

# Energy Communities: from ideas to practice

24/11/2025

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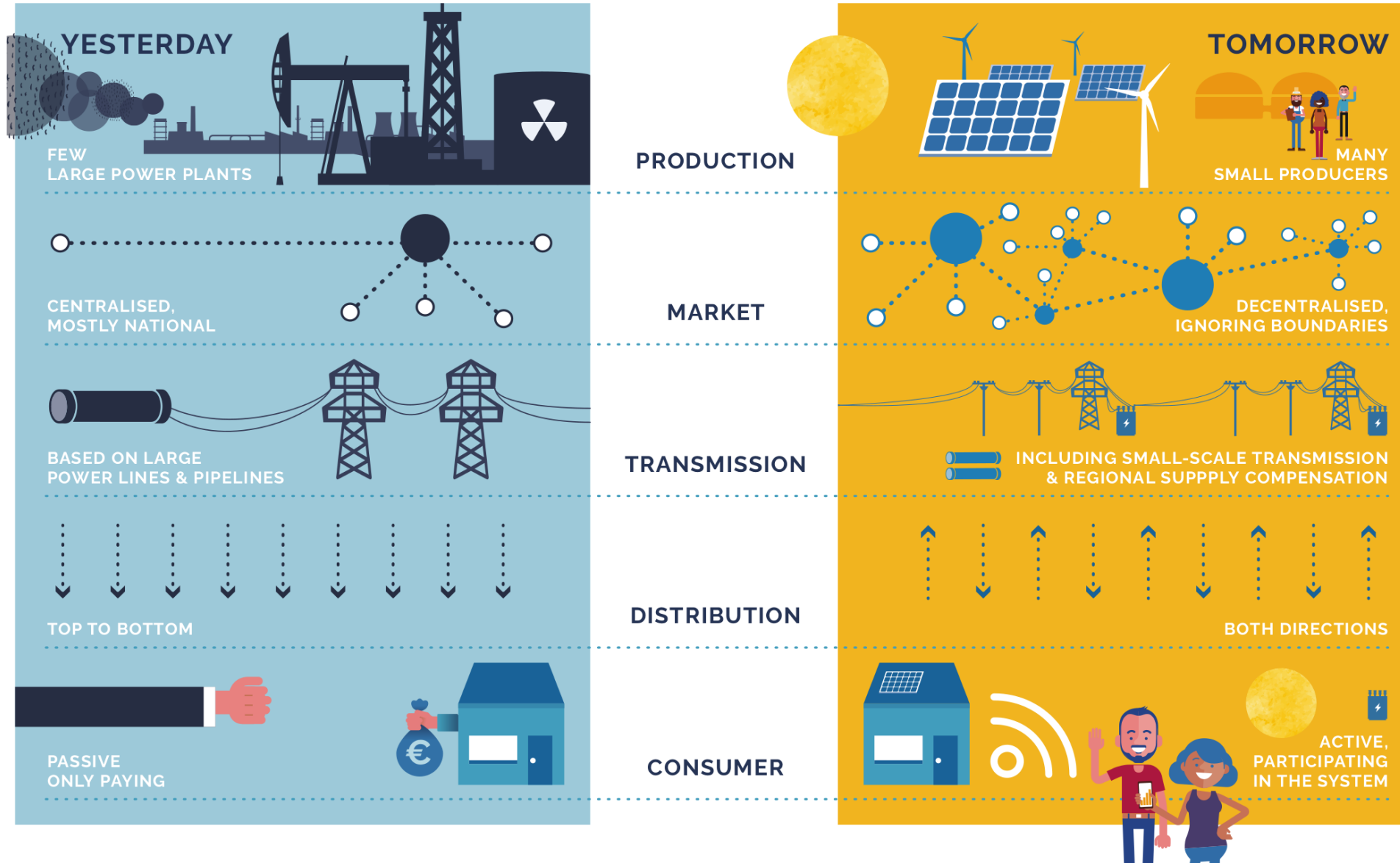
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# Agenda

- **1. Context: Climate Change+ Energy System transformation**
- 2. Energy Communities: different perspectives**
- 3. Projects in Portugal and wider Europe**

# Context: Ongoing energy system transformations



# Energy Communities from multiple perspectives

**Energy  
Communities**

**Concept**

**Social**

**Legal**

**Tecnical-  
Económicoal**



## Primeira comunidade de energia nasce em Miranda do Douro. Governo quer mais, para ajudar a baixar fatura da luz

Bárbara Silva  
24 Agosto 2021



Inaugurado primeiro projeto em Miranda do Douro, que vai baixar gastos energéticos em 10% face ao preço de mercado. Galamba revela que mais comunidades de energia serão aprovadas em breve no país.

AMBIENTE

### A primeira comunidade energética do Porto vai nascer na Asprela

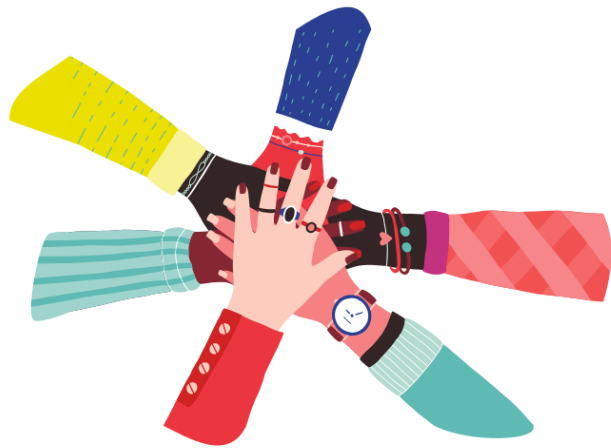
**A REVOLUÇÃO ENERGÉTICA ESTÁ A CHEGAR AOS BAIRROS: DAS COMUNIDADES DE ENERGIA RENOVÁVEL AOS BAIRROS DE ENERGIA POSITIVA**

Publicado por Filipa Cardoso | Ago 27, 2021 | Energia, Notícias, Tendências urbanas



# The idea

**“...refers to people in a community cooperating on energy issues.”**



**Cooperation**

**Colective Action**

**Energy Sector Activities**

# Social Perspective



Decision Process

Energy as commons

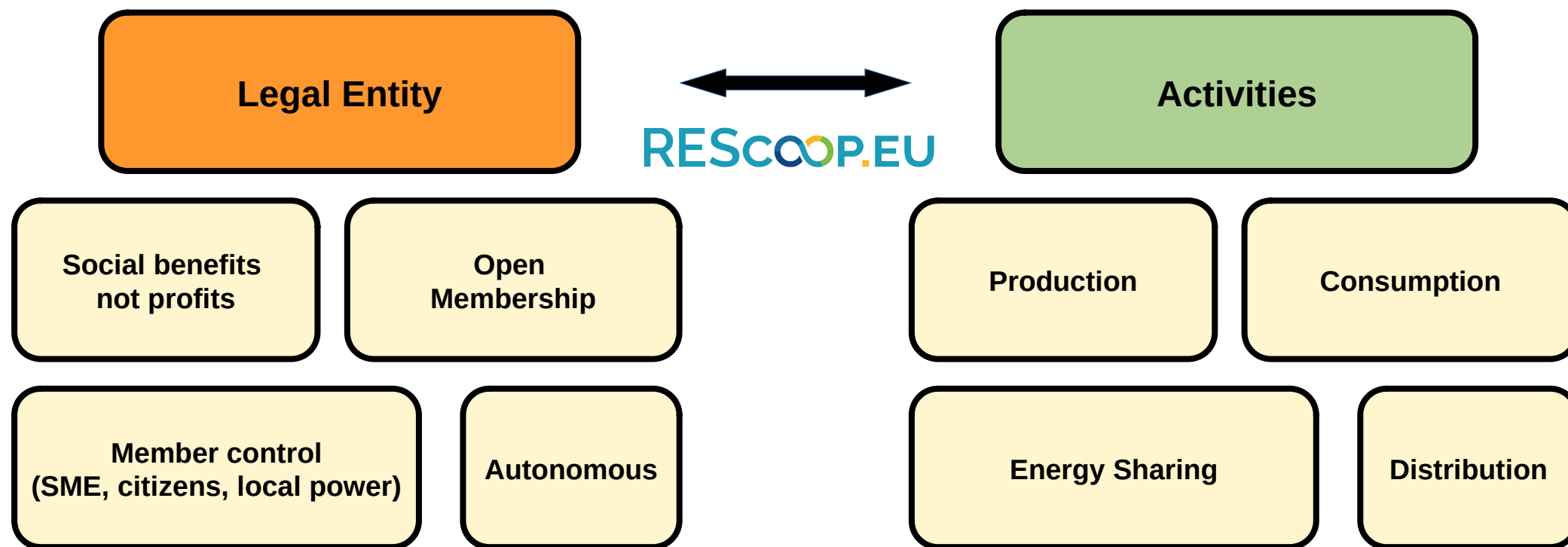
Energy Democracy

Other questions:  
Energy poverty,  
gender, race

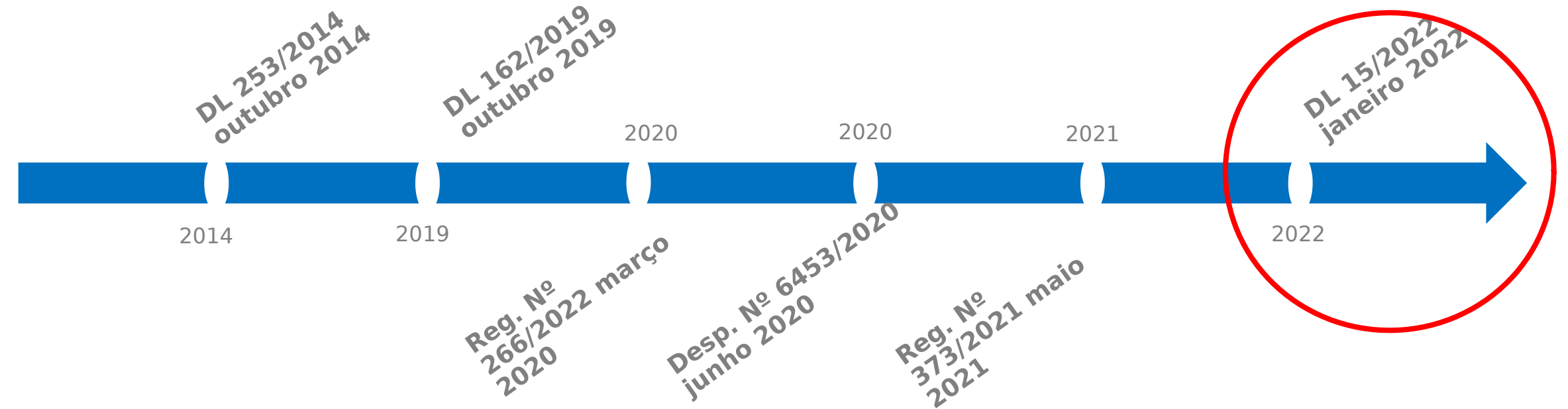
# Legal Perspective (UE)

## Clean Energy Package: RED II + MIED

Renewable Energy Communities + Citizen Energy Communities



# Legal Perspective (Portugal)



**Colective Entity**

**Open Membership**

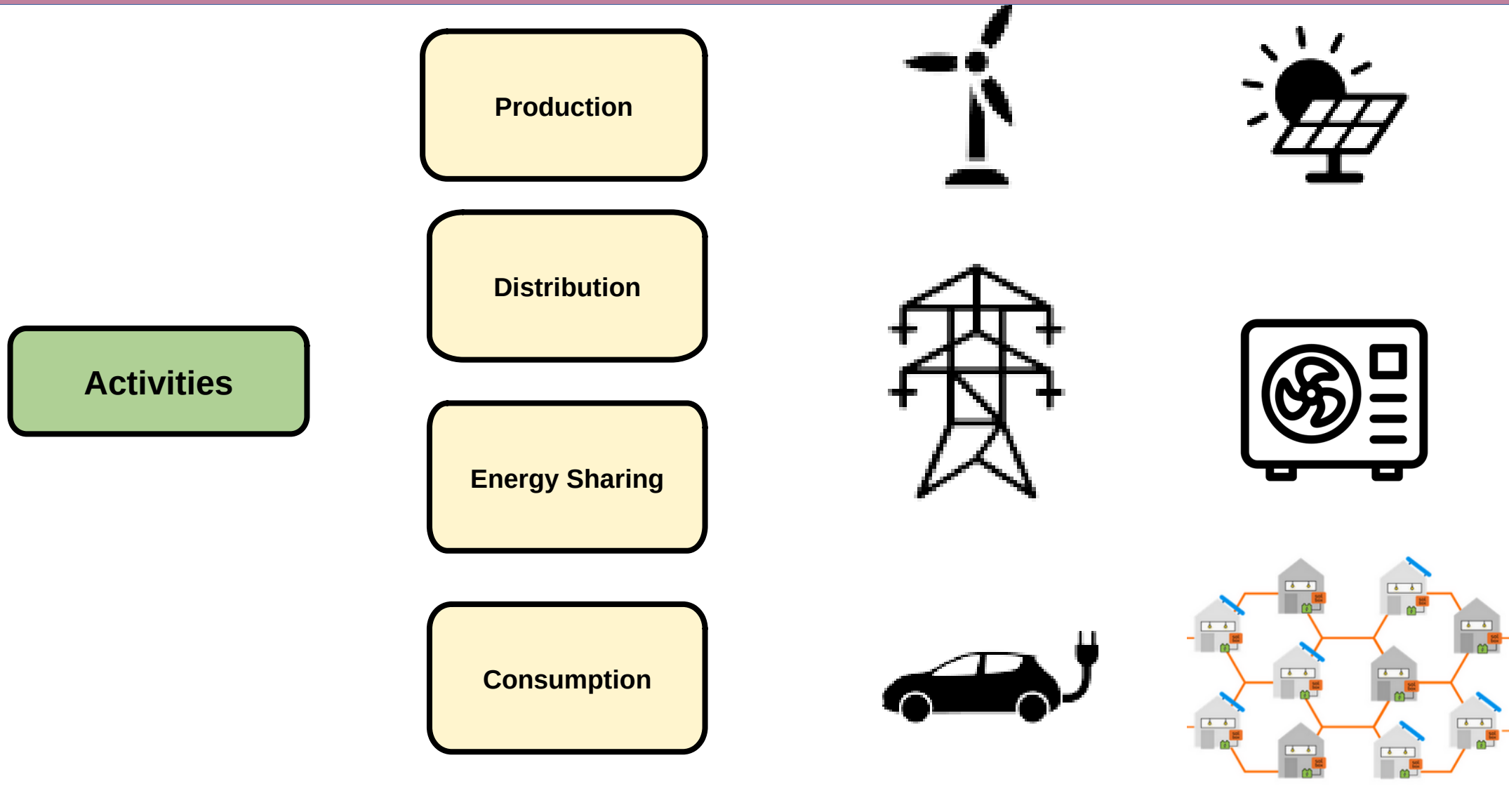
**Economic, social and  
environmental benefits**

# Legal Perspective (Portugal)



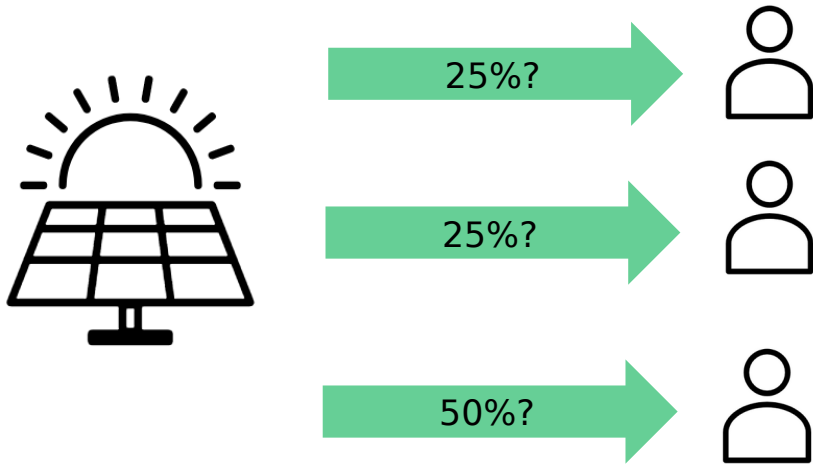


# Technical - Economical perspective

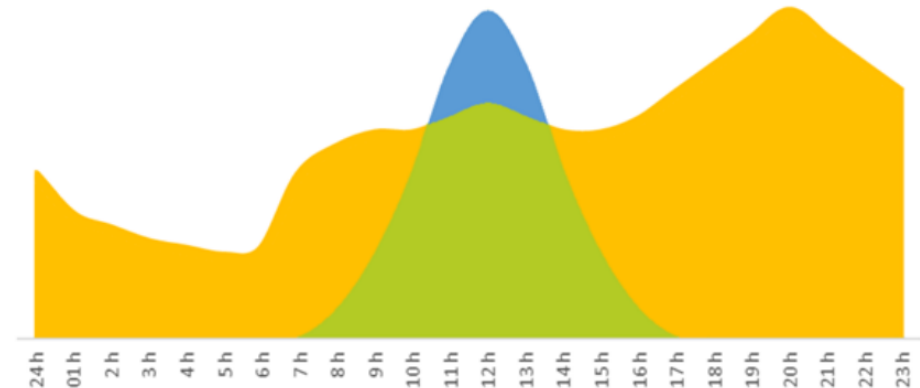


# Collective Self-Consumption

## Activity: Collective Self-Consumption



1. Available space for a PV system
2. 2+ CPE
3. Proximity
4. Smart-Meters
5. Internal regulation
6. EGAC
7. Sizing and instalation project





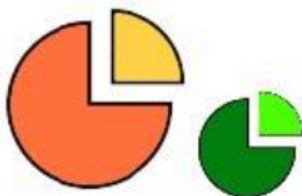
# Sharing Energy

Fixa

30%  
70%

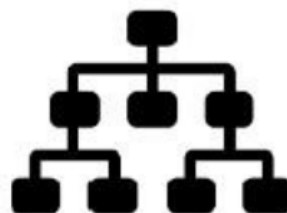
Coeficientes fixos  
definidos pela EGAC

Proporcional  
ao consumo



Produção distribuída  
de forma proporcional  
ao consumo

Hierárquica



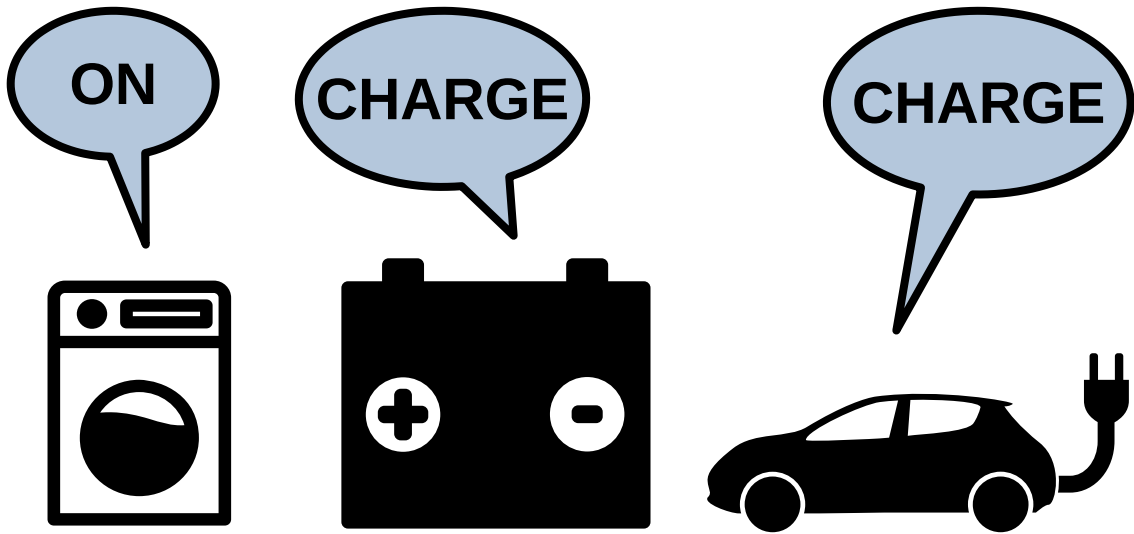
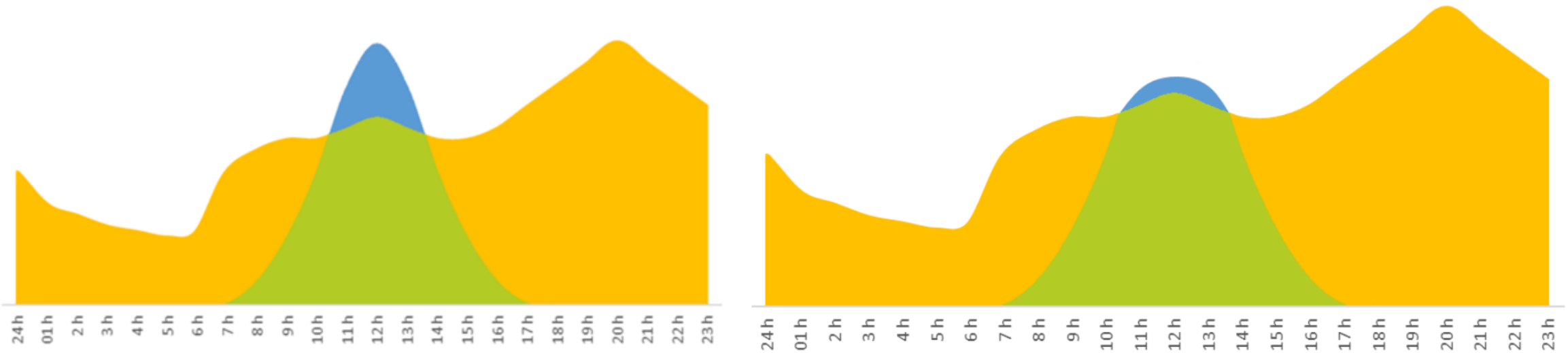
Produção distribuída  
por grupos  
pré-definidos

Dinâmica

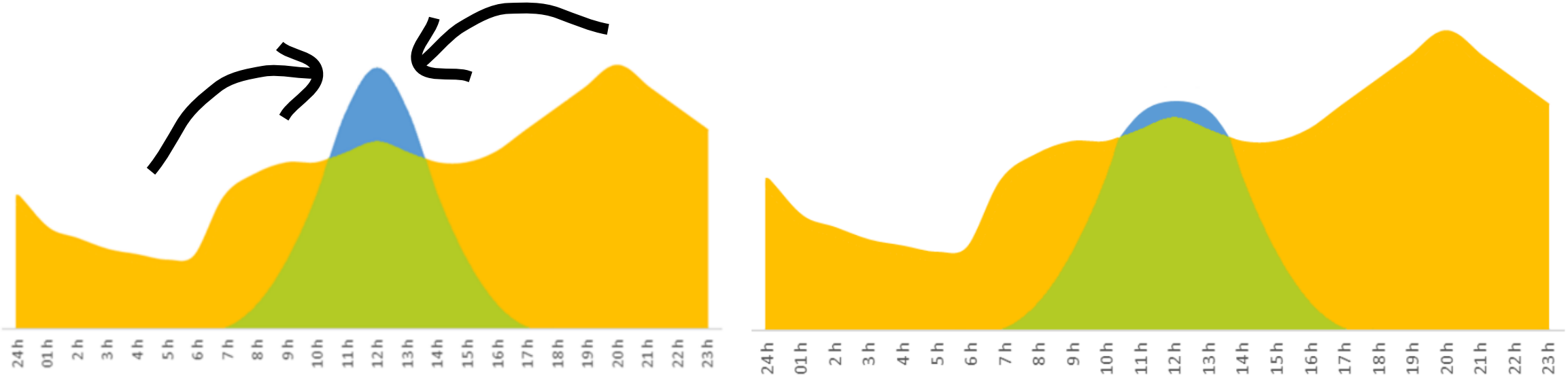


Produção distribuída  
por cada participante  
pela EGAC, *ex post*

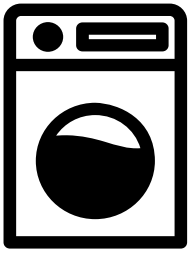
# Maximizing Self-Consumption



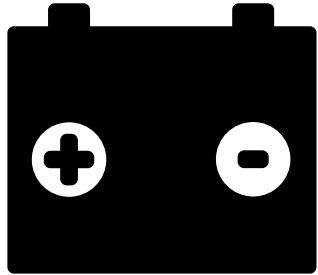
# Maximizing Self-Consumption: How ?



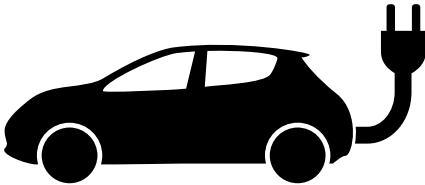
ON



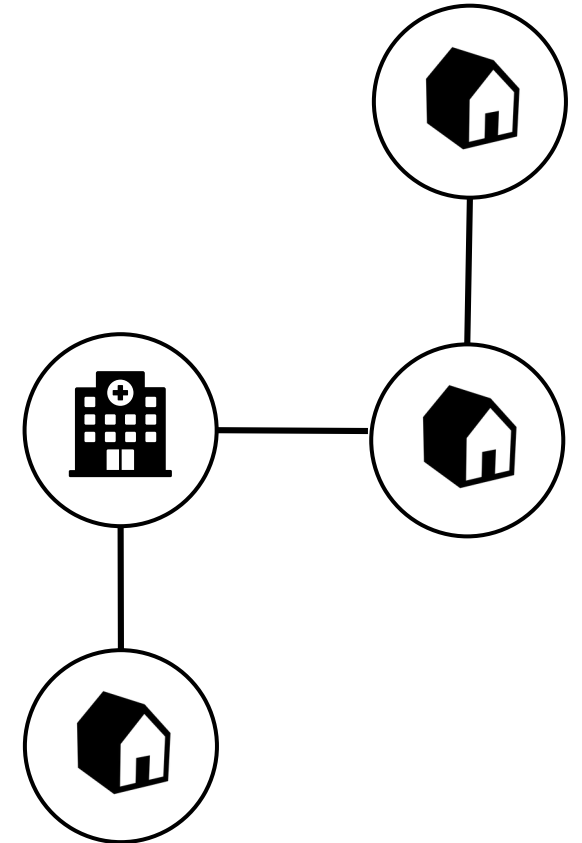
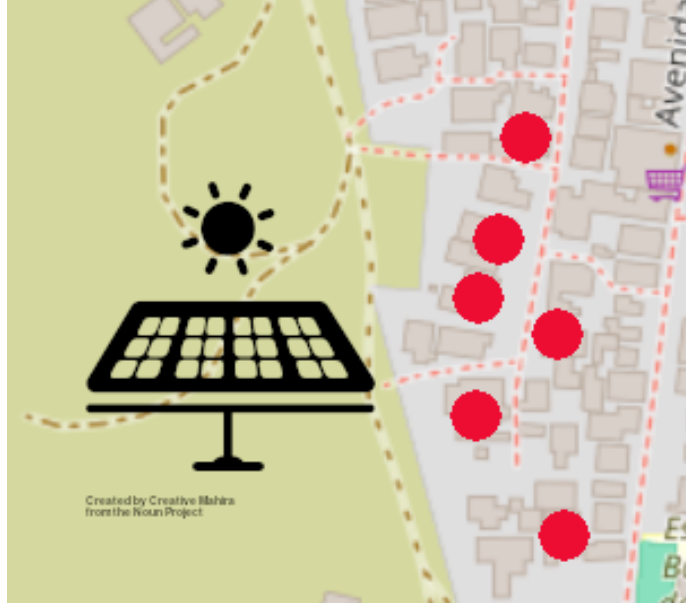
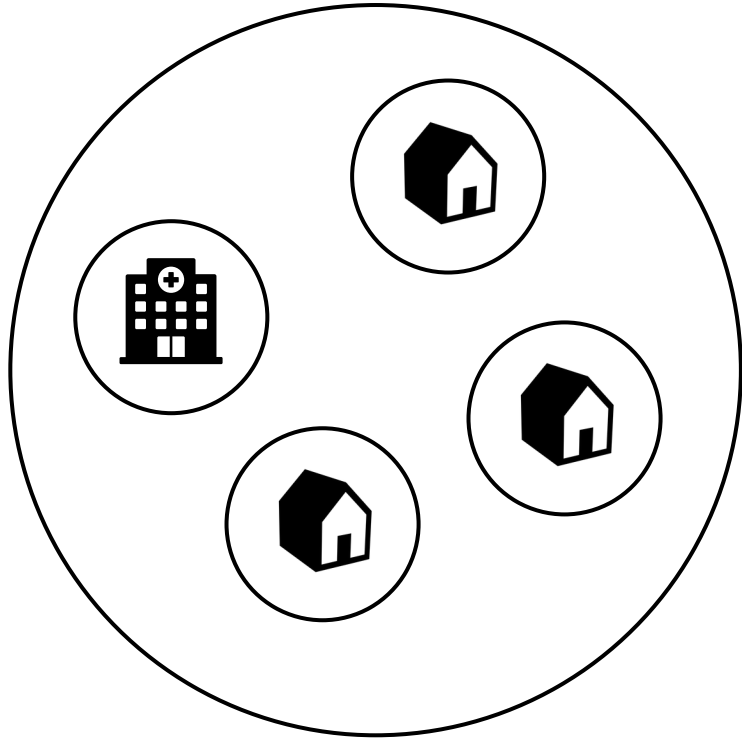
CHARGE



CHARGE



# Maximizing Self-Consumption: How ?



# Projects



# Projects



**HYPERION (Athens, Grécia)**  
First Energy Community in Athens  
(Electra Energy Coop)

# Projects



## REPOWERING LONDON (UK)

Support for the creation community energy projects on social housing

**COOPERATIVA DE CAR-SHARING (Bélgica)**  
E-car sharing cooperative founded in 2015 operating a fleet of 74 electric cars. Also uses a cooperative management platform





# Projects



## **Aldeia de São Luís (Alentejo):**

120kW system: 75k€ from participatory budget (kindergarten, school, public buildings)

**Ilha da Culatra (Algarve):**  
Pilot project involving university, municipality, local association





## BAIRRO DE TELHEIRAS, LISBOA

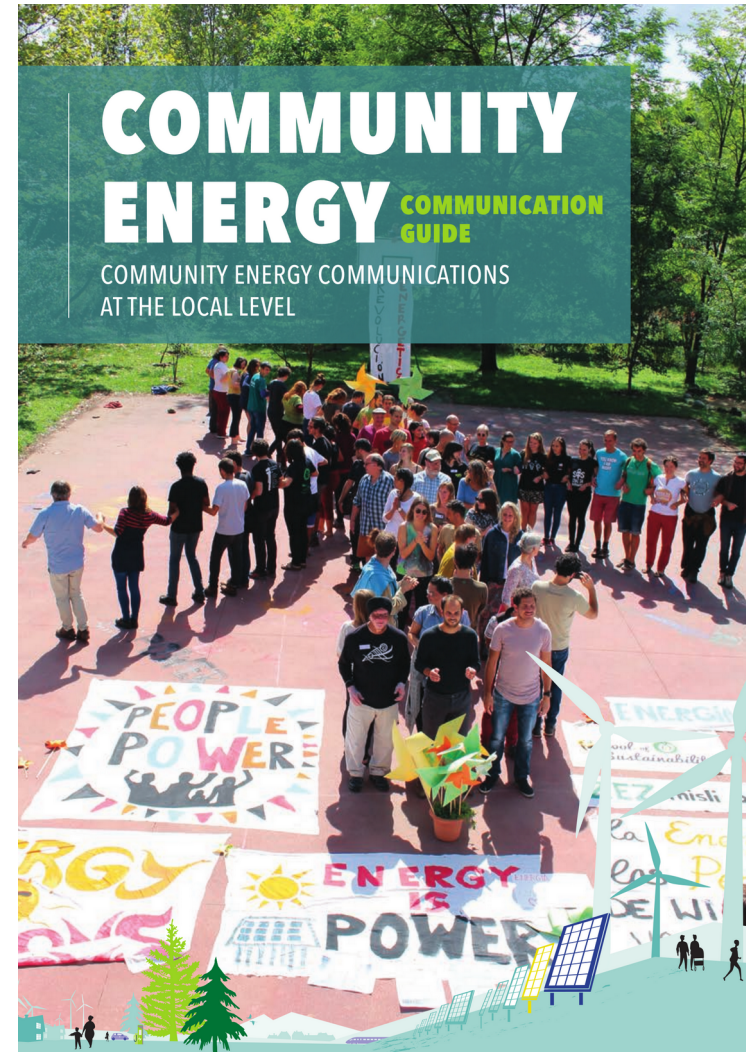


Localização do bairro de Telheiras em Lisboa, Portugal



A Parceria Local de Telheiras junta mais de 20 entidades locais desde 2013

# Practical guides



# Thank you !

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