



RESCOOP EU

European federation of groups and cooperatives
of citizens for renewable energy

Common and public goods in the hands of citizens for the benefit of their communities

Social Entrepreneurship Forum
Technopolis, Athens, November 20-21, 2014
Dirk Knapen
REScoop.eu - REScoop.be



Co-funded by the Intelligent Energy Europe
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Who

Dirk Knapen

REScoop.be,
Federation of groups and cooperatives of citizens for renewable energy



“A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise.”

REScoop.eu



- European federation with partners from European project REScoop 20-20-20
- Inventory of REScoops, businessmodels and financing schemes
- Offering services to members: lobbying, financing, energy supplier, balancing
- Sifnos Island Green Energy Cooperative one of 15 pilot projects

WISE Power project on fostering social acceptance for wind energy



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World suffering from growing pains

Ecological deterioration



Cultural frictions



Unfair distribution



Earth Overshoot Day 2014 august 19th

Growing out of crisis without hurting others or the environment, now or in the future, here or elsewhere, is no longer an option unless...
based on the single outside source we have ... the SUN

growing organic food, using renewable energy, harvesting materials (sinks for CO₂)



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Common and public goods

Common goods

- free by nature (land, beaches, forests, sun, wind, water, sea, rivers,...)
- free right of access for everyone
- no legal owners



Public goods

- paid for by taxpayers or consumers
- public services
(roads, railways, airports, ports, water distribution, telecommunication and electricity grids, high tension lines, public buildings, schools hospitals,...)
- owned by citizens collectively



Neither of both should be privatized

Citizens claim them



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Common and public goods for the benefit of local communities

Turning reaction into action

Omicronproject

136 Thessaloniki water



<http://omicronproject.gr/grassroots>

Alternative Festival of Solidarity & Collaborative Economy
3rd edition Athens 10-11-12 October

Energy cooperatives

- Sifnos Green Energy Cooperative
- Agro energy cooperative Lamia
- Lakoniki bioenergiaki
- ΕΣΕΚ Karditsa

Kapa-cooperatives network

Greenpeace crowdfunding school in Stropones, Euboea
40,000 € collected in 2 months time



"ΑΓΡΟΕΝΕΡΓΕΙΑ // COOP"



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Co-operative enterprises build a better world



Common and public goods for the benefit of local communities

Turning reaction into positive action



RE-connecting citizens
renewables as levers for local development

Harvesting values for the benefit of local communities

- harvesting : preparing, supporting, nurturing, protecting
- values :
 - resilience, self confidence, generosity, kindness, peace, solidarity, abundance, social cohesion, local employment, security of supply, price stability, energy autonomy, healthier environment, reduced climate impact, ...
 - 100% sustainable energy supply > 90 € per inhabitant per month



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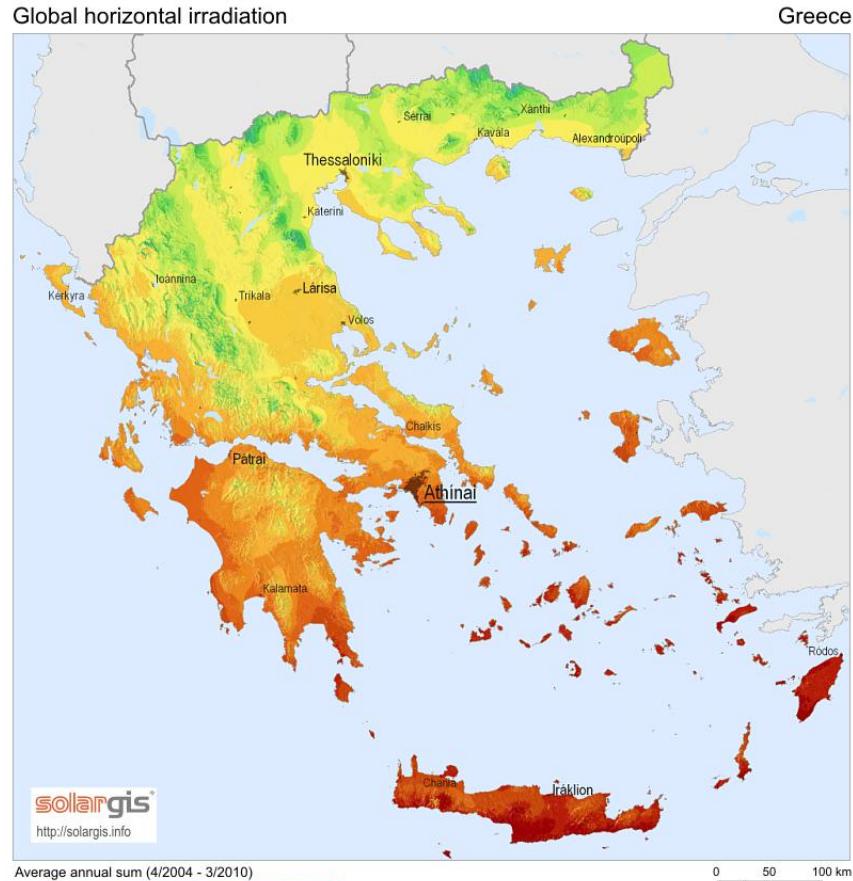


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Renewable energy supporting Greece

Global horizontal irradiation



http://solargis.info/doc/_pics/freemaps/1000px/ghi/SolarGIS-Solar-map-Greece-en.png



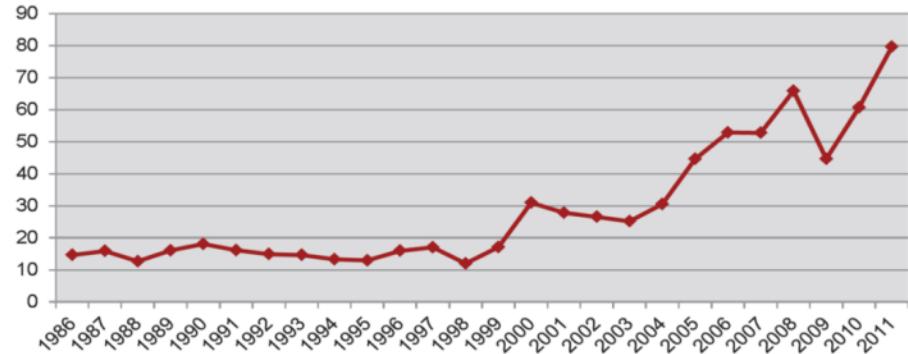
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Renewable energy supporting Greece



Annual solar irradiation Greece

211.184 TWh/year

(1600 kWh/m²/year or 1,6 TWh/km²/year at 131.990 km²)

Average energy consumption in Greece at 27.000 kWh/cap.year

Population 11,3 million 2012 census

314 TWh/year
(0.15%)

Cost 2012 of 314 TWh at 40 €/MWh

12.560 million €/year

Cost 2000 of 329 TWh at 10 €/MWh

3.290 million €/year

Annual cost of rising prices 2000-2012

9.270 million €/year

1 TWh is 1 bilion kWh

1 barrel crude oil = 100 \$/barrel = 75 €/barrel

159 l/barrel = 1,6 MWh/barrel = 62,5 \$/MWh = 47 €/MWh

http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/8-17022014-AP/EN/8-17022014-AP-EN.PDF



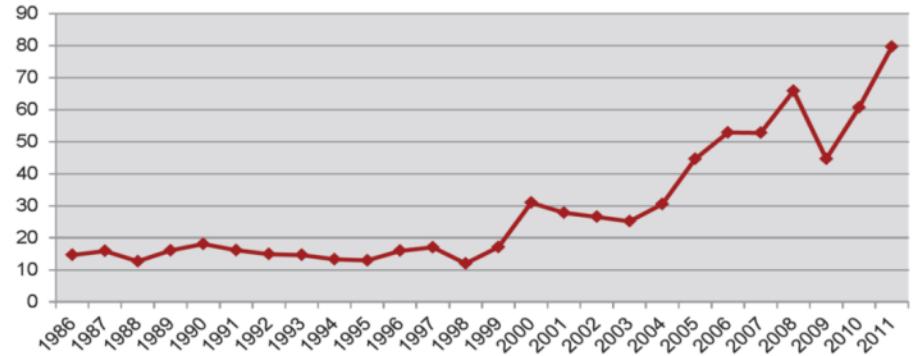
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Renewable energy supporting Sifnos



Annual solar irradition Sifnos

(1700 kWh/m²/year or 1.700 GWh/km²/year at 74 km²)

Average energy consumption in Greece at 27.000 kWh/cap.year

Population 2.625 as off 2011 census

125.800 GWh/year

71 GWh/year
(0.056%)

Cost 2012 of 71 GWh at 40 €/MWh

2,8 million €/year

Cost 2000 of 71 TWh at 10 €/MWh

0,7 million €/year

Annual cost of rising prices 2000-2012

2,1 million €/year

1 GWh is 1 million kWh

1 barrel crude oil = 100 \$/barrel = 75 €/barrel

159 l/barrel = 1,6 MWh/barrel = 62,5 \$/MWh = 47 €/MWh

http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/8-17022014-AP/EN/8-17022014-AP-EN.PDF



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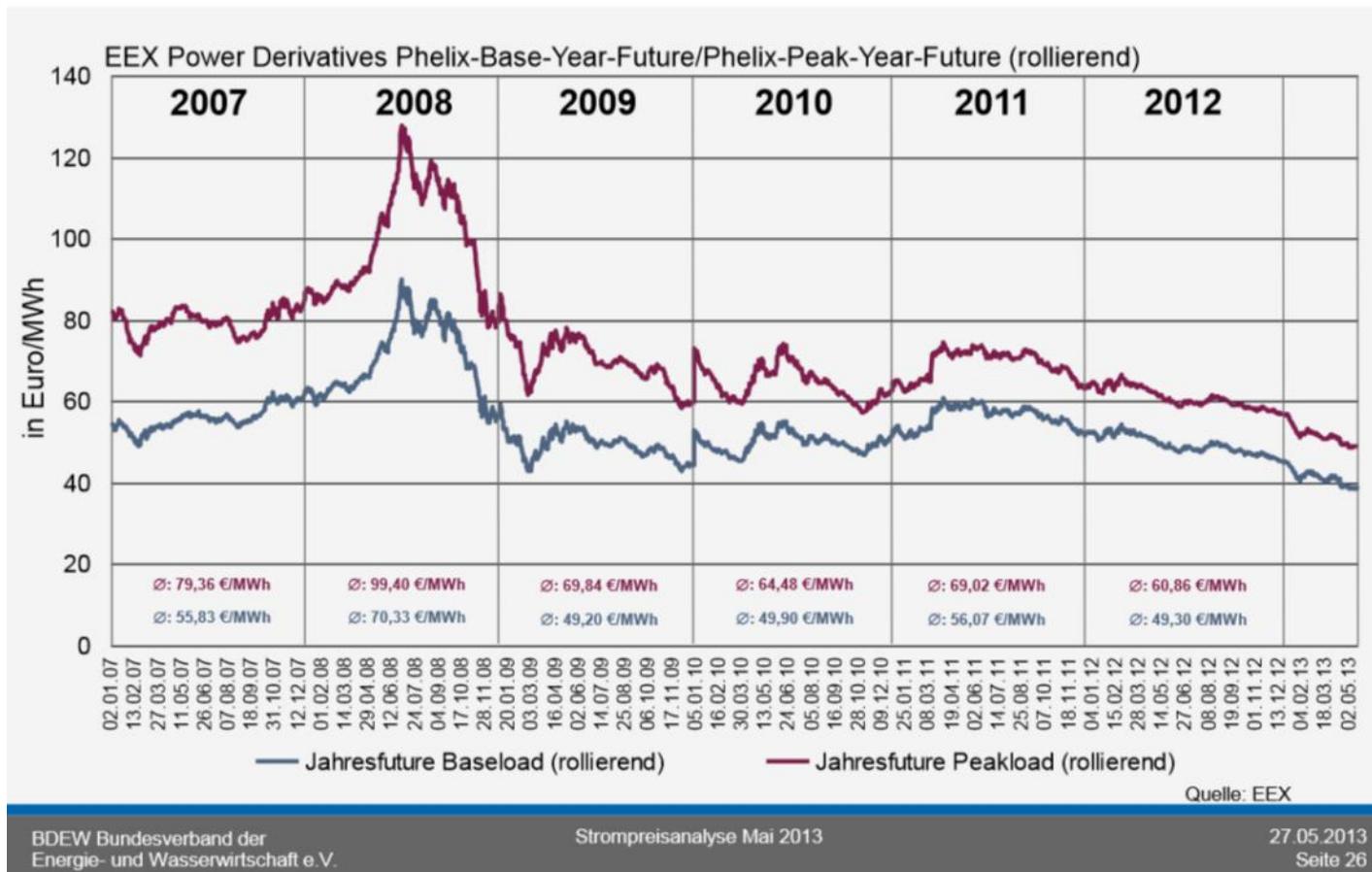


Cost coming down rapidly

Preisentwicklung an der Strombörse

Terminmarkt Jahresfuture (01.01.2007 – 22.05.2013)

bdew
Energie. Wasser. Leben.



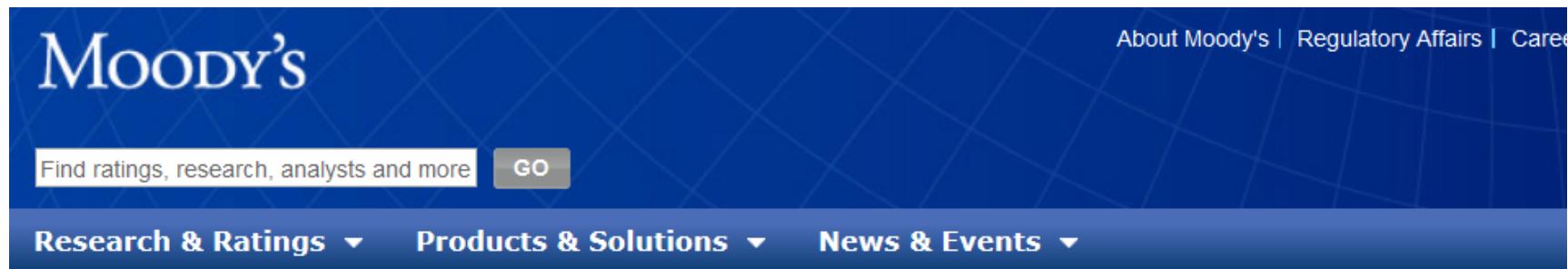
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Cost coming down rapidly



The image shows the top navigation bar of the Moody's website. It features the Moody's logo in white on a blue background. Below the logo is a search bar with the placeholder "Find ratings, research, analysts and more" and a "GO" button. To the right of the search bar are links for "About Moody's", "Regulatory Affairs", and "Careers". Below the search bar are three main menu categories: "Research & Ratings", "Products & Solutions", and "News & Events", each with a dropdown arrow.



Print



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Announcement: Moody's: Wind and solar power will continue to erode thermal generators' credit quality

Global Credit Research - 06 Nov 2012

London, 06 November 2012 -- Further expected increases in renewable energy will continue to erode the credit quality of European thermal generation companies in the near to medium term, says Moody's Investors Service in a Special Comment published today.

The new report, entitled "European Utilities: Wind and Solar Power Will Continue to Erode Thermal Generators' Credit Quality", is now available on www.moodys.com. Moody's subscribers can access this report via the link provided at the end of this press release.

"Large increases in renewables have had a profound negative impact on power prices and the competitiveness of thermal generation companies in Europe," says Scott Phillips, an Assistant Vice President - Analyst in Moody's Infrastructure Finance Group. "What were once considered stable companies have seen their business models severely disrupted and we expect steadily rising levels of renewable energy output to further affect European utilities' creditworthiness."



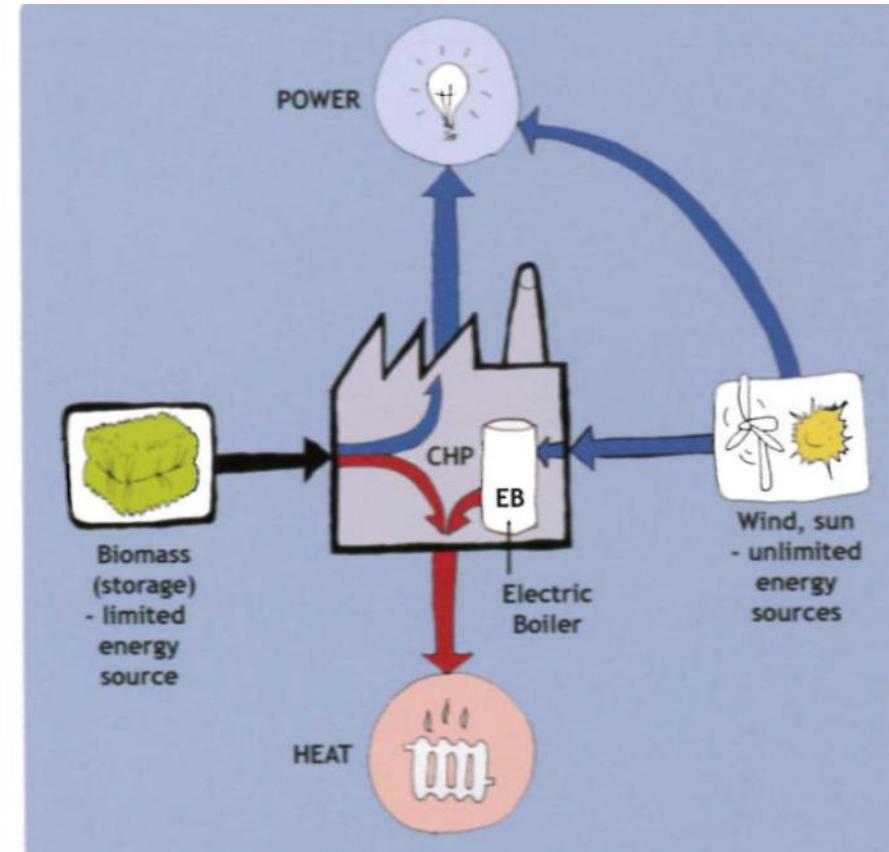
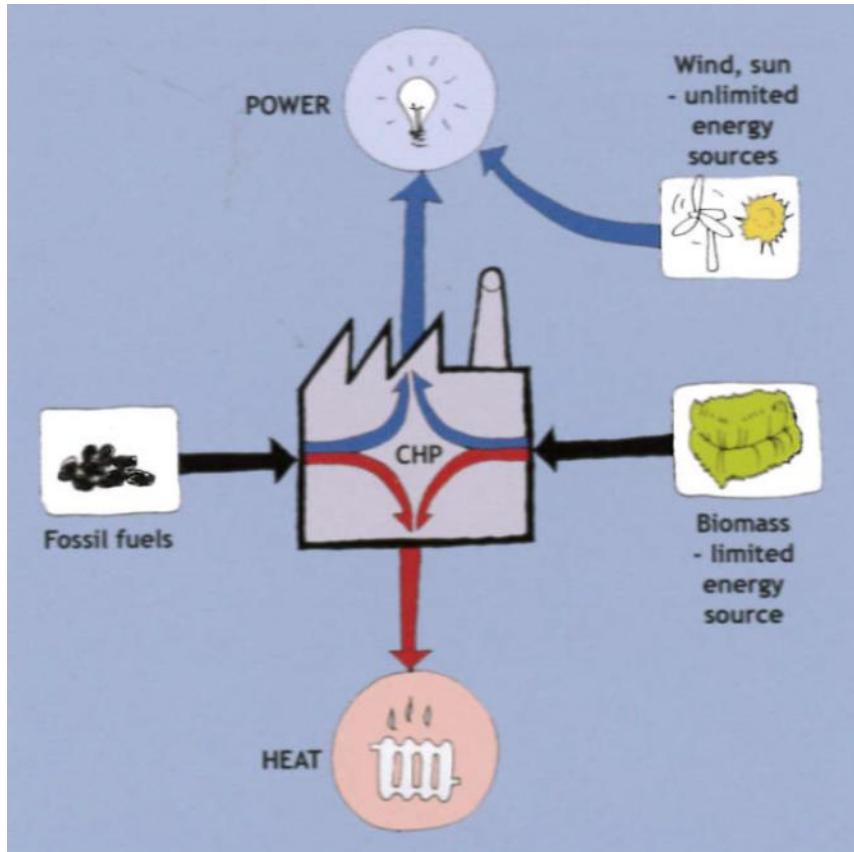
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Sustainable energy supply system



4' www.youtube.com/watch?v=Zw8sWR5uohk

18' www.youtube.com/watch?v=sosx7o3GU88

Website <http://green.thisted.dk/?lang=en>

www.kombikraftwerk.de/fileadmin/Kombikraftwerk_2/English/AEE_Press_Release_Kombikraftwerk2_okt13.pdf



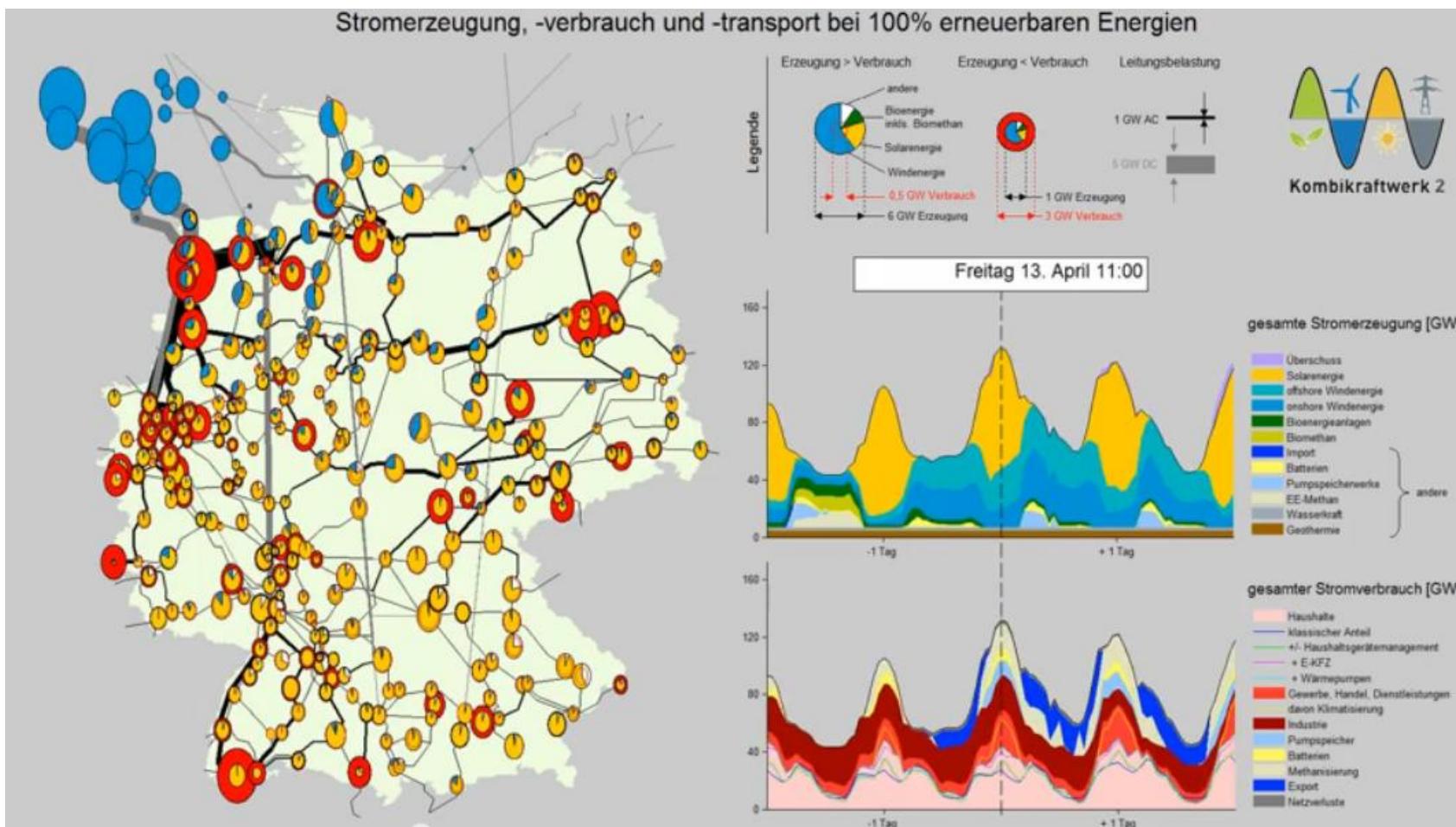
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Power flows in 100% scenario



www.kombikraftwerk.de/100-prozent-szenario/das-100-erneuerbare-energien-szenario.html



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REScoop best practice: Ecopower



Cooperative

- Belgium (Flanders)
- °1991 (Ngo TSAP, Leuven, °1985)
- 47.419 cooperative members
- 48 million € equity

Production

- wind: 12 turbines (23,16 MW)
- PV: 322 installations (5,26 MW)
- small hydro: restoration of 3 water mills (0,1 MW)
- plant oil cogeneration 1 plant (0,25 Mwe + 0,3 MWth)
- 11 years: 6%, 1 year: 4%, 1 year 0% support of Walloon REScoops (13 x 2,3 MW wind turbines)



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REScoop best practice: Ecopower



Ecopower cvba

Supply

- 94 million kWh
- 1,3 % of households in Flanders
- 40.247 customers on 31 12 2013
- 3.274 new customers in 2013
- fairest and greenest electricity and best customer service on the market
- link between renewable energy and rational use of energy
- average consumption dropping continuously : - 33 % in 7 years
- without customers with PV-installations (8809): 3260 kWh (- 4%)
- one single very simple tariff



Dienstverlening energieleveranciers				
	Score Op basis van het aantal klachten	Aantal klachten	Telefoons beantwoord binnen 60 sec.	Kosten vervroegde stopzetting
Ecopower	★★★★★	1 op 23.800	98%	0 euro
Electrabel	★★★★★	1 op 4.900	80%	50 tot 75 euro
Luminus	★★★★	1 op 3.225	80%	50 tot 75 euro
Ebem	★★★★	1 op 1.875	95%	0 euro
Belpower	★★★	1 op 1.495	98,76%	50 tot 75 euro
Nuon	★★	1 op 980	onbekend	50 tot 75 euro
Lampiris	★★	1 op 775	98%	50 tot 75 euro*
Essent	★	1 op 525	onbekend	50 tot 75 euro

*Uitgezonderd bij een nieuw contract

Year	Average consumption
2007	3331
2008	3063
2009	2985
2010	2819
2011	2421
2012	2113
2013	2135



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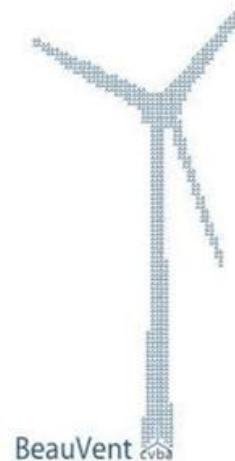


REScoop best practice: Ecopower



Community engagement

- ongoing partnership with the city of Eeklo
- purchasing power production
- supplying energy for colleague cooperatives
- pre-financing projects for new or colleague cooperatives in Belgium
- start-up support for Enercoop France
- co-founder of REScoop.be and REScoop.eu
- offering office space for CoopKracht and REScoop.be



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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 wind-
power told over and over again
- private partnership formed May 1997, by working group with the aim to produce electricity through the establishment and management of wind turbines on Middelgrunden shoal
- following success of Lynetten Windpower (www.lynettenvind.dk)
- shareholders own a share corresponding to 1/40500 of the partnership per share (1000 kWh/year)
- supporting the island of Samsø, Bornholm and others in their transition towards a sustainable energy supply
- set up of Copenhagen PV-cooperative
- energy renovation of social neighbourhood in Hvidovre
- development of biogasification plant in Hillerød



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REScoop best practice: EW Schöna



- triggered 1986 by Chernobyl accident
- 1997 take-over local grid
- 1998 supply of Schöna customers with electricity from renewable energy and cogeneration
- 1999 national supplier of clean electricity
- by 2012 operating 7 grids
- shareholders: 1830
- customers electricity: approx. 130.000,
natural gas: approx. 8.300

- subsidized some 1950 new, ecological electricity production units: PV, cogeneration, biogas, small hydro
- support of local groups to set up production or take over their grid
 - wind project evaluation Kleine Wiesenthal
 - 2014 Hamburg, Berlin
- fund supporting complaint Austria against subsidy new nuclear in the UK



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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



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Action

Start small

Involve citizens

Demonstrate that you mean well

Civilization = care for the defenseless

Take everybody along

Build trust - be transparent



Schools are an excellent place combining

- buildings that often could use some renovation
- authorities that need to save money
- contact with future generations and their families
- wonderful communication basis for results



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Further action

Use momentum

Create people's bank?

- NewB bank in Belgium “An other bank is possible”
Project went public 2013
First night 10,000 people interested 200,000 € collected
By now 47,000 supporters, 2.7 million € collected
- E-banka and Open Source Bank, Croatia

Create people's green energy supplier?

Cooperative green energy suppliers all over Europe linking green energy producers with customers

- Som Energia, Spain, 2010 (17.000 customers)
- Enercoop, France, 2005 (18.000 customers)
- EWSchönau, Germany, 1994 (150.000 customers)
- Ecopower, Belgium, 1991 (40.000 customers)



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More information

Greek projects

<http://omikronproject.gr/>

www.136.gr/

www.festival4sce.org/

www.sifnosislandcoop.gr

www.agroenergy.coop/

www.anka.gr

www.bioenergiaki.gr/

<http://diktio-kapa.dos.gr/>

www.sxoleiomas.org/eng/

www.mobilisationlab.org/crowdfunding-keeps-kids-warm-in-greece-and-shows-the-way-forward/

www.mobilisationlab.org/in-greece-crowdfunding-is-more-than-a-fundraising-tool/

www.regions2020.eu/cms/assets/Uploads/Resources/130226-GP-CRES-buildings-schools.pdf



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More information

International

www.solarundspar.de/

www.indiegogo.com/projects/energy-independent-school

www.solarschools.org.uk/

www.solarcity.com/company/givepower

www.newb.be

www.ebanka.eu/

www.opensourcebank.net/

www.go100percent.org

100% renewable energy communities

www.renewable-world.org/

tackling poverty through renewable energy



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More information on REScoop

For more information or contact have a look at

www.rescoop.eu

www.facebook.com/pages/REScoopeu/198522540221034

or subscribe to our news alert

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www.rescoop.be

www.ecopower.be

www.mittelgrunden.dk

<http://ews-schoenau.de/footer/international.html>

www.energy4all.co.uk

www.wisepower-project.eu

<http://communitypower.eu/>

<http://citizenergy.eu/>

www.sustainableislands.eu/

www.islepact.eu/



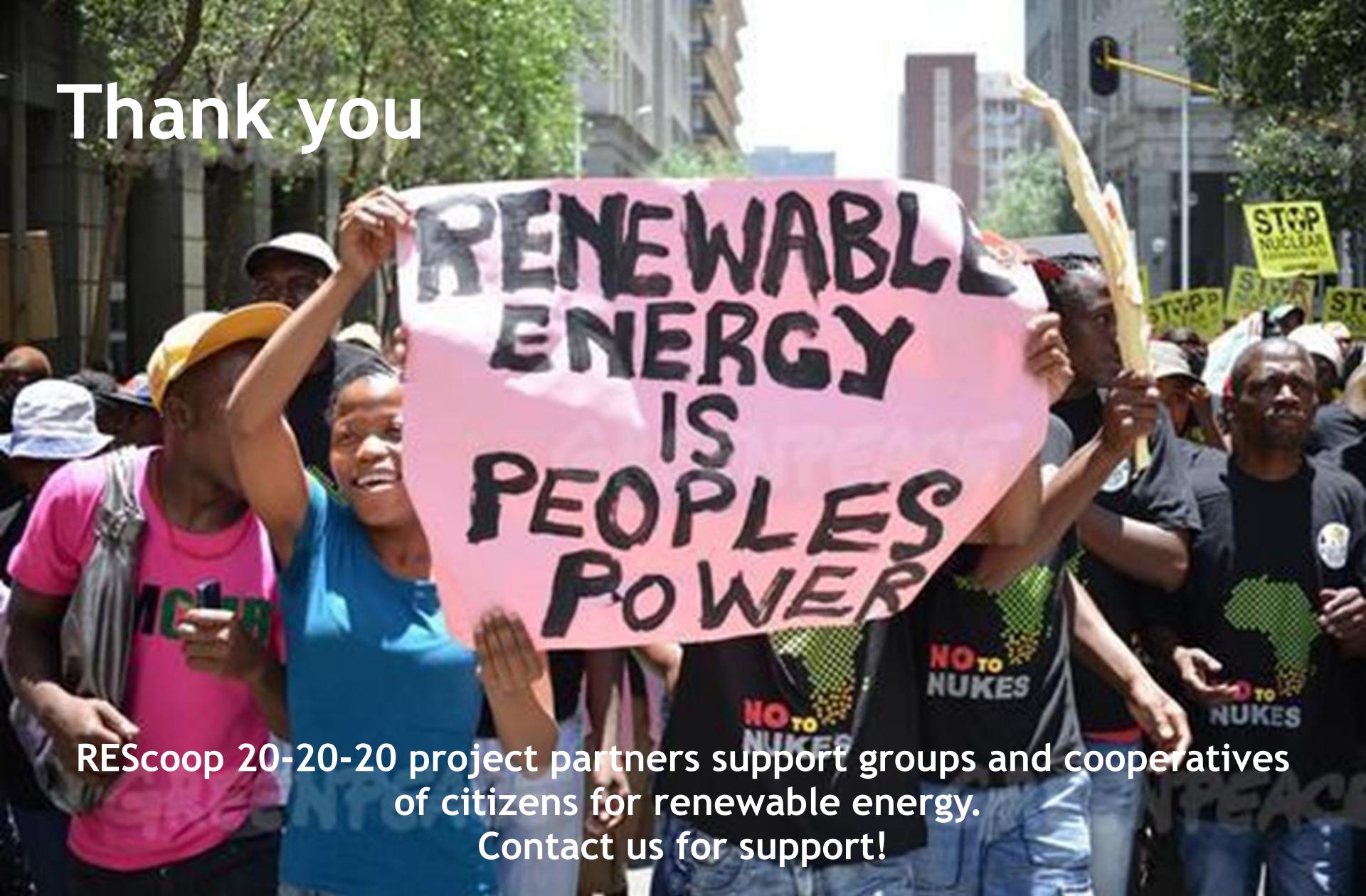
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Thank you



REScoop 20-20-20 project partners support groups and cooperatives of citizens for renewable energy.
Contact us for support!



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