Subgroup

---

Robin Jones – Lancashire  
County Council, North West  
Net Zero Hub

The logo is a circular emblem with a green background. At the top, there is a stylized sun with a yellow-orange center and a light blue outer ring. Below the sun are blue mountain peaks. The text 'COMMUNITY ENERGY PRESTON' is written in bold, black, uppercase letters across the center of the emblem.

**COMMUNITY  
ENERGY  
PRESTON**




## What is the Community Energy Preston community solar offer?

- Free solar panel installations for **businesses and community buildings**
- Community Energy Preston raises the money, installs the system, owns and maintains it
- You get cheaper power from the solar (at least 15% cheaper than the grid) and slash your carbon emissions
- Surplus income is donated to local community projects/charities to reduce carbon emissions and address fuel poverty
- Local organisations and people get an opportunity to invest in Community Energy Preston and earn an annual return.

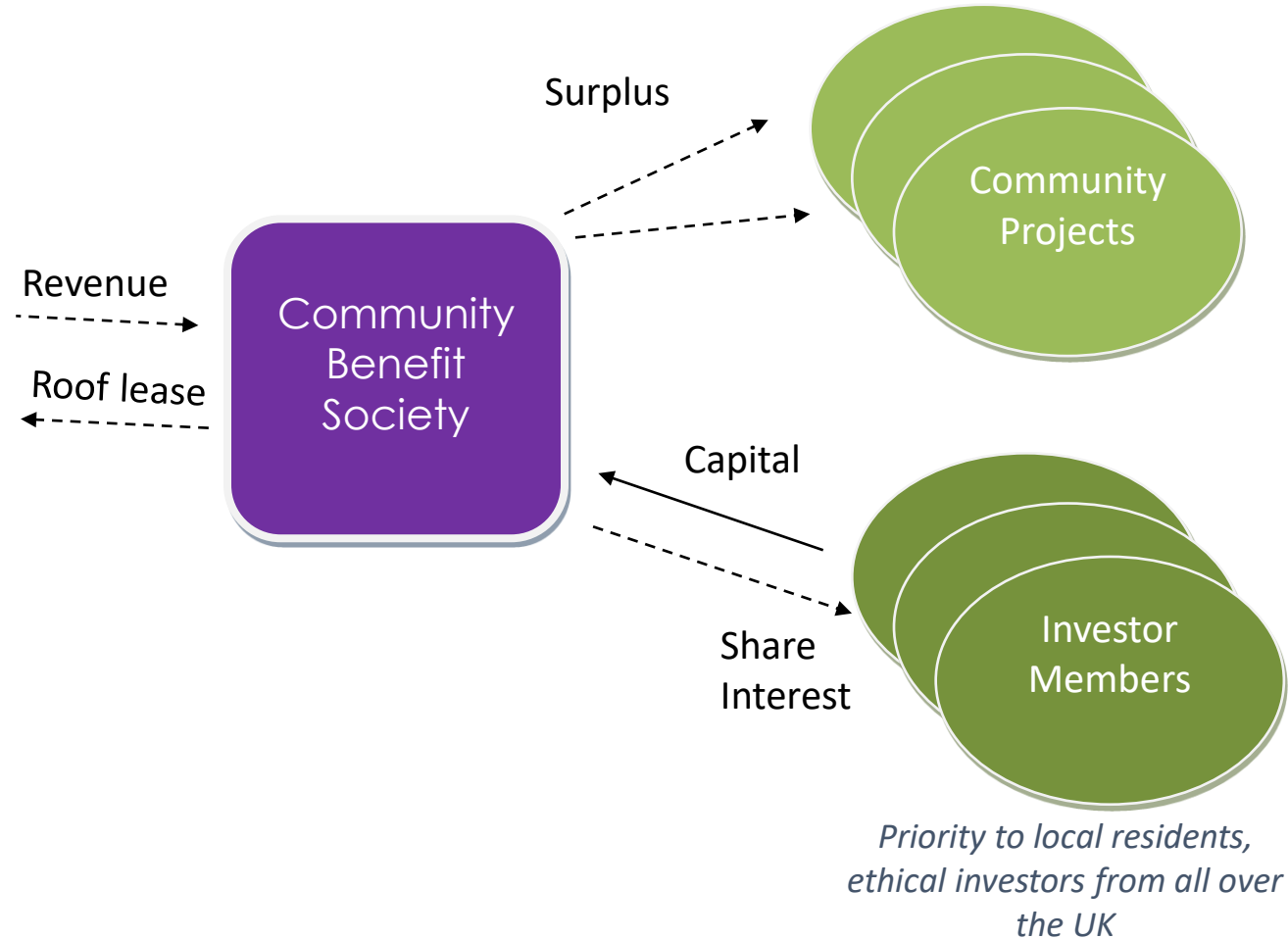
# What's the offer?

- If you would like solar PV panels on your roof, Community Energy Preston offers an arrangement where we:
  - Raise the total cost of the solar PV installation from a **community fund-raise** so there is **no capital outlay for you**.
  - **Sell the solar PV-generated electricity** to you at an **agreed discounted index-linked rate**, thus delivering energy cost savings to you.
  - Provide a **well-tested lease** and **Power Purchase Agreement**.
  - Undertake all of the **pre-installation development activities**. application for a Certificate of Lawful Development or planning permission application.

# What's the offer?

- **Manage the complete procurement and installation** of the PV project, including structural and asbestos surveys.
  - Use the revenue from the sale of the PV-generated electricity to you to **make interest payments and investment repayments to the Community Energy Preston investors.**
  - **Allocate profits to an independent community fund** to support local community groups to deliver projects to cut carbon emissions and reduce fuel poverty.
  - **Highlight the energy actions of all our Community Partners** on our website, newsletter and in our publications.
- 
- A large yellow triangle is positioned in the bottom right corner of the slide, pointing towards the top right.

# What is community energy? Simple Co-op Structure



# Has this been done before?

---

- There are over 30 of these organisations across the UK but fewer in the north.
- Communicated with lots of other organisations who have done this previously.
- Often created with help and buildings from local authorities and anchor organisations or interested SMEs



# Our Partner: Energy4All



- Energy4All and its members share a mission and values:
- To help the UK's transition to a low carbon economy
- To engage ordinary people in the development, operation and ownership of renewable energy
- A co-operative of 31 community energy societies co-operating to provide cost effective comprehensive support
- A community owned development partner
- A self –financing and non-profit distributing organisation



Glasgow Community Energy



Reading Community Energy



Edinburgh Community Solar  
Co-Operative



Energise South

# What are we looking for? Future rounds

- Business and buildings located in or around Preston
- Buildings with a non-northerly facing pitched roof in good condition
- Buildings that use a significant amount of power year round.
- Priority will be given to sites which do not require planning permission and sites which require it, such as listed buildings or flat roofs, may fall into later rounds of development.
- Solid ownership of the building in question.
- We need to build over 1MWp of solar in each round, financials look better with fewer big buildings than multiple smaller roofs.



# First steps

We will arrange an initial assessment of the potential for PV on your roof. This assessment will be at no cost to you and with no obligation and will include:

- A potential PV layout, showing installed system size and generation output.
- A financial analysis showing the estimated on site consumption, the savings to you by offsetting the current grid supplied electricity and a guide to the cost per unit you might pay for the solar power the array generates for you.
- An estimate of the **surplus to the recipient and the community fund.**

# How do we assess roofs?

## PV Estimation Tool using PVGIS

Cursor: Selected: 53.760, -2.699  
Elevation (m): 43  
PVGIS ver. 5.2

Use terrain shadows:  
 Calculated horizon  
 Upload horizon file

[Download CSV](#) [Download JSON](#)  
[Choose File](#) No file chosen  
[Switch to version 5.1](#)

GRID CONNECTED  
TRACKING PV  
OFF-GRID  
MONTHLY DATA  
DAILY DATA  
HOURLY DATA  
TMY

### HOURLY RADIATION DATA

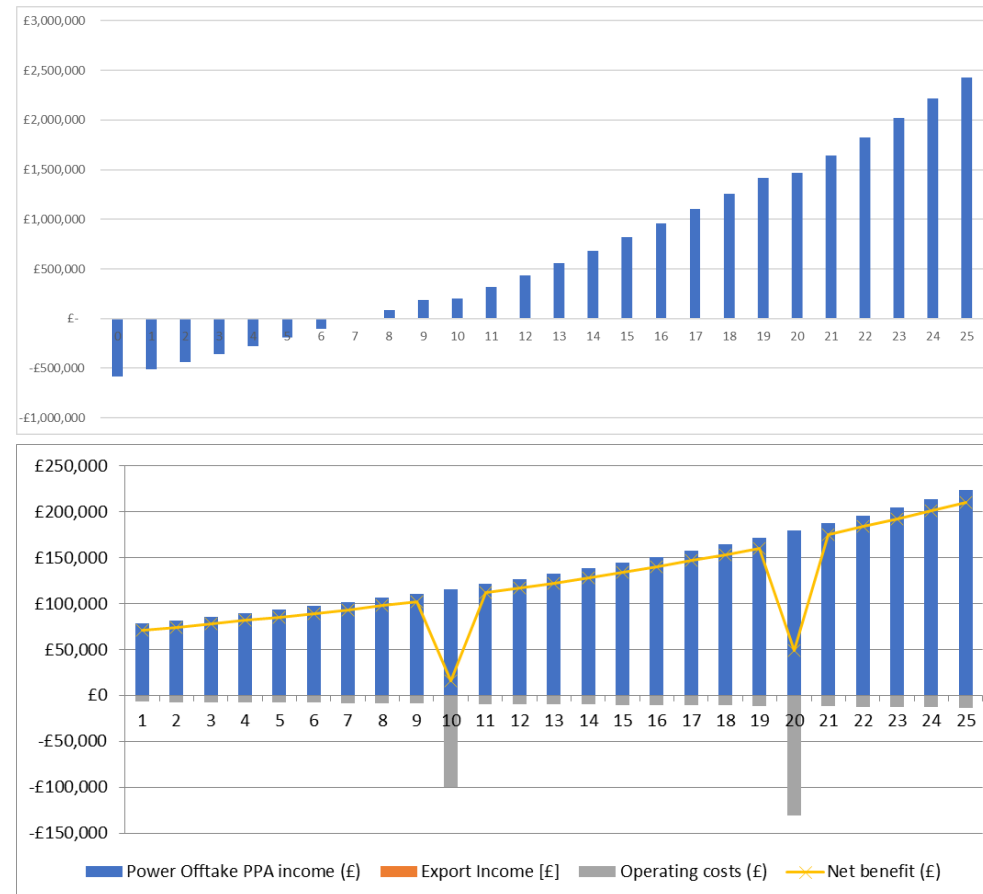
Solar radiation database\* PVGIS-SARAH2  
Start year\* 2020 End year\* 2020

Mounting type\*  
 Fixed  Vertical axis  Inclined axis  Two axis  
Slope [°] 30  Optimize slope  
Azimuth [°] 0  Optimize slope and azimuth

PV power  
PV technology\* Crystalline silicon  
Installed peak PV power [kWp]\* 1  
System loss [%]\* 14  
 Radiation components

[Download CSV](#) [Download JSON](#)

## Financial breakdown



# Site 1

- ❑ Large educational establishment
- ❑ Potential for up to 895kW of Solar PV
- ❑ More likely to require 700-800kW
- ❑ An installation of this size with their consumption patterns gives 70-80% self consumption.



Jan	- - - -	42666867665634	- - - -	58%
Feb	- - - -	5890929188746637	- - - -	77%
Mar	- - - -	10099100100100100100978251	- - - -	95%
Apr	- - - -	10010010010010010010010010091	- - - -	100%
May	- - - -	100100100100100100100100100100	- - - -	100%
Jun	- - - -	100100100100100100100100100100	- - - -	100%
Jul	- - - -	100100100100100100100100100100	- - - -	100%
Aug	- - - -	100100100100100100100100100100	- - - -	100%
Sep	- - - -	100100100100100100100100100100	- - - -	100%
Oct	- - - -	161001001001001001001009268	- - - -	97%
Nov	- - - -	3310010010010095806737	- - - -	84%
Dec	- - - -	58697067675635	- - - -	60%

Timezone offset: +0 hours

Horizon Shading



## Site 2

- Building in Leigh, Greater Manchester, potential for up to 425kWp of solar.
- Run by a community benefit society and houses a high energy consuming factory on first floor.
- Lots of roof space, high consumption mostly in middle of day.
- With consumption factored in can save company 1.7M over 25 years while getting healthy return for CEP.

# Additional sites and how you can help

- We are in talks with other schools and other cooperative organisations. We may be able to do these as part of our first round of share offer or in a subsequent round.
- If you know of a site you think would be suitable please put them in touch.
- If you have time to offer the working group and an enthusiasm for renewable energy (you don't have to be an engineer or lawyer). Do get in touch via [communityenergypreston@gmail.com](mailto:communityenergypreston@gmail.com)



## Project progression and those who helped:

- We've managed to gather over a MW of installed solar potential through our main two sites.
- With the help of the Advancing a Shared Economy in Preston work from Preston City Council CEP are ready to incorporate, with help from Andrew Glassford and Rachel Stringfellow.
- PCDN and CMS will be facilitating the formation of the Community Benefit Society and enabling the employment of project management/coordination support. Thanks to Gareth Nash, Gaynor Wood and their teams.
- LCC providing help to CEP by designing contractor help from social value measures in their procurement. Thanks to Debbie King and team.
- Help with the initial strategies and adaptation of solar estimation tools from the North West Net Zero Hub. In particular Kate Gilmartin.
- Energy4all and other community energy groups who have provided advice.



# **Any questions about Community Energy Preston?**

... There's more to come...



# Lancashire Community Climate Action Forum

17 May | 9.45am – 4pm  
Business School



Welcome, everybody!

## Elsewhere in Lancashire Community Energy

Edge Hill hosted the first in a series of annual community climate action forum events on 17<sup>th</sup> May.

Organisations from all over Lancashire joined the event and there is a directory of organisations and contacts being created.





## Low Carbon Heat

### **Urban Model - Rossendale**

- A “net zero terrace street” proposition
- Working with a mix of social housing and privately owned houses.
- Shared loop ground source heat pump rollout, paired with insulation, solar and storage.

### **Rural Model - Chipping**

- A net zero village proposition in Ribble Valley that is off the gas grid
- Already been successful in getting B4RN, broadband for rural north.
- Shared loop ground source heat pump will minimise impact on the grid from electrical demand.

# Accrington Solar Meadow

£1.2M project, making the absolute most use of the land, allowing it to be used for solar generation and biodiversity.

Received funding through the Rural Community Energy Fund.



# Other Community Projects in Lancashire

## Bretherton Energy Partnership

Parish community working with a large pet food manufacturer that makes up over 20% of Chorley's carbon emissions. GA Pet Foods are building a hybrid solar/wind farm with 5% of benefit going to the local community.

## Others

- Skelmersdale Community Energy has been working towards renewables, fabric and heat pump with West Lancs Council
- Rural EV car club initiatives in Mellor and Heysham.

# **Any questions about Community Projects in Lancashire?**

That's all folks