



CAPAS

Capabilities-led energy  
Poverty  
Alleviation via innovative community  
Solutions

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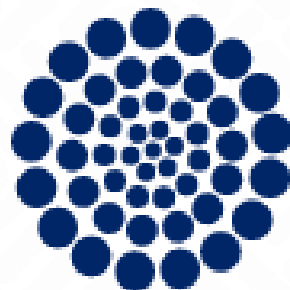


**Newton  
Fund**

**Impact  
Scheme**



**BRITISH  
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**UCL ENERGY**  
INSTITUTE



Atlautla, Edo. México

Cuetzalan, Puebla

Tzetzénguar, Michoacán

Temixco, Morelos

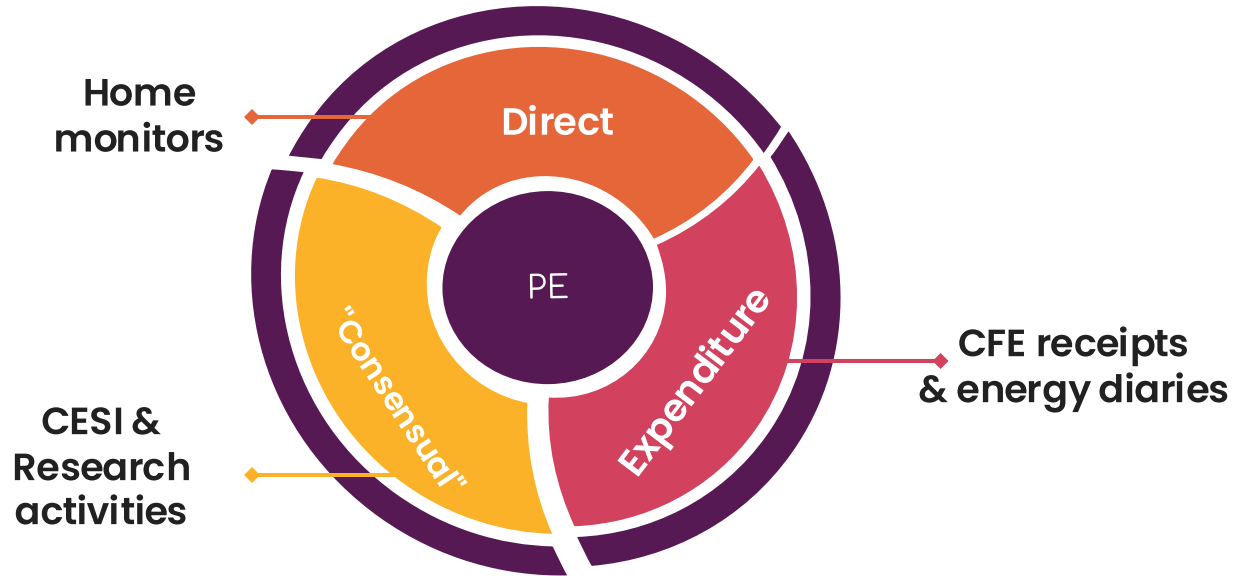
# What do we do?



## Participatory



# Measuring energy poverty





Improving the energy  
conditions of homes



# Generation of inclusive knowledge

CESI\*

## Capabilities

Emphasis on all people  
in the household

## Energy

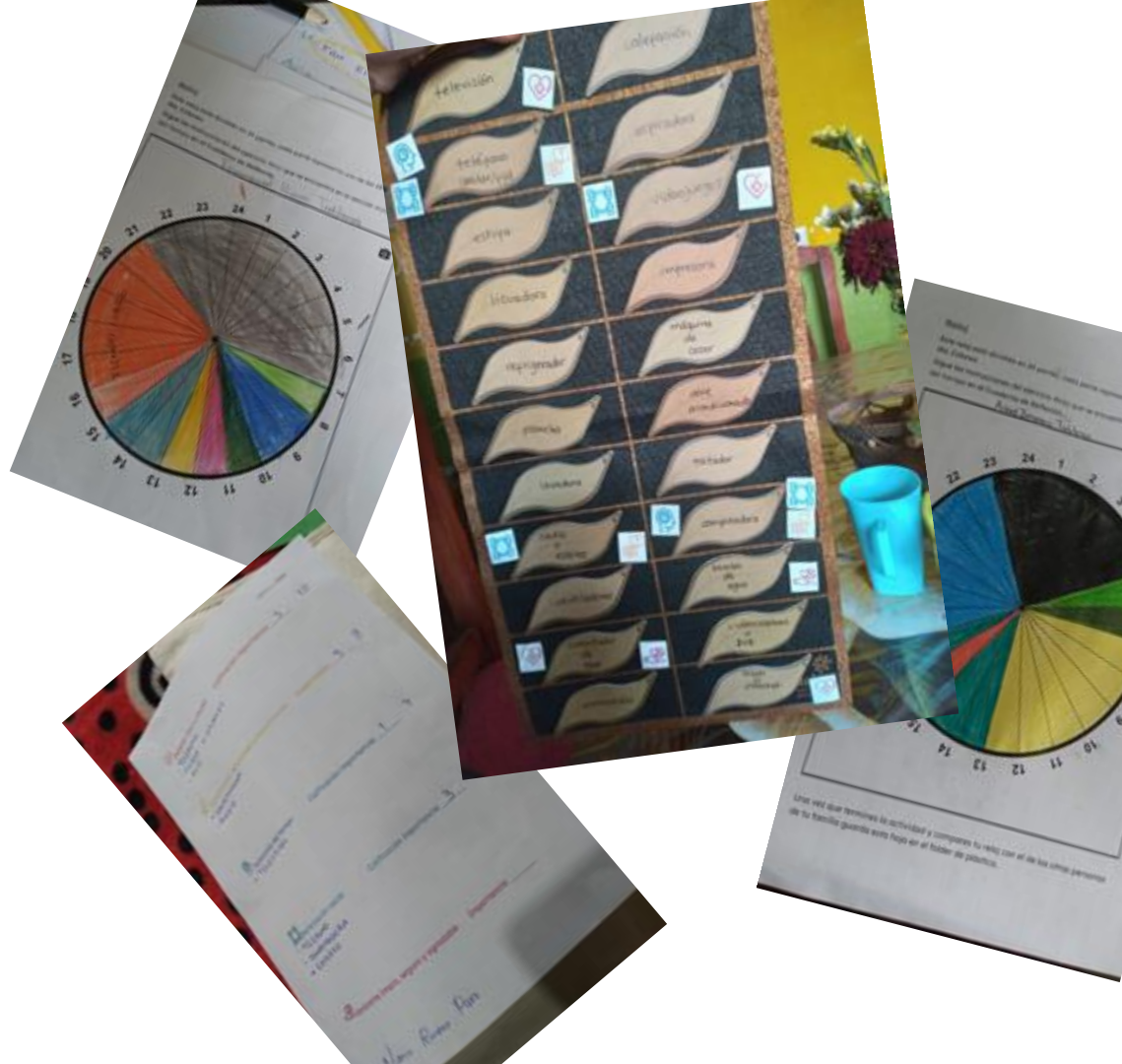
As a way to achieve  
well-being

\*Ricalde, K., Cedano, K. G., Thomson, H., & Robles, T. (2021). Contextualizing Nussbaumer via Nussbaum: unveiling a multi-disciplinary, human capabilities-centred approach to energy poverty from Mexico. In Research Handbook on Energy and Society. Edward Elgar Publishing.



# The activities

- Surveys
- Workbooks



# Introduction to Capabilities



Moments of reflection on capabilities.

Previous step to central activity.

5 exercises of half an hour each to do with all the people in the household.



# Relating them to energy





- ⇒ Decide which energy services relate to **capabilities** or aspects of life
- ⇒ **Sort** services within capabilities from most important to least important
- ⇒ Add missing **energy services**
- ⇒ **Rate** 1 – 10 each capability





# Energy eco-technologies



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- Solar Heater
  - Biodigester
  - DC refrigerator
  - Solar cooker
  - Space heater
  - Isolated FV system
  - Interconnected FV system
  - Solar lamp
  - Solar pump
  - Efficient wood stove
- 

It is a device that is used to heat water using the energy of the Sun, it does not use gas or electricity.

# Solar Heater



The water it heats can be used for showers, food cleaning, and surfaces.



the water reaches up to 60 °C and can heat from 80 to 350 liters depending on the model.



It should be installed in a sunny, shade-free space with access to water lines.




It is connected to a water tank that must be at least 30 cm above the heater.




Maintenance is simple.

# Solar cooker

It is a device that is used to cook food using the energy of the Sun

 You need an easily accessible space that is sunny for more than 4 hours a day

It should be handled with the same caution as any other heated cookware used to prepare food.

 Reflective surfaces should be kept clean using only water and a clean rag





# Results of community interventions
















# Most Significant Change





Tzetzénguaró, Michoacán

Temixco, Morelos

Atlautla, Edo. México

Cuetzalan, Puebla



## Level 3

Proof of concept: Edo. de México

## Level 4

Pilot case: Morelos

## Level 5

$\alpha$  testing: Puebla

## Level 6

$\beta$  testing: Michoacán

# Open Social Innovation Readiness Levels





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