

# Alternatives for the Energy Sector in Greece - European and Global context

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### Who is who?

#### Karel Derveaux



- Flanders, Belgium, master mechanical engineering
- active in renewable energy sector since 1995
  - EUREC Agency: European renewable energy researchers network
  - Ecopower: Flemish renewable energy cooperative
  - REScoop.eu: federation of groups and cooperatives of citizens for renewable energy in Europe







# Energy in the context of world-wide Crises

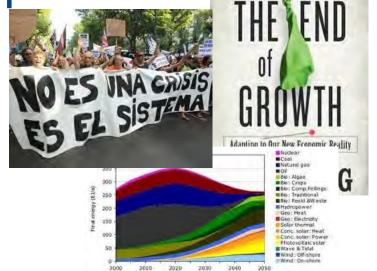
In the context of crises:

- financial crisis
- economical crisis/system crisis
- environmental crisis/energy crisis
- social crisis

Energy will become one of the major issues of the coming decades.

We will face an **energy transition** from

- fossil/nuclear fuels towards renewable energy
- centralised to decentralised production
- spoiling energy to rational energy use







# Goals regarding Energy and Climate

- EU
  - EU 20-20-20 Climate and energy package
     Reduce emissions of greenhouse gases by 20%
     Improve energy efficiency by 20%
     Cover 20% of energy demand from renewable sources
  - EU 2050 Roadmap
- UN
  - Climate convention 1992
  - Kyoto protocol 1997





- UN proclaimed 2012 international year of cooperatives as well as year of sustainable energy for all







# Opportunity for citizens

Citizens and communities have now the opportunity to take up a role in their future energy production and supply

#### They will anyway as:

- consumer
- taxpayer
- money-saver

Renewable Energy Sources Cooperatives - REScoops - are the ideal enterprise for citizens to take an active role in the energy transition.





# Background: citizens in action







# A Belgian REScoop: Ecopower















- Belgium (Flanders)
- °1991 (NGO TSAP, Leuven, °1985)
- 45.000 cooperative members
- 45 million € equity

#### Production:

- Wind: 13 turbines, ~25 MW
- PV: > 250 installations,~ 2,25 MW
- Small hydro: restoration of 3 watermills, 0,1 MW
- Plant oil cogeneration 1 plant, 0,25 MWe, 0,3 MWth
- 11 years: 6%, 1 year: 4% dividend
- Support of Walloon REScoops (7 x 2,3 MW wind turbines)





# A Belgian REScoop: Ecopower





Year	Average consumption
2006	3.909
2007	3.331
2008	3.063
2009	2.985
2010	2.819
2011	2.421



#### Supply

- ~100 million kWh
- 1,2 % of households in Flanders
- ~35.000 customers
- ~5.000 new customers each year
- fairest and greenest electricity and best customer service on the market
- effectively links renewable energy and rational use of energy
- average consumption dropping continuously: 38% in 5 years!
- without customers with PV-installations (8809): 3096 kWh (-20%)
- very simple tariff





## A REScoop best practice: EW Schönau





- triggered 1986 by Chernobyl accident
- 1997 take-over local grid
- 1998 supply of Schönauer customers exclusively with electricity form renewable energy and cogeneration
- 1999 national supplier of clean electricity
- by 2012 operating 7 grids
- 2014 Berlin grid?
- shareholders: 1830
- customers electricity: approx. 130.000, natural gas: approx. 8.300
- subsidized new, ecological electricity production units: some 1950
- PV, cogeneration, biogas, small hydro





atomstromlos. klimafreundlich.

bürgereigen.

## A REScoop best practice: Middelgrunden



- 20 wind turbines,
- 10 northern owned by DONG Energy 10 southern owned by Middelgrunden Wind Turbine Cooperative
- world famous, most photographed
- story of Danish people investing savings in windpower told over and over again
- private partnership formed May 1997, by working group for wind turbines at Middelgrunden
- following success of Lynetten Windpower (www.lynettenvind.dk)
- aim to produce electricity through the establishment and management of wind turbines on Middelgrunden shoal
- shareholders own a share corresponding to 1/40500 of the partnership per share





# A REScoop best practice: Energy4all





- created due to daily enquiries received from people looking to replicate the success of Baywind, the UK's first community-owned wind farm (www.baywind.coop)
- works primarily with community groups and landowners, to develop renewable energy projects wholly or partially owned by a community co-operative



- created a 9 step stones guideline for groups planning to set up a wind project
- provides a package of sector, admin, and financial services to Coops in return for an annual fee





## REScoop.eu



Federation of groups and cooperatives of citizens for Renewable Energy in Europe

- Practical application of the 7 cooperative principles
- Supporting local communities
- Clean, affordable energy supply for all
- Citizen's role in production, distribution and supply
- Sharing of experience
- Mutual practical and organisational support
- Creation of cooperative investment fund
- Creation of pan-European sustainable energy supplier
- Lobby local, regional, national, European and international authorities





# REScoop 20-20-20 IEE project

Project partners support groups and cooperatives of citizens to go together for renewable energy

Over 1000 REScoops in Europe?

Middelgrundens Vindmøllelaug































# Cooperatives as part of the energy solution. in the USA

Did you know Electric Cooperatives ...



Are located in 80% of the nation's counties

Are the largest electric utility network in the nation

Total more than 930 local systems in 47 states

Have 40 million member-owners

Distribute power over 2.4 million miles of line

Serve 75% of the U.S. land mass

Own \$112 billion in generation, transmission, and distribution assets

More than 80% of all local electric co-ops offer electricity generated from renewable sources?





# Touchstone energy cooperatives (USA)

Touchstone Energy®
Cooperatives

What Makes Our Cooperatives Different?

The power of human connections

Touchstone Energy co-ops are owned by the members they serve and are committed to providing reliable electricity at the lowest price possible. In short, co-ops "look out" for the members they serve.

http://www.youtube.com/watch?v=tenKnlx4ouY





# More information on REScoop 20-20-20

For more information or contact have a look at

www.rescoop.eu

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