



ELECTRA ENERGY.



Collective self-consumption:

a practical community energy model for tackling energy poverty

TRECE, European Conference 21st of December 2021

Chris Vrettos / Dimitris Kitsikopoulos

<http://electraenergy.coop>



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ΚΑΛΟ





Research

Advocacy

Project
Development

Capacity
building



Directive RED II

(2018 / Clean energy package)



Law 4513,2018

(Energy communities)



ELECTRA ENERGY.

Activities

Sell energy

Energy saving

Distribution

Energy supply

Energy Storage

Capacity building / education / consulting

Electric mobility

Self-consumption



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Law 4513,2018

(Energy communities)



**COLLECTIVE
SELF-CONSUMPTION
MODEL**

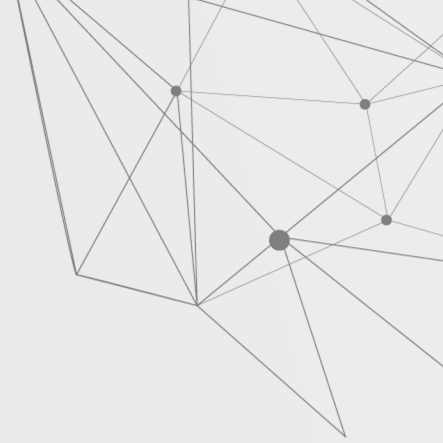
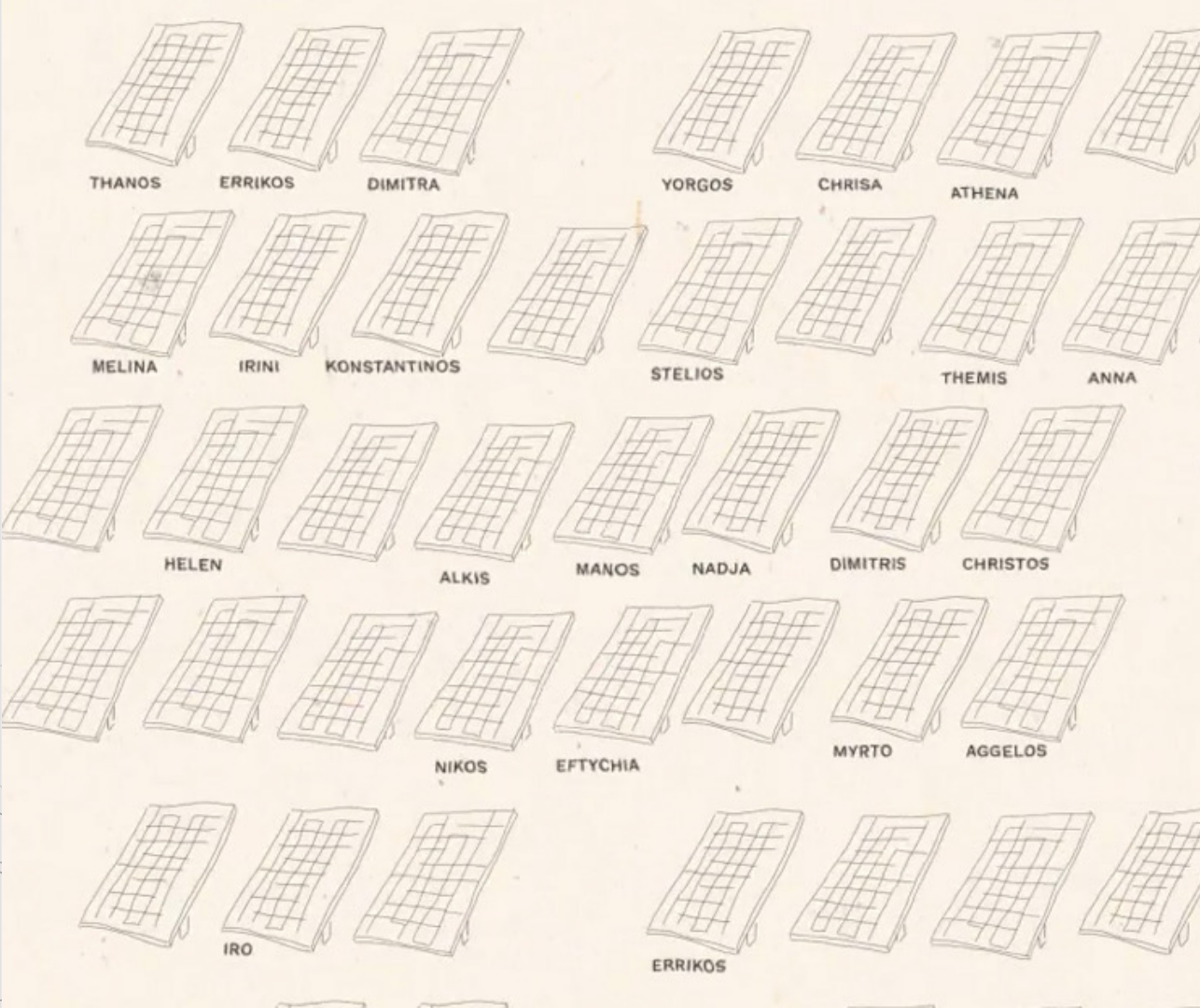


ΦΕΚ Β' 759, 2019

(Virtual Net-metering)



ELECTRA ENERGY.



**Collective
self-
consumption
model**



1000 KWH
CONSUMED THIS MONTH



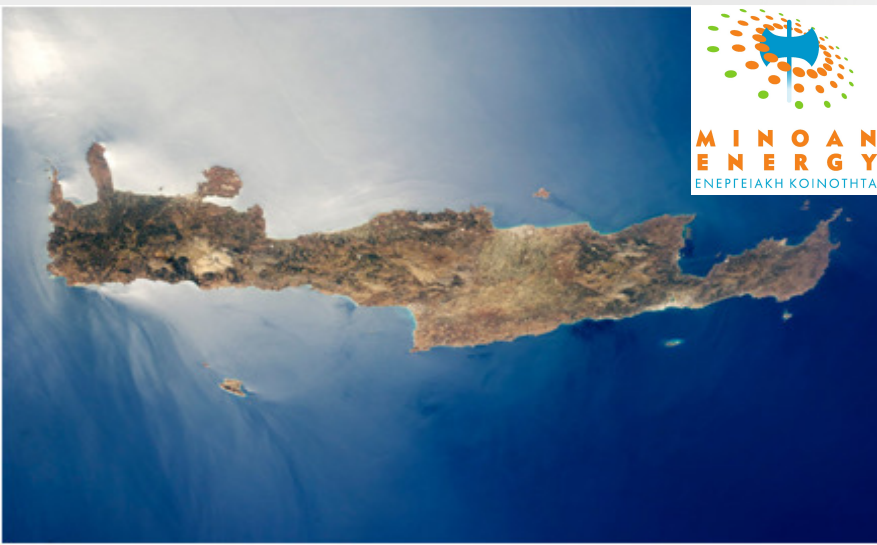
YOUR SHARE
PRODUCED
800 KWH



GENERATED
+800 KW

YOU ARE
BILLED FOR
200 KWH
INSTEAD OF
1000 KWH





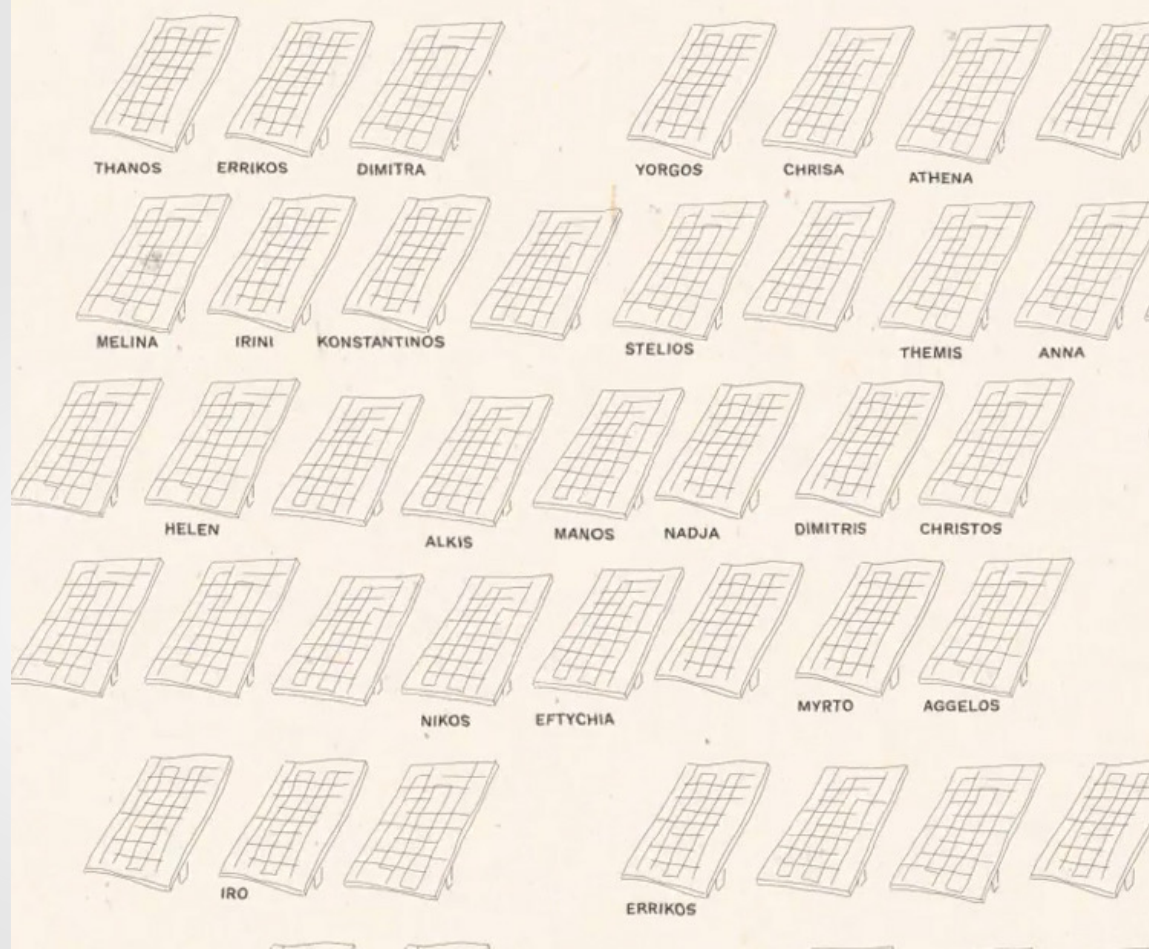


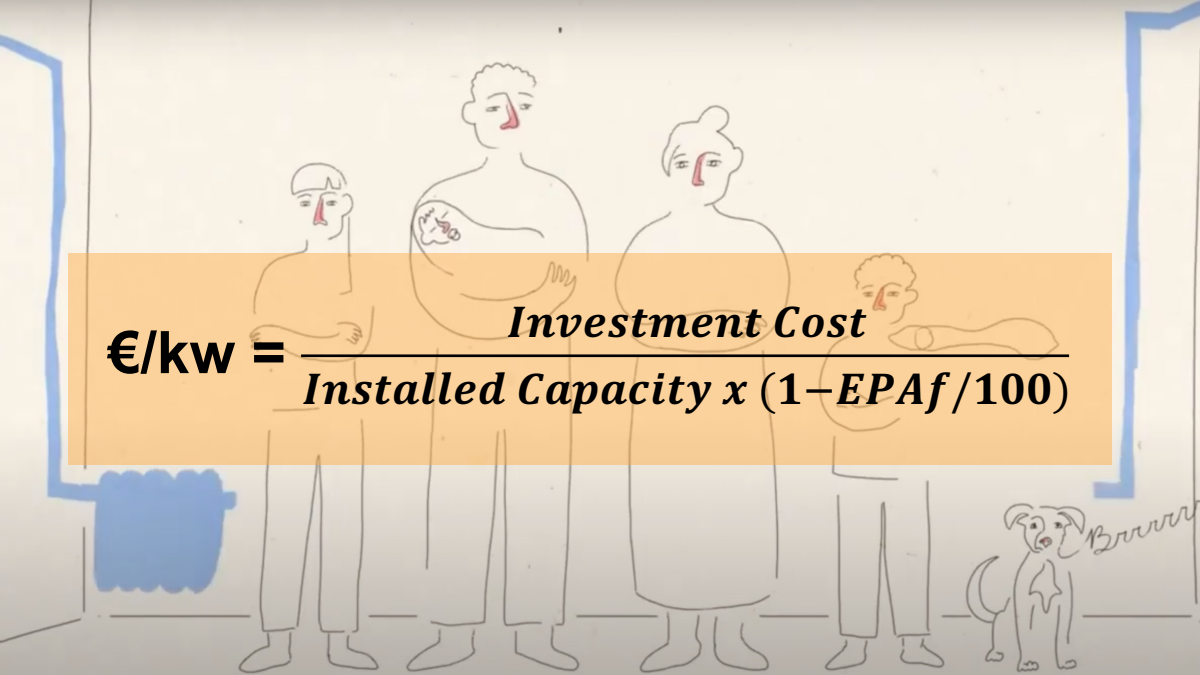
Social impact: Tackling energy poverty !

**My flat: 4.500 kWh
/ 1.500 = 3kW**

**I need 3kW, out of
the 500kW = 0,6%**

Cost = 3kW x €/kw





$$\text{€/kW} = \frac{\text{Investment Cost}}{\text{Installed Capacity} \times (1 - \text{EPAf}/100)}$$

SCENARIO 1: EPAf = 0

$$\text{€/kW} = \text{€800}$$

The cost for me: €2.400

Vulnerable families supported = 0

SCENARIO 2: EPAf = 2

$$\text{€/kW} = \text{€800} + 16 = 816$$

The cost for me: €2.448

Vulnerable families
supported \approx 3 to 4 /
supported by 125 families

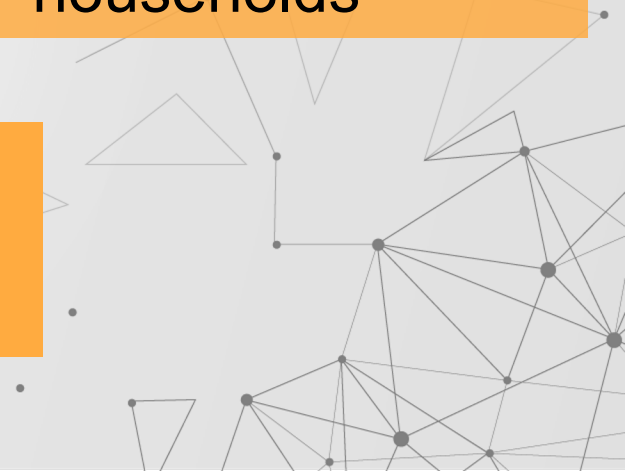
Energy Poverty
Alleviation Factor

- Hyperion: EPAf = 2
- Vulnerable households can be beneficiaries without being members

Energy Communities and energy poverty

- Lack of energy poverty definition
- Energy Communities can identify and support vulnerable households

Public funding for the EPAf (?)





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