Changing the future of energy: civil society as a main player in renewable energy generation

EESC Study

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Changes in the EU, decided by politicians, f.e. ... 

   → by 2020, 20% of the energy within the EU has to be generated by renewables

• ... in 2014, the “EU 2030 climate and energy package”:
   → at least -40% GHG-emission, 27% renewables by 2030

• ... Juncker: Europe should become Nr 1 in RES in the world
The EU directive on RES (2009)

- national binding targets for renewables, in total EU-wide 20% by 2020; and the EU will succeed!

- Includes some statements on the benefits of the energy transition and on “players”

- today: a few “big player” (in Germany: 4, in France: 1) producing electricity in centralized power plants. Role of consumer: buying and paying. But what about the future?
Background: Preamble of the EU directive on RES (2009)

• (3) ... **Production** of energy **from renewable sources** often **depends** on **local or regional small and medium-sized enterprises (SMEs)**.

The **opportunities for growth and employment** that investments in regional and local production of energy from renewable sources bring about in the Member States and their regions are **important**. ...
Background: Preamble of the EU directive on RES (2009)

- (3) ... the Commission and the Member States should therefore **support national and regional development measures** in those areas, encourage the exchange of best practices in production of energy from renewable sources between local and regional development initiatives and promote the use of structural funding in this area.
(6) .... The move towards decentralised energy production has many benefits, including the utilisation of local energy sources, increased local security of energy supply, shorter transport distances and reduced energy transmission losses. Such decentralisation also fosters community development and cohesion by providing income sources and creating jobs locally. (…)
• (43) .... In order to **stimulate the contribution by individual citizens** to the objectives set out in this Directive, the relevant authorities should consider the possibility of **replacing authorisations by simple notifications** to the competent body **when installing small decentralised devices** for producing energy from renewable sources."
Understanding:

- **RES** is much more than just a technical question! It’s on the **structure of the energy production**, on market and money.

- We can **combine energy production** and **regional development**!

- Need for EU, national and regional policies and strategies specifically aimed at **empowering local/regional renewable energy generation**
Research questions:

• What is the **real role** of civic society, what kind of involvement is foreseen/ happening: simply information, consultation or **active producers of energy**?

• Is civil society ready to play a role?

• Does the legal framework enable/ allow civil society to play that role?
Main findings (1)

• Local acceptance/ local opposition of renewable energy infrastructure, depending on the involvement
• Stakeholder want to make use of their local resources, such a wind, solar and biomass ...
• “we will not allow to steel our wind”
• technology exist – and becomes cheaper and cheaper

→ civic energy – a new phenomena and movement
Civic energy:

- Decentralized renewable energy generation by citizens, communities, local authorities, charities, NGOs, farmers, cooperatives or SME`s
Example: Frankenwald in Germany
figures:

area: 102,000 ha
population: 139,000
forest: 50,000 ha
Background

ENERGY-IMPORT (HEAT, PRIVATE HOUSEHOLDS)

Frankenwald

Ca. 1,2 TWh/a

Ca. 100 Millionen Euro/a
Background

ENERGIEIMPORTE (ELECTRICITY)

Frankenwald

Ca. 0.7 TWh/a

Ca. 175 Millionen Euro/a

Dubai
Energy potential analysis for the Frankenwald
An example: the German *Energiewende*:

In 2014:
- More than 30% of electricity from (3% in 1990) renewable sources.
- More than 1000 energy cooperatives.
- More than 50% of the currently installed capacity (73 GW) are civic energy installations.

Ownership distribution of installed renewable electricity generation capacity in Germany (2012).

Source: Blog "German Energy Transition"
Południowostan jest importerem energii

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Challenge for Podlasie

„Energy revolution” toward conservation of non-renewable resources and decentralization of energy generation while ensuring energy security for the benefit of the society and natural environment
Wariant III: Power to heat

Instalacja wiatrowa E-53 800 kW

Pompa cieplna
2x 400 kW

975.000 kWh el.
* COP 2,3

Stacje przekaznikowe 35 Stck.

Produkcja pradu
1.600.000 kWh/a el.

Siec cieplownicza
ca. 3.180 m

2.240 MWH th.

2.000 MWH th.

975.000 kWh el.

* COP 2,3

Stacje przekaznikowe
35 Stck.

Siec cieplownicza
ca. 3.180 m

2.240 MWH th.

1.600.000 kWh/a el.
Main findings (2)

- Civil society is ready to be a major driver of the energy transition …
- … contributing with human resources, funds and creativity;
- Shared local socio-economic benefits and incomes that stay within the communities;

→ Climate protection, regional development/business, job creation
What is needed to promote civic energy?

1. Favourable policy frameworks for civic energy
2. Simple administrative procedures
3. Effective support mechanisms // level playing field
4. Grid development and management
5. Participatory and transparent policy dialogue

→ Political willingness
1. Favourable policy frameworks for civic energy:

• Long-term, stable renewable energy policy frameworks that provide investment security;

• Civic renewable energy integrated as explicit priority into energy planning, regional and rural development policies at all levels.
2. Simple administrative procedures:

- Simple, fast, transparent and affordable administrative procedures;
- One-stop shops offering guidance in the planning process through to deployment;
- Reasonable costs and waiting times for grid connection;
- Renewable electricity of the magnitudes of civic energy should be exempt from procedures creating disproportionate burden, such as direct marketing obligations.
3. Effective support mechanisms

- **Feed-in priority** for electricity from renewable sources.
- **Feed-in tariffs** should be the main form of support for civic renewable energy.
- **Net-metering** for civic power production.
- **Tenders and auctions** can put a disproportionate burden, or even exclude small energy producers.
4. Grid development and management

• **Invest in grid renovation and improvements** necessary to keep up the pace of renewables’ roll-out.

• Accelerate the development of **smart grids** to optimise energy management, reduce peak loads and allow for a higher share of renewables.
5. Participatory and transparent policy dialogue

- Design, implement and review renewable energy policies in **continuous dialogue with civil society**.
- Launch a transparent and objective policy dialogue on the **long-term costs and benefits of the energy transition**, and on their fair distribution.
- The **social consequences of the energy transition** must be adequately addressed by strategies to help mitigate adverse effects on jobs and on socially weak households.
Main findings (3)

- **Highly motivated civil society** in all of the visited countries, aware of the opportunities for local socio-economic development offered by renewable energy.
- **Frustrations** with bureaucratic hurdles and with the non-recognition of civic energy by policy makers, and anxiety about current policy reforms.
- **No** consistently implemented, **targeted policy support for civic renewable energy** at any level.
- **EU Directive is not implemented.**

→ political willingness?
The „big 4“ in Germany:

- In the `90th : No chance to have a share of more than 5% of RES in the grid (long-term) ...
- ... blackout without nuclear (17 NPP)
- Their share in electricity production: > 90%
- Today: 30% RES, less than 10% from big four: > 25% loss in market
- Vattenfall would like to sell lignit fired power plants
- E.on announced on Dec 2nd: move out of fossil and nuclear! RES, grid operation and services is the future!
Situation in Germany

• The "Energiewende" (energy transition) is result of thousands of civil energy projects

• “Big 4” are waking up: energy is our business!

• ... is it necessarily so?
... towards a new energy policy!
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