Introduction:
Renewable Energy Self-Sufficiency (RESS)

Dr. Chantal Ruppert-Winkel
Project: Renewable Energy Regions
www.ee-regionen.de

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Federal Ministry
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Centre for Renewable Energy

ZEE Zentrum für Erneuerbare Energien

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Fraunhofer Institut Solare Energiesysteme

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FVA Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg

Öko-Institut e.V.
Institut für angewandte Ökologie
Institute for Applied Ecology

Project „Renewable Energy Regions: Socio-Ecology of Self-Sufficiency “

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Research Focus

Municipalities and regions aiming at supplying themselves completely with Renewable Energy (RE)

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UNIVERSITÄT HOHENHEIM

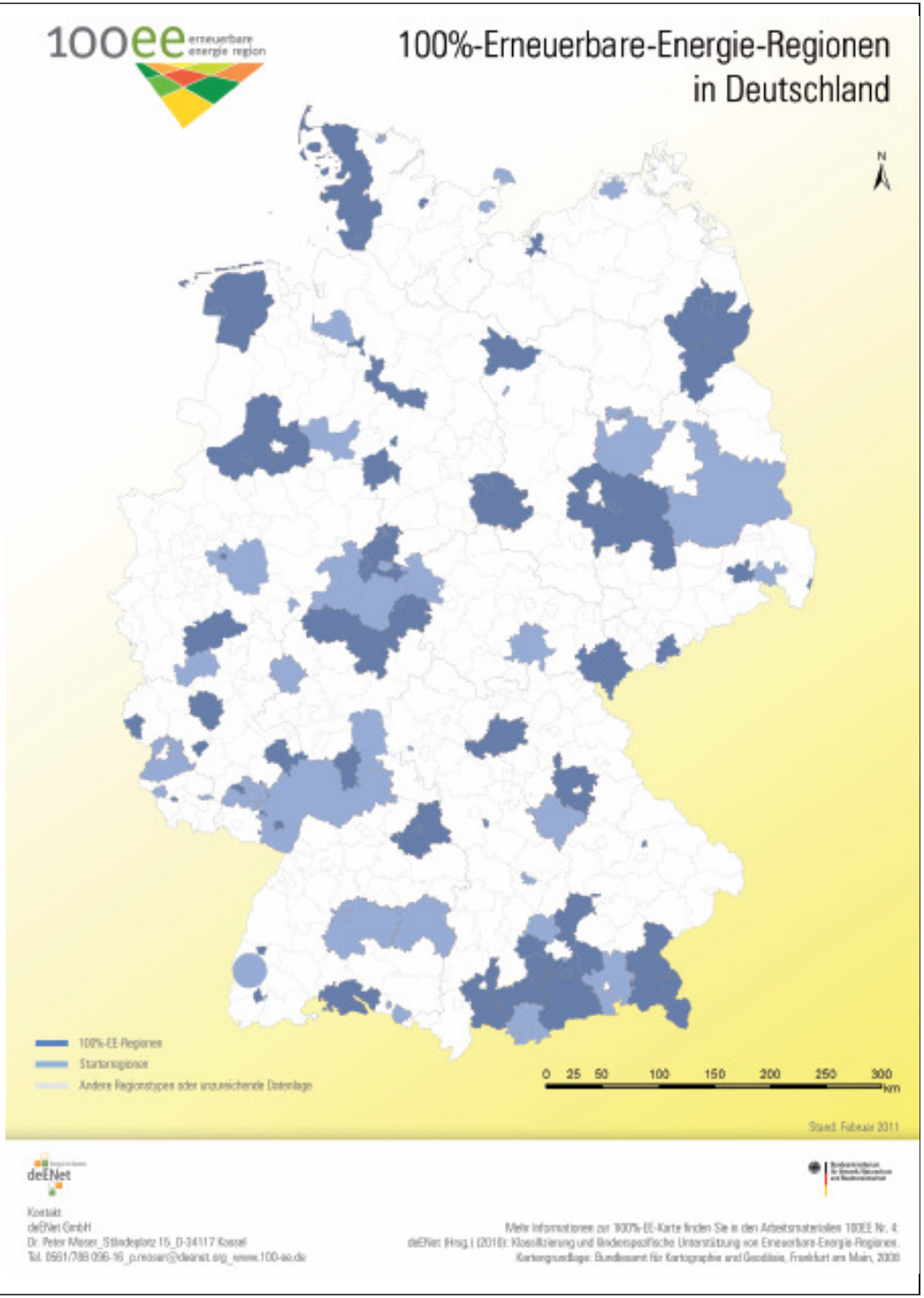
Institut für Landschafts- und Pflanzenökologie

Project duration: May 2009 – May 2013

German municipalities and regions with the goal to supply themselves completely with renewable energy:

- **More than 25% of Germany's territory**
- **More than 17 million people live in the regions**

(2011)



Source of the map: deENet, 2011: http://100-ee.de/fileadmin/Redaktion/Downloads/100EE-karte+Liste110214+neuesLogo_Web.pdf (access: Sep. 8th 2011)

RE-Regions project: Partner municipalities and regions

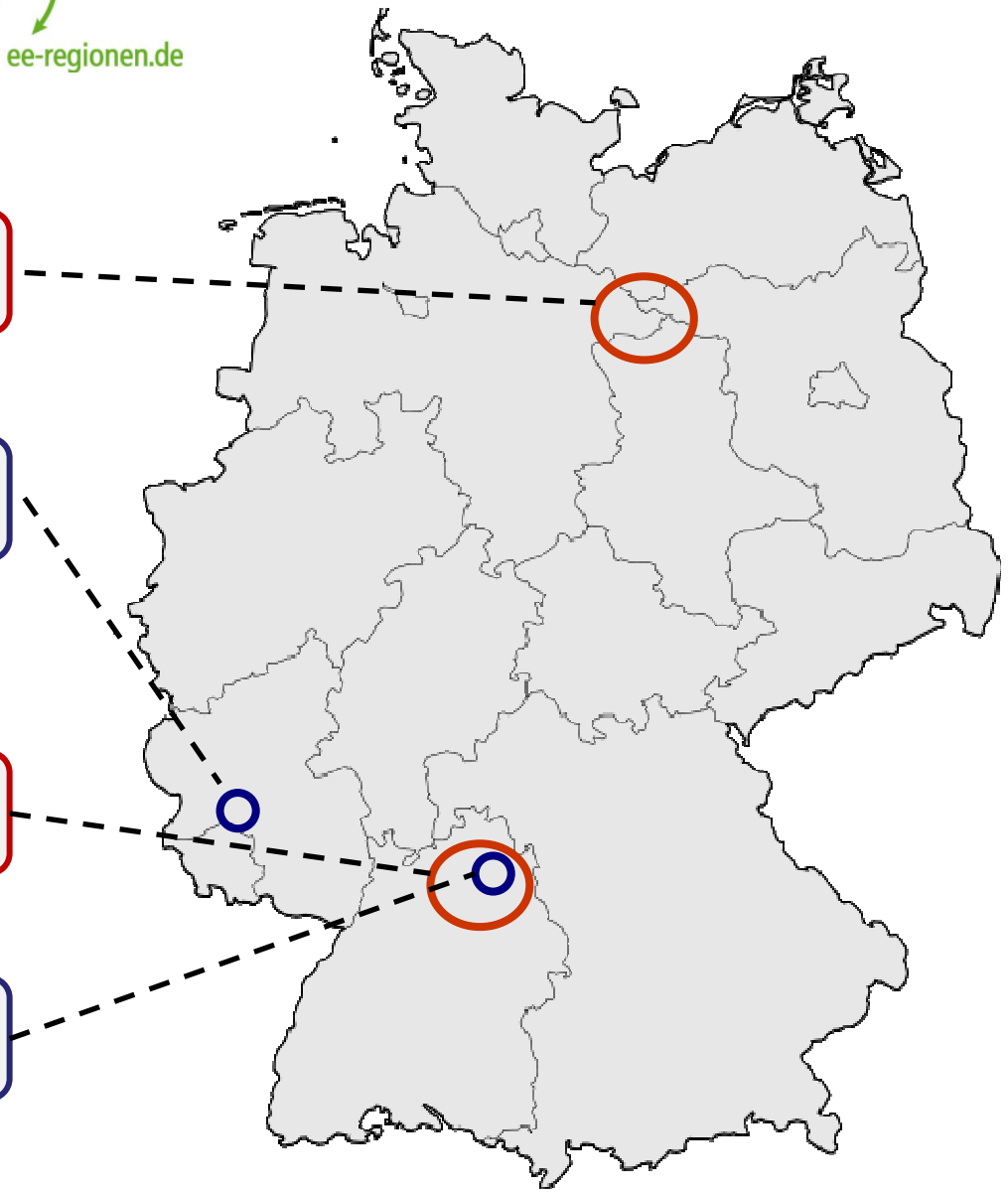
ee-regionen.de

Luechow-Dannenberg
50,000 inhabitants

Morbach
11,200 inhabitants

Schwaebisch Hall
190,000 inhabitants

Wolpertshausen
2,020 inhabitants



Source: www.energielandschaft.de

Source: NovaTech GmbH

Source: NovaTech GmbH

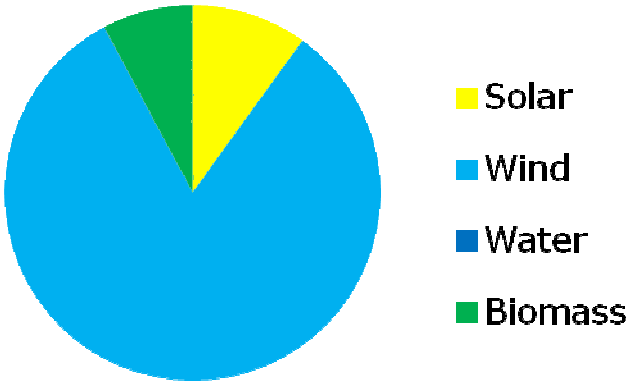
Source: Akademie für Erneuerbare Energien Lüchow-Dannenberg GmbH

Shares of RE in partner municipalities

Electricity mix in 2010:

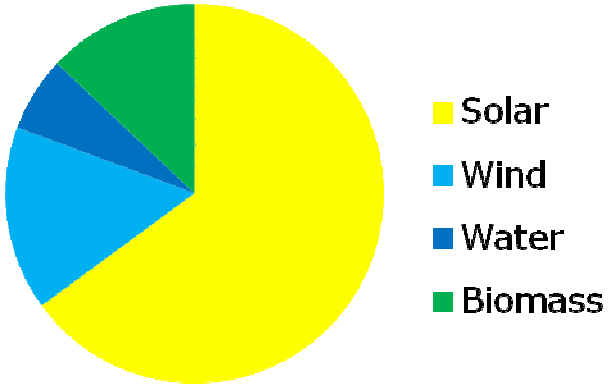
Morbach

RE: 52%



Wolpertshausen

RE: 57%



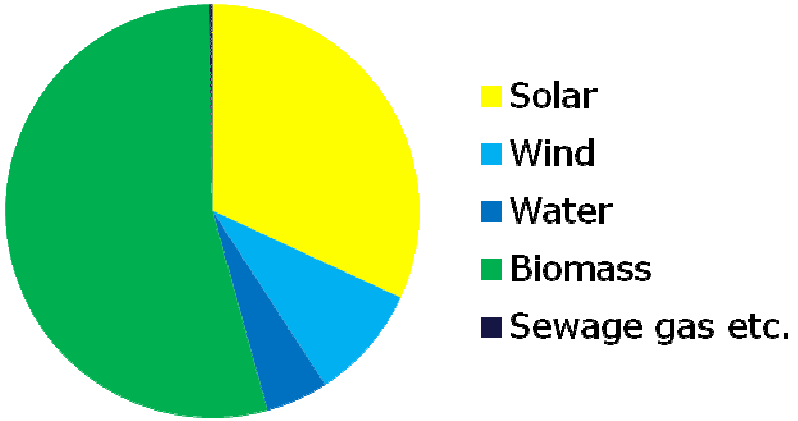
Average in Germany: electricity 16.8% (2010)

Shares of RE in partner regions

Electricity mix in 2010:

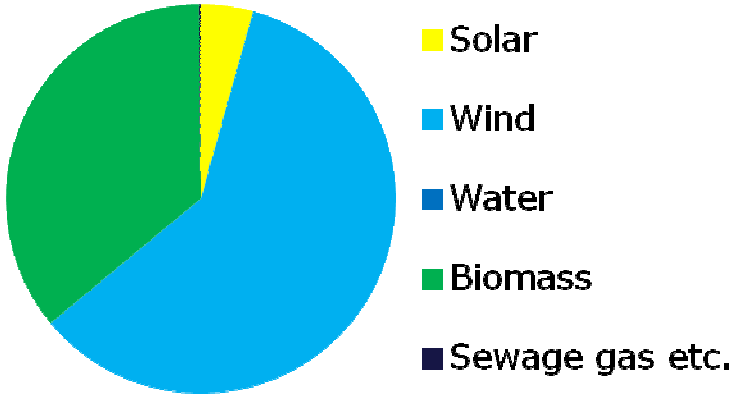
Schwaebisch Hall

RE: 32%



Luechow-Dannenberg

RE: 64%



Average in Germany: Electricity 16.8% (2010)

Local policies of the partner regions

RESS goal…

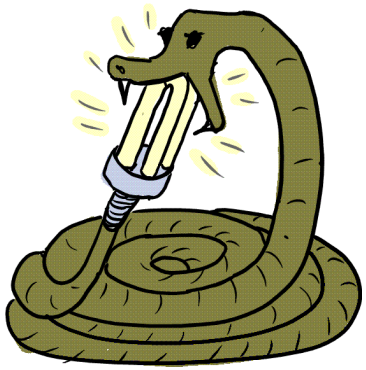
- Focuses on power and heat; in Luechow-Dannerberg also including fuels; in Morbach also including energy savings
- Time frame: 2015, 2020 or later
- Implicitly refers to municipality territory (and not all activities of the citizens at other places)
- Includes building up own district heating grids & evaluating options to buy electricity grids back

Challenges for the regions at the moment

- Landuse conflicts => especially biomass, wind turbines, and open space photovoltaics; e.g. biodiversity, landscape, food/alternative use of wood

- Integrate more citizens, information about possibilities of financial participation

- Conflicts between energy saving and added value objectives (e.g., rebound effect)



Source: Angela Lüchtrath

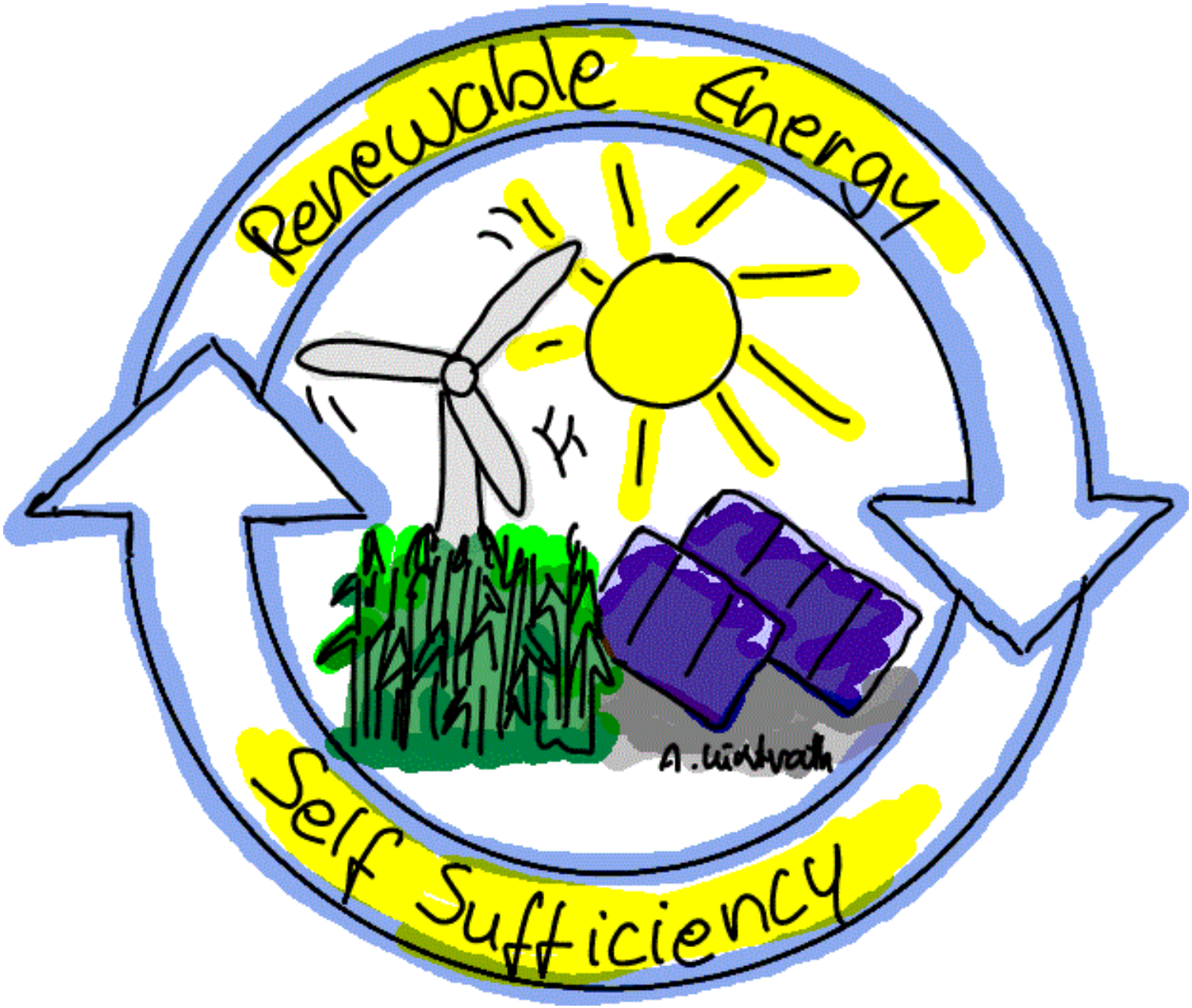
Additional challenges the regions will have to face in future

In the regions:

- Integration of large industrial enterprises in the transformation process
- Heat concepts for the whole area
- Energy for mobility
- Technological aspects: storages, grid capacities, etc.

Beyond the regions:

- Scale problem: RESS Realistic goal for bigger urban areas?
- Small scale ‚islands' a good solution for national/international needs?


Renewable Energy
Self Sufficiency