Empowering Citizens: Value, Challenges and implications, Community owned renewable energy generation

Why this yellow ribbon?

Pep Puig, PhD engineer.
Summary

- A new vision of energy
- The key questions
  - Community power, why? how?
- Examples for learning
- Energ-ETHIC Democracy
What we want?

A new vision of energy systems where:

- Energy as a common
- Person as producer/user of energy:
  - PROD-USER (not pro-sumer!!!)
- Democratic energy system: people centered, based on persons and communities
A new energy vision

<table>
<thead>
<tr>
<th>Energy system</th>
<th>Dominant sXX</th>
<th>Possible sXXI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Resource/merchandise</td>
<td>common</td>
</tr>
<tr>
<td>Access to energy</td>
<td>According to income</td>
<td>Guaranteed</td>
</tr>
<tr>
<td>Person</td>
<td>Consumer</td>
<td>Producer/user</td>
</tr>
<tr>
<td>Technology</td>
<td>Centralized</td>
<td>Distributed</td>
</tr>
<tr>
<td>Decision</td>
<td>A minority (technocracy)</td>
<td>Society (democracy)</td>
</tr>
</tbody>
</table>
Amory B. Lovins published (1976) a key book where he questions the current energy vision and raises a new vision.
The energy problem

Lovins rises 3 key questions:

- **How much energy** we need to live with dignity?
- **Which kind of technology** is necessary to use?
- **Who has to control** the energy systems?
Who is in control?

- The Lovins’ answer to the 3rd question on control:
  - It is necessary to create decentralized energy systems:
    - Using renewable energy
    - Owned by the community that manages and uses them

To make possible the democratic control at local level
Our Board of Directors

SMUD is owned by its customers, who elect a seven-member Board of Directors.

Go solar

SMUD offers you the tools and information you need to make an informed choice about whether solar is right for your home or business.

If you're considering solar, use our Solar System Estimator to help you determine the benefits of installing a rooftop solar system. Let us serve as your trusted advisor to help you make the choice that's right for you.
Germany's "Electricity Rebels"

The group of citizens in Schönau, a small town in the Black Forest, is fighting against the construction of a new power plant that would supply the area with conventional electricity from a coal-fired power station. The group believes that this would be a step towards a sustainable energy future and is demanding alternative energy sources. The Schönau community has set up a website to inform and mobilize citizens and is seeking support from other environmental organizations.

www.ews-schonau.de
1st Community based wind project in Catalonia, in Spain and in the Southern Europe

Launched in March 2009
Mar. 2012: start authorization process
Apr. 2016: Catalan gov. authorized the project
Nov. 2017: start installation work
Jan. 2018: connection to the grid
Mar. 2018: start operation
Why Community power in Spain?

診 All wind projects in Spain are owned by utilities or big commercial companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Ownership Percentage</th>
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</thead>
<tbody>
<tr>
<td>Iberdrola</td>
<td>24.15%</td>
</tr>
<tr>
<td>Acciona Energía</td>
<td>18.48%</td>
</tr>
<tr>
<td>EDP Renovables</td>
<td>9.88%</td>
</tr>
<tr>
<td>ENEL Green Power España</td>
<td>6.48%</td>
</tr>
<tr>
<td>Gas Natural Fenosa Renovables</td>
<td>5.26%</td>
</tr>
<tr>
<td>Eolia Renovables</td>
<td>2.29%</td>
</tr>
<tr>
<td>Saeta Yield</td>
<td>2.22%</td>
</tr>
<tr>
<td>Vapat</td>
<td>2.04%</td>
</tr>
<tr>
<td>RWE</td>
<td>1.92%</td>
</tr>
<tr>
<td>Olivento</td>
<td>1.82%</td>
</tr>
<tr>
<td>Enerfin</td>
<td>1.69%</td>
</tr>
<tr>
<td>Viesgo</td>
<td>1.65%</td>
</tr>
<tr>
<td>Bora Wind</td>
<td>1.43%</td>
</tr>
<tr>
<td>Medwind</td>
<td>1.07%</td>
</tr>
<tr>
<td>Others</td>
<td>19.62%</td>
</tr>
</tbody>
</table>
Why Community power in Spain?

To show that in the Spanish context of RE (stagnant or retrograde) it’s possible to develop a wind project based on a community approach (without FIT, bank loans, big utilities, big investors, etc., only based on people’s power)
How it has been possible?

People involved in the project were founders of Ecotècnia Wind Coop in the eighties
How it has been possible?

- Learning from solar community projects developed in Spain when FIT was existing
How it has been possible?

Germany leads on community energy projects

Citizens form cooperatives to drive the energy transition

Number of energy cooperatives in Germany, 2001-2015

Source: www.unendlich-viel-energie.de
Kongress "100% Erneuerbare-Energie-Regionen" 11. + 12. November 2014

Mit der thematischen Schwerpunktsetzung „Erfolgreiche Rahmenseitigungen für die dezentrale Energiewende in Kommunen und Regionen“ der Veranstaltung „100% Erneuerbare-Energie-Regionen“ in 2014 soll erreicht werden, diese regionalen Umsetzer und Treiber zusammenzuführen, um gemeinsam ein Bild über die aus ihrer Sicht notwendigen politischen Rahmenbedingungen für die erfolgreiche Weiterführung der dezentralen, regionalen Energiewende zu entwerfen.

Installed renewable energy capacity broken down by ownership in Germany in 2012

- Institutional and strategic investors: 30.2 GW (41.5%)
- Citizen-owned renewable energy projects in a broader sense: 33.5 GW (46.6%)
- Individual owners: 18.3 GW (25%)
- Citizen energy cooperatives: 6.7 GW (9.2%)
- Citizen participation (interregional, minority shareholders): 8.4 GW (11.6%)
- Citizen-owned renewable energy projects in a narrow sense: 25 GW (34.4%)

Investments in renewables are spread across many players:

- Business sector: 13.4%
- Project planners: 14.4%
- Funds/banks: 13.4%
- Others: 1%
- Private households: 31.5%
- Big Four utilities: 5.4%
- Farmers: 10.5%

100.3 GW installed capacity 2016
1974: Tvind schools asked themselves what to do in front of the oil crisis
1975: beginning of the works
1978: start of operation
900 kW
Not 20% - but 100% local ownership as the alternative to external investors.

OPTION 1.

Citizens take matters in their own hands. Locally owned energy production will bring development and generate income for the local community.

OPTION 2.

People abandon their land and move away. Money flows to investor’s pocket.
Real World Example:
Hvide Sande, fishery harbour Denmark:
100% local acceptance
Why Community energy?

- It creates **local dialogue** and **acceptance**
- It raises **public awareness**
- It **solves problems and conflicts**
- It demands **less transmission lines** and saves electricity
- It is private investment promoting **cheaper and better technologies**
- It is **DEMOCRATIC**
- It makes **sustainable development** understandable
- It gives people **opportunity to act for** sustainable development
  - Generating clean energy & reducing CO2 emissions
BUSINESS

Big Power Goes Local

A grass-roots movement to generate power in towns and basements is challenging the energy industry's status quo.
SHARE OFFER NOW OPEN

Academy for a better world, Brahma Kumaris, Mt Abu, India

England

Ontario
Community energy

- **Community energy requires:**
  - Balanced playing field (fair regulation)
  - Equal access to capital and financing,
  - Self-organization and good community management
  - Education and empowerment to people in the community so they recognise their opportunities to become active in the energy system (interaction between people and between them and the networks)
Community energy

- Opens the door to build a **democratic** energ-ETHIC system
- **Empowering** individuals and communities
- Social appropriation of technologies
- **Using renewable** energy sources
- **Taking advantage** of their capture, conversion and use
- Sharing locally the wealth generated
- Combining, at local level, technological opportunities with economic opportunities
Community energy

Principles in which a democratic energ-ETHIC system should be based:

1. Reducing energy needs (efficiency)
2. Free of fire (no fossil fuels)
3. Flexibility (two way flow)
4. Local control (local decision making)
5. Equitable access (technologies, networks)
Community energy

- Energy democracy has the ability to create a fair and equitable energy economy
  - where energy prices are transparent and effective in terms of cost,
  - where there is no cross-subsidization from one part of the system to another part thereof
Community energy

Every community has the opportunity to be the owner of a renewable energy project

- Communities of locality
  - are made up of people living in a certain geographical area, be it a small village, a county, or a densely populated city

- Communities of interest
  - are comprised of individuals living in many different communities of locality that nevertheless share a common interest
POWER TO THE PEOPLE

Do big multinationals really own energy? Can communities take control over what should belong to them?

FREE CATALAN POLITICAL PRISONERS!

Thank You