



Local Governments
for Sustainability

EUROPE

Energy Communities

What makes them “just”?

Arthur Hinsch

Climate Policy & Energy Governance

ICLEI Europe



What is it?

- 1 What makes a transition „just“?
- 2 What makes energy communities „just“?
- 3 Is it because they rely on a sense of community?
- 4 Is it because they lower energy costs and are non-profit orientated?
- 5 Is it because they provide local economic benefit?
- 6 Is it because they receive public subsidies?
- 7 Is it because they create jobs?
- 8 So?

What makes a transition „just“?

“The people will not unite behind science - they will unite behind justice.”

- Éloi Laurent 2019

SUSTAINABLE AND JUST CITIES



| | | |
|---|---|--|
| <i>Distributional justice</i> speaks to costs, responsibilities, and benefits being spread equally across society | <i>Procedural justice</i> speaks to inclusive access to decision-making processes | <i>Recognition justice</i> speaks to recognition of everyone’s equal dignity |
|---|---|--|

What makes an energy community „just“?

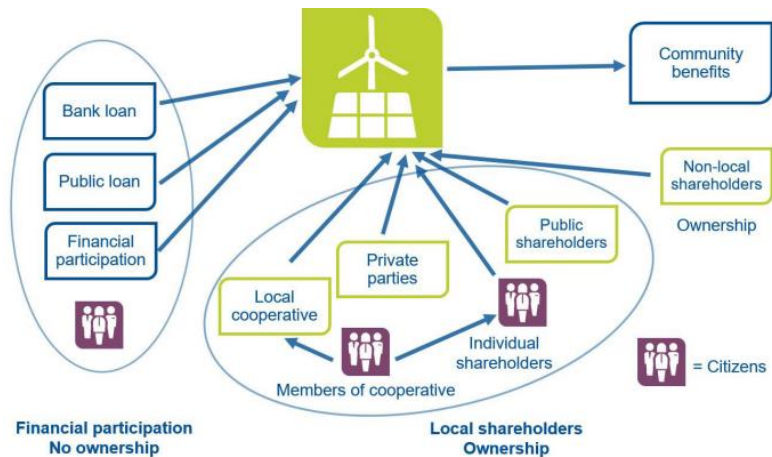


Figure 1: Different types of participation in a renewable energy project. Blue = financial participation without ownership; Green = ownership by different types of shareholders

[COME RES 2021](#)

SIMILAR ACTIVITIES

'Citizen energy communities' & 'Renewable energy communities' can exercise similar activities:

- Generation
- Aggregation
- Energy storage
- Distribution
- Consumption
- Provision of energy related services
- Supply
- Sharing

NOTE: Communities and community members must comply with the same obligations as other market participants

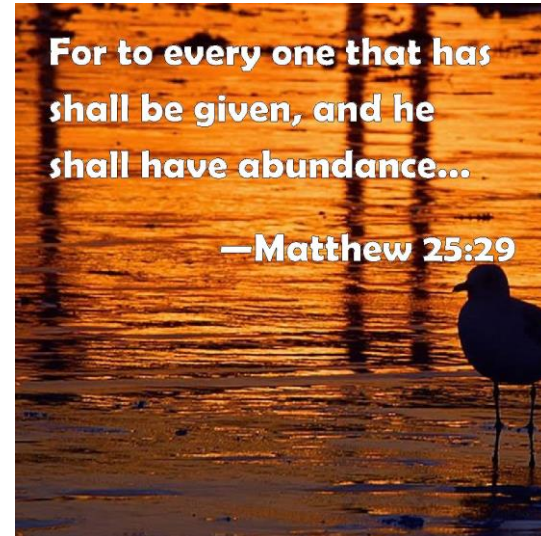
[RECAH 2023](#)

Is it because they provide local economic benefit?

Who is the citizen in „citizen-led“?

Who is the community in “community-driven”?

But also more local renewables
(and acceptance?)



**For to every one that has
shall be given, and he
shall have abundance...**

—Matthew 25:29

https://biblepic.com/45/matthew_25-29.htm

Is it because they rely / foster a sense of sense of community?

Two definitions of energy communities

'Citizen energy communities' – Directive (EU) 2019/944 - (Electricity cover)

'Renewable energy communities' – Directive (EU) 2018/2001 – (Renewable energy cover)

Common elements under both definitions:

GOVERNANCE

"Participation must be open and voluntary" (renewable energy directive)

"Households should find it easy to both enter & leave the energy community" (Electricity directive)

OWNERSHIP & CONTROL

Both definitions emphasise participation and effective control by citizens, local authorities & smaller businesses whose **primary economic activity is not the energy sector!**

PURPOSE

Their PRIMARY purpose is to generate social & environmental benefits rather than focus on financial profits.

SIMILAR ACTIVITIES

'Citizen energy communities' & 'Renewable energy communities' can exercise similar activities:

[RECAH 2023](#)

Your Region. Your Electricity.

- What if the affected territories could continue maintaining their shared identity as energy producers (with their strong social fabric), while at the same time still pursuing a more sustainable and just transition?

Is it because they lower energy costs and are non-profit orientated?

There are many ways to lower an energy bill...

energy communities are one possible option

Can energy communities, reliably lower energy bills while still ensuring an acceptable return on investment to investors?

Is it because they receive public subsidies?

- Special citizen energy fund – Schleswig Holstein, Germany
- Community Energy Fund – Devon County, United Kingdom
- Special funding for small municipalities supporting RECs – Italy
- EU Energy Communities Facility

Is it because they create new jobs?

Community volunteer
work or unpaid labour?

- In areas with high unemployment, it might be wiser to deploy energy communities in a top-down manner e.g. via municipalities rather than primarily expecting citizens to do this themselves.

So?

- The **socio-economic environment** of JTF territories presents a rather unique opportunity to encourage the promotion of the concept of energy communities in environments with different starting conditions.
- Next to progress with regulatory enabling frameworks, **differences in cultural experiences, income levels and volunteering readiness** should all be factored in to facilitate the **broad spectrum of energy communities** in a manner which makes them a fundamental and justified part of just transition strategies.

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[@ICLEI_Europe](https://www.whatsapp.com/channel/0123456789)



[@ICLEI_Europe](https://twitter.com/ICLEI_Europe)



[ICLEI_Europe](https://open.spotify.com/playlist/123456789)



*Bioeconomy & Environmental Cluster
Western Macedonia*

Yannis Fallas
Director

ICLEI – CoM – CINTRAN, 5.7.2023

The Region of Western Macedonia - Greece

- Pop. ~284.000 inh.
- 13 Municipalities
- Regional GDP PPS EU-28 avg: from 83% (2006) to 59% (2017)
- Unemployment 27,1% (2019), > 50% among youth
- Continental climate
- Mountainous, the only Greek Region without sea coast...



But lots of lakes and rivers, even snow...!



Pindos National Park "Valia Kalda"



Bridge over Aaos River



Kozani Central Square



Vasilitsa Ski Resort



Energy Sector in Western Macedonia – PPC

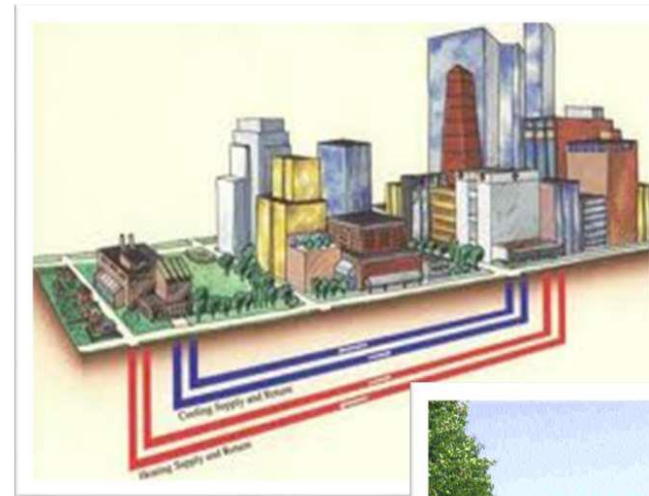


- 4 large lignite mines 40 Mtns / yr
- \approx 75% total GR MWeI
- \approx 12,5% from lignite (March 2020)
- \approx 20% regional working force
- > 200 cooperating SME's



Energy Sector in Western Macedonia – District Heating

3 / 5 DH in the country
3 / 4 municipal DH



Decarbonisation of the Energy Sector in Western Macedonia

Challenge
Lignite plants
decommissioning by 2023
Except 1 Unit in 2028



Photo credits: Lampranidis Christos

Renewable resources in Western Macedonia



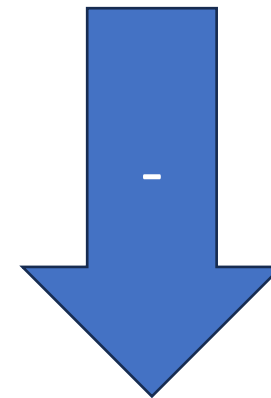
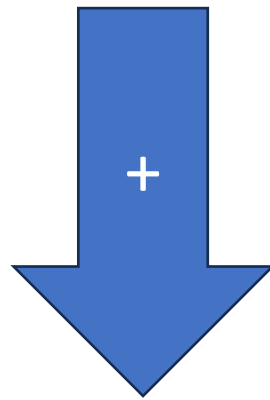
Kozani's Energy Community



Kozani's Energy Community

The first Energy Community to cover municipal energy needs through virtual net-metering.

Kozani's Energy Community



Virtual Net Metering

Kozani's Energy Community: main features



City population: 70K

Energy source : 7MW photovoltaic park

Energy production : 10.500 MWh/yr

Consumption covered:

Municipal buildings (schools – public lighting – pumping stations)

CO₂ avoided: 2.704 tn/yr

Method: Energy virtual net – metering (3-year balance)

Kozani's Energy Community: main features



Members :

Municipality of Kozani

DEYAK SA (Water Supply and Sewerage Municipal Company of Kozani)

OAPN (Sports, Culture and Youth Organization of the Municipality of Kozani)

DIADYMA SA (Waste Management of Western Macedonia S.A.)

KMLK (Koventarios" Municipal Library of Kozani)

BIOPAK S.A (Kozani's Industrial Park Management Company)

Primary and Secondary Education Schools

Other municipal buildings

Kozani's Energy Community: main features



Budget : ≈ 6,3 M €

Funding: Pending (EIB, National, Structural Funds, Just transition, etc)

Land : Own Municipal

Status : On Going

Plan B: Power Purchase Agreement PPA...

Kozani's Energy Community



Exemplary role

Climate Neutral and Smart City by 2030



Κλιματικά Ουδέτερη
& Έξυπνη Πόλη

A few words on CluBE



Western Macedonia, Greece

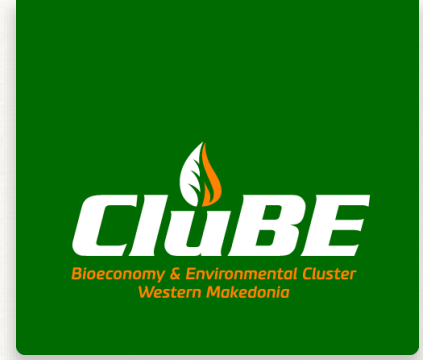
Bioeconomy and Environment Cluster – CluBE

- Formally established (2014)
- Not for profit company
- Bottom-up approach

<https://clube.gr>

**Development of common business and R&D in the fields of
Bioeconomy and Environment
Mobilize resources to bridge the gap**

Areas of Activity



Energetic exploitation of **biomass** and other **RES** for District Heating and industrial, commercial and domestic use

Development of the **green hydrogen economy** for storage and transport

Promotion of **Bioeconomy** as a major decarbonization pillar for the regional economy

Organizing local **biomass supply chains**

Increasing the share of **biofuels in the energy mix** of transportation fuels

Optimization of heating systems

Biomass development (energy **plantations**, forest management, certif. schemes, etc.)

Energy **efficiency** in industry, services, households / collective models

Cooperation models (ESCO's, energy cooperatives, ...)

Promote the concepts of **smart cities and villages**

CluBE Members: a rich ecosystem with more than 50 Quintuple Helix Members

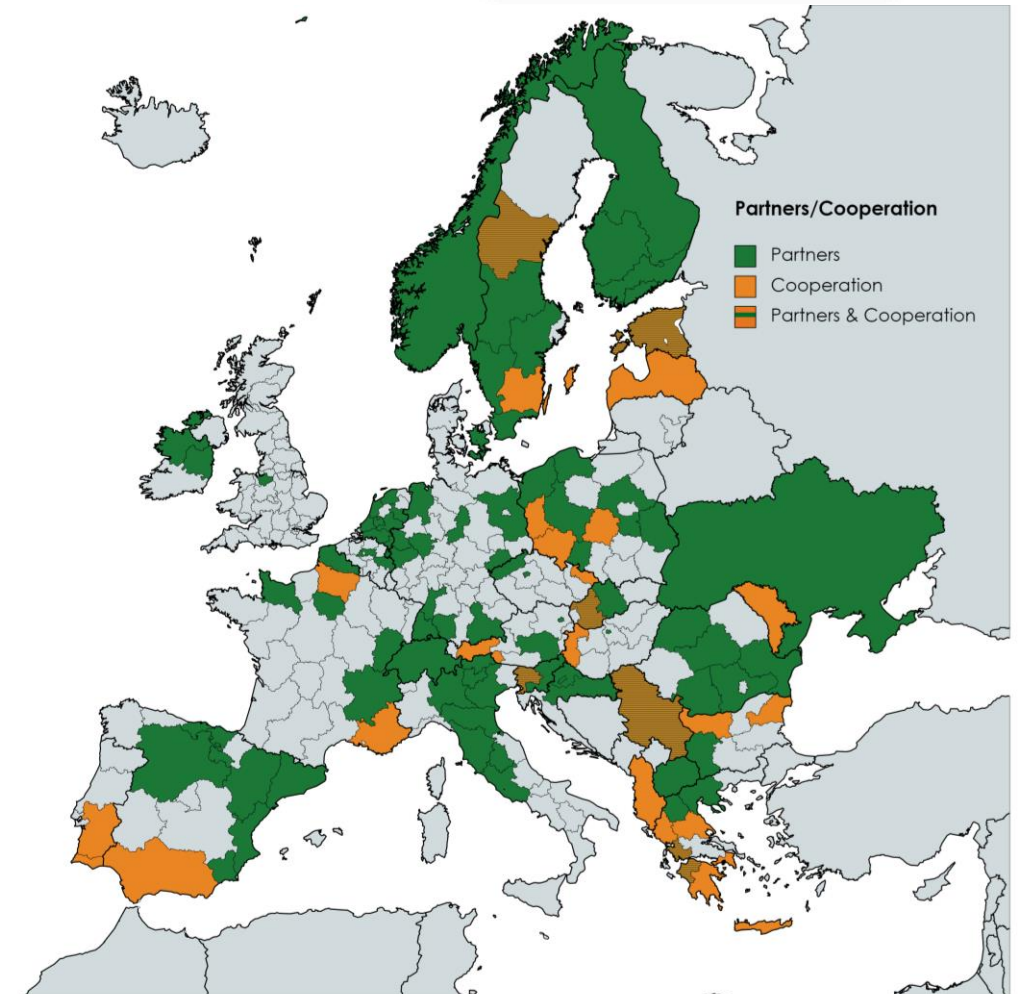


- Public sector
- R&D
- SMEs
- Environment
- Social

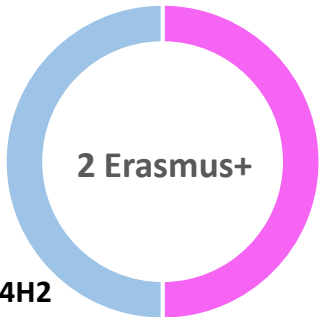
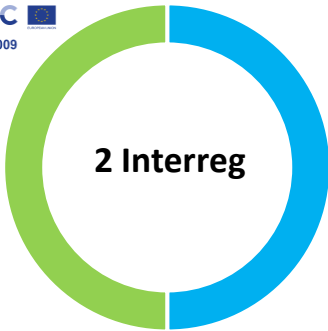
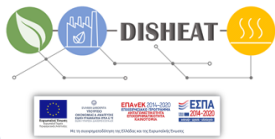
CluBE main target: EU added value!



- Greenovate! Europe – Full member 
- European Bioeconomy Stakeholders Panel – DG RTD European Commission – Member 
- Biobased Industries Consortium (BIC) – Associate Member 
- European Clean Hydrogen Alliance – Member 
- Innovawood – Full member 
- Hellabiom (Hellenic Biomass Association) – Full member 
- Fuel Cells and Hydrogen Joint Undertaking (FCH JU) – Hydrogen Valleys Partnership – Member 
- European Circular Economy Stakeholder Platform – Leadership Group Member 
- ENRD Mainstreaming the Bioeconomy Thematic Group – Member 
- S3 Bioenergy Partnership – Member 
- Greek Bioeconomy Forum – Founding member 
- Local Governments for Sustainability – Member 
- Hellenic-German Chamber of Commerce and Industry 
- American-Hellenic Chamber of Commerce 



CluBE - Project Portfolio

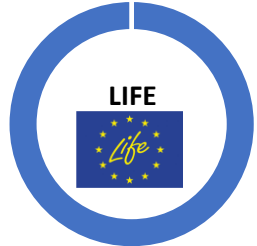
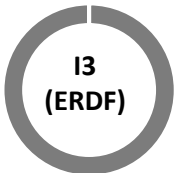
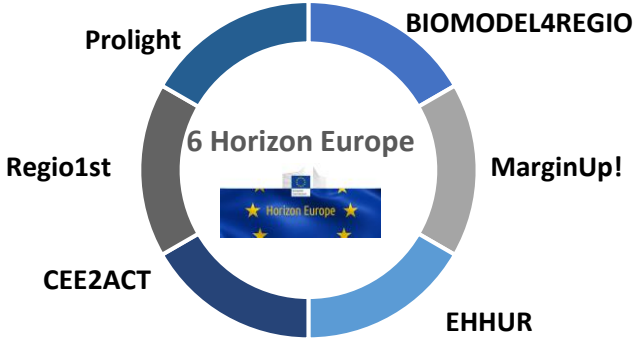
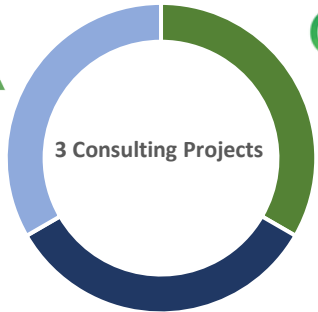


SEED

GreenSkills4H2

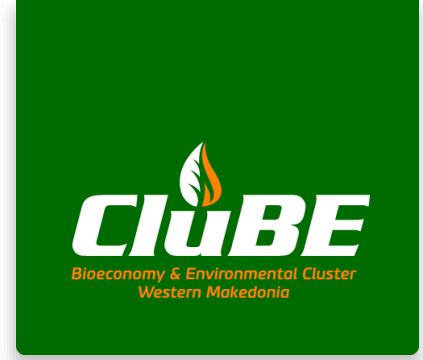


Training and counseling program "Agrocircularity"



Hy2Market

Regio1st



Hydrogen

- White Dragon (IPCEI)
- Just Transition Fund (Prasino Tameio) – Use of sewage sludge for Hydrogen production

100 Climate Neutral Cities

- Kozani local alliance for Climate and Smart City

Digital Innovation Hub

- Core member of the Consortium

Strategic Projects 2



Circular Economy

- Circular Economy Park for Western Macedonia

National Centre for Knowledge in the Energy sector

- Member of the consortium selected

Bioeconomy

- Biorefinery
- Mobile extraction unit for aromatic residues

Energy Efficiency

- Financial Innovative Processes for Energy Efficiency (PDA)

Key take away message



There is life after Coal

CluBE



Thank you for your
attention !!!!

The background of the slide is a scenic landscape photograph. It shows rolling green hills under a blue sky with scattered white clouds. In the foreground, a small pond is visible, with a single tree standing on its bank. The lighting suggests a bright, sunny day, with the hills and trees appearing vibrant green.



*Bioeconomy & Environmental Cluster
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Energy communities as coping strategies?

Roberto Cantoni, Marie Claire Brisbois, Laur Kanger, Benjamin K. Sovacool

Promoting energy communities for a just transition?, ICLEI webinar

5 July 2023

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Unravelling the Challenges
of Structural Change

We have mapped coping strategies to see if we can draw effective ways to move transitions forward.

Work to date has focused on the 4 CINTRAN regions. Data for the coping strategies inventory was collected through:

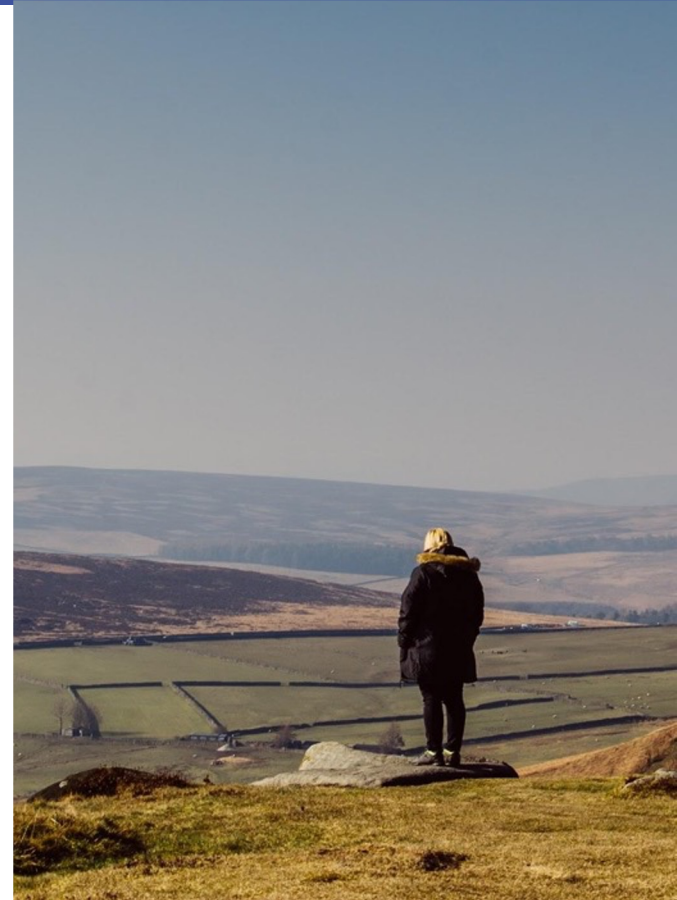
- **Analysis of national and regional newspapers, government and institutional reports, policy documents, and academic articles**
- **Key informant interviews**



Characterizing coping strategies

Strategies are aggregated from individual coping “actions” and are classified according to:

- **The actor or group doing the coping**
- **The direct trigger for action**
- **Whether the action attempts to *resist, adapt or transform***
- **Whether an action is *symbolic or functional***
- **The impact or “success” of the action, including:**
 - **Time frame for impact**
 - **Contribution to global decarbonization**
 - **Scale of impact**
 - **Main actors targeted**



- **They seek to preserve current conditions and resist drivers of change**





- **They attempt to protect the functioning of the existing system from substantial change**

Transformation strategies

cintran

- **They challenge the stability of the existing system by introducing fundamentally new ways of thinking, acting, doing and organising**



Energy communities

The development of local, community-owned energy projects



Energy communities are renewable energy generation, storage or distribution projects that are owned and controlled by members of the local community, and sometimes the local government. This transformative strategy reorganises relationships of energy generation and ownership; profits from community energy projects are usually either distributed to local participants, or are used for the benefit of the local community. Energy communities can be formed around solar or wind or other renewable generation assets, battery or other storage resources, microgrids, or other renewable energy services.

Starting an energy community requires significant upfront investment. However, municipalities and community groups in former coal regions sometimes see community energy projects as a way to regain control over some of the energy, and its economic benefits, that have traditionally been associated with their regions. It is largely citizens, small groups, and local governments who engage in this strategy.

Many existing energy communities in Europe are not a direct result of decarbonisation policy. However, as transitions progress, they are increasingly viewed as an effective strategy to address issues of social and economic deprivation in transitioning coal-intensive regions.

Keywords

#energy community #Greece
#new economies #solar #transform #wind

Actors

#Citizen groups #Local government
#Regional Government
#Renewables industries #Solar companies
#Think tanks #Universities
#Wind companies

Actions

Establishing an energy community

Related Strategies

Investing in renewables

Sample Actions

Establishment of an energy community in Western Macedonia (Greece)

STRATEGIES (30)



Sending letters to decision-makers

Individual or joint letters to attempt to influence policy or business decisions

#adapt #Germany #grassroots strategies #lobbying #resist #Spain
#Citizen groups #Fossil fuel companies #Local government #National government #NGOs
#Private citizens #Regional Government #Unions



Repurposing former fossil fuel sites

Converting former coal or oil shale sites for other energy or industrial uses

#adapt #biomass #coal #company operations #Estonia #geothermal #Hungary
#jobs and employment #plant or mine closure #renewables #solar #transform
#EU level #Fossil fuel companies #National government



Regional or local investment plans

Government plans to re-develop regional or local economies

#Hungary #new economies #plant or mine closure #Slovakia #transform
#Local government #National government #Regional Government



Public consultations

Meetings, surveys or questions to gather public input on decisions

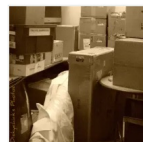
#adapt #biomass #coal #Czech Republic #district heating #energy storage #gas #geothermal
#Greece #hydrogen #participatory strategies #renewables #solar #wind
#Citizen groups #Local government #National government #NGOs #Private citizens
#Regional Government



Publication of energy transition studies

Research into energy transition options

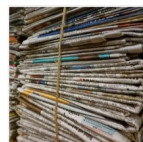
#adapt #education and research #Greece #Slovakia #transform
#Consultancies #NGOs #Think tanks #Universities



Outmigration and worker relocation

Migration because of a lack of local employment opportunities

#adapt #Estonia #jobs and employment #just transition fund #outmigration and worker relocation
#Poland
#Fossil fuel workers



Newspaper op-eds and opinion pieces

Ideas, activities and opinions expressed through the media

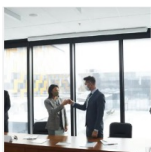
#adapt #biomass #Bulgaria #Czech Republic #district heating #energy storage #geothermal
#Germany #hydrogen #renewables #resist #solar #transform #wind
#Citizen groups #Fossil fuel companies #Local politicians #National politicians #NGOs
#Private citizens #Regional politicians #Renewables industries #Scientists #Unions



New partnerships

New relationships or collaborations

#adapt #Germany #grassroots strategies #new economies #participatory strategies #Poland
#resist #transform
#Citizen groups #Fossil fuel companies #Local government #National government #NGOs
#non-energy firms #Regional Government #Renewables industries #Unions
#Universities & think tanks



Meetings with government ministers

Elite meetings to discuss transition pathways

#adapt #Germany #government policies #Greece #lobbying #resist #transform
#EU level #Fossil fuel companies #Local government #National government #NGOs
#Regional Government #Renewables industries #Unions #Universities & think tanks



Investing in batteries and energy storage

Infrastructure for battery production and other energy storage facilities

#Czech Republic #Hungary #new economies #transform
#Car manufacturers #Fossil fuel companies



Investing in gas

Replacing coal or oil with gas to reduce emissions

#company operations #gas #Hungary #resist #Spain
#Fossil fuel companies #National government #non-energy firms



Creation of non-energy industries

Development of non-energy industries

#Greece #Hungary #hydroponics #new economies #petrochemical #renewables #transform
#Consultancies #Local government #National government #NGOs #non-energy firms
#Regional Government #Think tanks #Universities



Company restructuring

Fossil fuel company restructuring to cope with decarbonisation policy

#adapt #coal #company operations #jobs and employment #oil shale #renewable
#Fossil fuel companies #Fossil fuel workers



Creation of creative or cultural initiatives

Investing in tourism and creative industries

#creative industries #Czech Republic #Greece #new economies #tourism #transform
#Local government #National government #NGOs #non-energy firms #Regional Government
#Universities & think tanks



Creation of R&D centres

New initiatives for research, development and innovation

#adapt #batteries #biomass #Czech Republic #district heating #education and research
#electric vehicle #energy storage #government policies #Greece #hydrogen #jobs
#new economies #petrochemical #transform
#EU level #Local government #National government #Regional Government
#Universities & think tanks

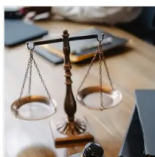


Maintaining fossil fuel infrastructure

Government policies and funds aimed at keeping carbon-intensive infrastructure open for as long as possible

#adapt #Bulgaria #coal #company operations #plant or mine closure #resist #Spain
#Fossil fuel companies #National government #Unions

Identified strategies



Litigation

Use of lawsuits to pressure against decarbonisation activities

#coal #Germany #plant or mine closure #Poland #resist #wind
#Citizen groups #Fossil fuel companies #NGOs #Private citizens



Workers strikes and sit-ins

Workers strikes and sit-ins to protest decarbonisation actions

#blockades #coal #plant or mine closure #Poland #protest rallies #resist #Romania #sit-ins
#Spain
#Fossil fuel industry unions #Miners



Just Transition Fund allocations

Government allocation of funds approved by the EU from the EU Just Transition

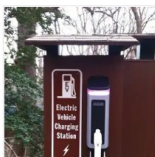
#adapt #Czech Republic #government policies #jobs and employment #just transition
#new economies #Spain #transform
#EU level #Local government #National government #Regional Government



Protests and blockades

Grassroots or union actions taken to protest policy decisions

#blockades #coal #Greece #meeting with government ministers #plant or mine closure #Poland
#protest rallies #renewables #resist #sit-ins #wind
#Citizen groups #Fossil fuel workers #NGOs #Unions



Electric vehicle investments

Investments in electric vehicles and electric vehicle infrastructure

#adapt #electric vehicle #Germany #Hungary #new economies #transform
#Car manufacturers #EU level #Fossil fuel companies #Local government #National
#Regional Government #Renewables industries



Investing in hydrogen

Development of strategies or plans to produce or use hydrogen

#adapt #Czech Republic #hydrogen #new economies #Spain #transform
#Fossil fuel companies #Hydrogen companies #National government #Regional Government



Education initiatives for energy transition

Education and vocational programs to help people develop skills for the energy transition

#adapt #education and research #Estonia #just transition fund #new economies #transform
#Local government #National government #Regional Government #Universities
#Universities & think tanks



Plant or mine closure

Closure of fossil fuel plants or mines

#adapt #coal #company operations #Czech Republic #plant or mine closure #Spain
#EU level #Fossil fuel companies #Fossil fuel workers #National government #Unions



Meetings, conferences and summits

Meetings to discuss transition pathways and processes

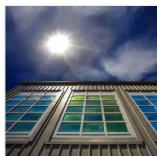
#adapt #Estonia #participatory strategies #Slovakia #transform
#Citizen groups #Consultancies #EU level #Fossil fuel companies #Fossil fuel workers
#Local government #National government #NGOs #Regional Government #Renewables i
#Think tanks #Unions #Universities



Collaborative processes

Deliberative, participatory and consensus-oriented processes

#adapt #participatory strategies #transform
#Fossil fuel companies #Local government #National government #NGOs #non-energy firms
#Regional Government #Unions



Energy efficiency improvement measures

Measures to reduce energy consumption, and reduce associated energy costs

#adapt #energy efficiency #Germany #Greece #transform
#Energy efficiency firms #Local government #National government #Private citizens
#Renewables industries



Investing in renewables

Planning and funding solar, wind, geothermal, biomass, or hydro, and district heating

#adapt #biomass #Czech Republic #geothermal #Germany #Greece #Hungary #Poland
#renewables #Romania #solar #Spain #transform #wind
#Fossil fuel companies #Local government #National government #Regional Government
#Renewables industries



Energy communities

The development of local, community-owned energy projects

#energy community #Greece #new economies #solar #transform #wind
#Citizen groups #Local government #Regional Government #Renewables industries
#Solar companies #Think tanks #Universities #Wind companies



Employee supports

Support packages or opportunities offered to redundant fossil fuel workers

#adapt #jobs and employment #just transition fund #retraining #Romania #transform
#Fossil fuel companies #Fossil fuel industry unions #Fossil fuel workers #Local government
#National government #Regional Government

Establishment of an energy community in Western Macedonia (Greece)



<https://www.pexels.com/de-de/foto/fokusfoto-von-4-holzernen-bauernfigur-209728/>

In July 2020, the former mayor of Kozani, Eleftherios Ioannidis, suggested citizens of the commune of Mavrodendri (Kozani province) set up their own initiative for the production of energy from renewable energy sources. In March 2021, a non-profit energy community was established. Its goal is to promote social and solidarity economy in the field of energy and energy sustainability, production, storage, self-consumption, distribution and supply of energy, as well as improving end-use energy efficiency at local and regional level.

Spreadsheet

We are still analysing and publishing from this dataset. It will be available in full from the project end date in April 2023. If you are interested in the database before that date, please email [m.c.brisbois\[at\]sussex.ac.uk](mailto:m.c.brisbois[at]sussex.ac.uk) to discuss usage.

Keywords

#energy community #Greece
#new economies #solar #transform

Actors

#Citizen groups #Renewables industries
#Solar companies

Related Strategies

Investing in renewables

*Law N4513/2018
defines energy
communities as urban
partnerships with the
aim of strengthening
the sharing economy
and innovation in the
energy sector*

Growing popularity

- **>3,500 ECs in Europe (Gjorgievski et al., 2021); 1,900 (REScoop)**
- **Various stated aims**
 - **Improving social justice (& reducing energy poverty)**
 - **Making profit from selling to grid**
 - **Community empowerment**
 - **Improved sustainability**
- **Contextual obstacles: legal/regulatory, social, structural, economic, political, commercial, communication**



database?

Limits of the study

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Hmm, we couldn't find that one

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- **Germany: saturation effect?**
- **Poland, Greece, Estonia: too recent to appear in the database (which stops at Dec. 2021)**
- **Database is regional, not national, so the absence we report relates to the studied regions, not the whole country**
- **Some community energy initiatives are not categorised as ECs**

What is and what is not an EC?

- **Renewable Energy Directive (EU) 2018/2001 sets the framework for ‘renewable energy communities’**
- **Internal Electricity Market Directive (EU) 2019/944 introduces new roles and responsibilities for ‘citizen energy communities’ in the energy system covering all types of electricity**
- **Some examples of community energy initiatives may not fully comply with the definitions of citizen ECs and renewable ECs**
- **E.g., German EWS, Polish ZEP**



Thank You

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