# The Role of Decentralized Energy Generation during the Energy Transition towards Renewable Energy in Germany

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# Federal State Thuringia (Thüringen)







# DGRV – German Cooperative and Raiffeisen Confederation

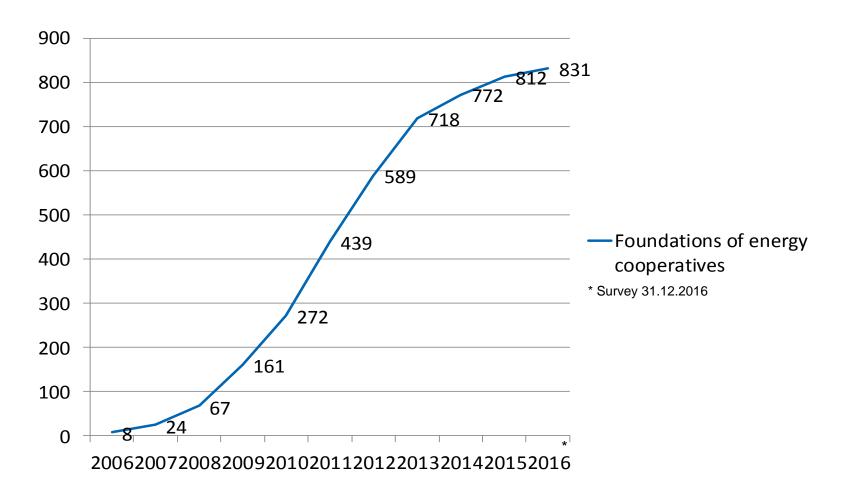
- National apex organisation
- Top-level auditing federation
- Largest economic organisation in Germany in terms of members:
  - 7,931 cooperatives
  - 22.6 million members (Source DZ BANK)
- German cooperatives → 160 years of business-tradition







### **Energy cooperatives since 2006 (cumulated)**







# Renewable Energy Sources Act (EEG)

### Obligation to purchase and transmit

Grid operators must give immediate priority to connecting installations for the generation of electricity from renewable energies and from mine gas to their grids and to purchasing and transmitting all the electricity available from these installations

#### Guaranteed feed-in tariffs

Grid operators must pay fixed tariffs for the feed-in of electricity from renewable energies (guaranteed payment period is generally 20 years for commissioned installations, payment is geared around the costs)





### **Business models**

### photovoltaic



wind energy



district heating



- € 1.8 billion investments in renewable energy
- 1 GW installed capacity



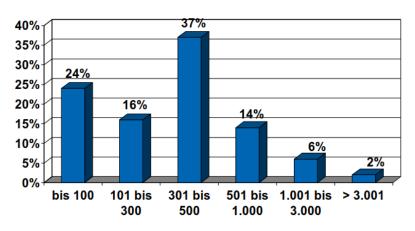


### **Member shares**

#### Mimimum share:

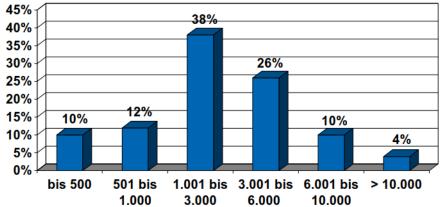
average value: € 652

minimum value: € 50



### **Average participation:**

average value: € 3,652

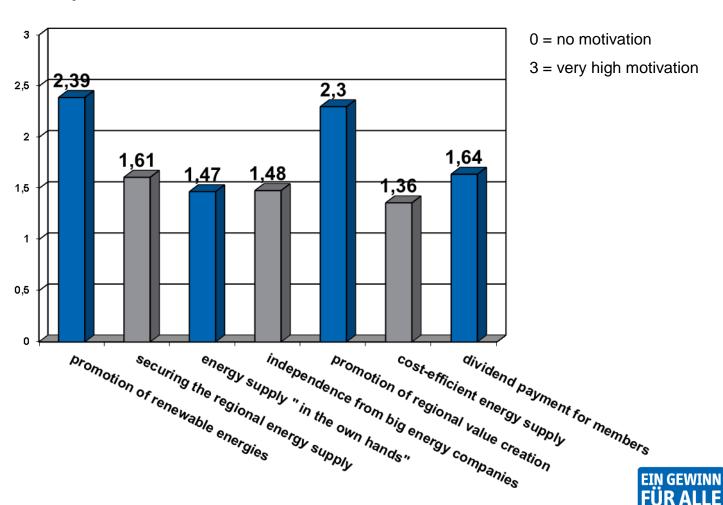






## Reasons for founding energy cooperatives

#### What's your motivation?





**EIN GEWINN** 

Die Genossenschaften

# Energiegenossenschaft Odenwald→ Boosting local economy

- Founded in 2009
- 3,000 members
- € 11 m
- € 50 m investments
- 83 solar plants (wind)
- 11 MWp installed capacity
- Energy provider
- "House of Energy"
- Kindergarden (150 children)











# **Energiegenossenschaft Odenwald**

### **House of Energy**



Kindergarden



### **Former Brewery**



**Parking Lots** 



# **Energiegenossenschaft Odenwald**

€ 17.5 m → 2,400 orders → 250 local companies!









# **Energiegenossenschaft Odenwald**

### **Public Viewing EURO 2016**



### **3rd Hessian Barbecue Contest**







### **NEW Neue Energien West eG**

- Cooperation of communities and municipal companies/utilities
- Common umbrella cooperative for many regional projects
- Citizen energy cooperative ist member of the umbrella cooperative
- Mayors and local representatives are board members









# Climate community Saerbeck / Saerbeck citizen cooperative

- 7,200 inhabitants → 100% renewables in 2030
- Bioenergy park (90 hectare former military arsenal)
- Photovoltaic investments by the citizen cooperative
- Windenergy investments by the community owned company, citizen cooperative etc.
- Biomass and biowaste plants run by farmers
- 400 private photovoltaic projects
- Community owns the local grid (since 2012)
- Local heating plant for the school, sports club, church etc.
- Energy education trail and program

for students







## **German Renewable Energy Sources Act (EEG)**

- Amendments of the EEG
  - Auctions for wind energy (onshore)
  - ,Competitive rule' for citizen energy
  - Exemption for solar energy (750 kw)
  - FIT adjustment for solar energy
  - Delivery inside buildings
- Business Opportunities for Community Energy
  - District heating?
  - Energy efficiency?
  - Mobility?
  - Regional development?





# Thank you for your kind attention!

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