

Competence Network Distributed Energy Technologies deENet

Gdańsk, May 11th 2010
deENet | Competence Network Distributed Energy Technologies
Jan Kallok





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Content



Background

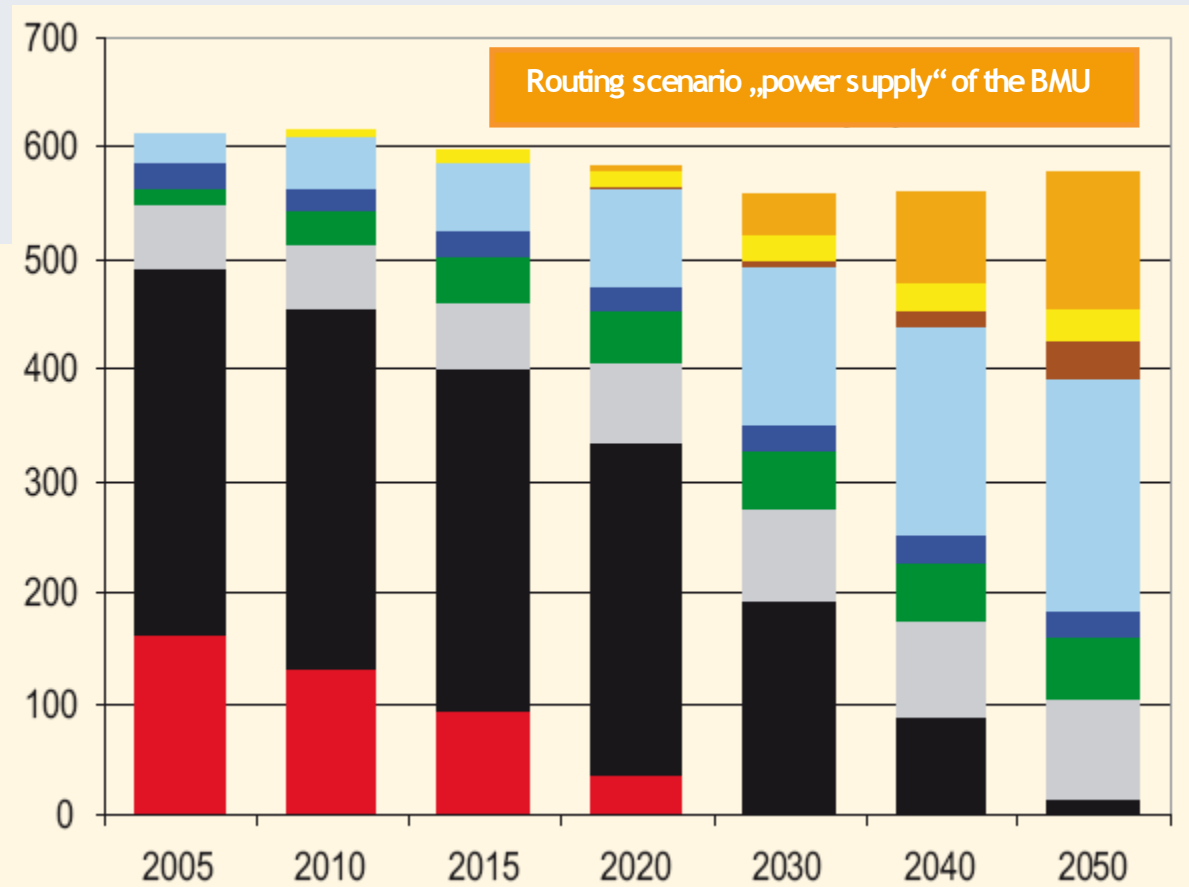
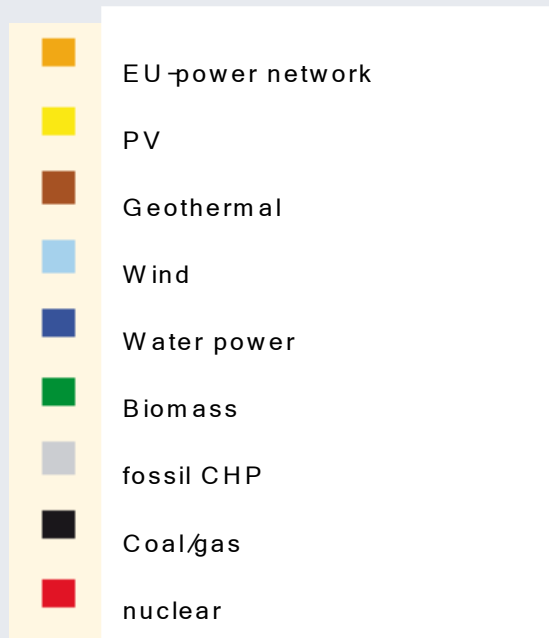
deENet – Network description

Model projects



Climate and Energy – political frame

Germany's energy targets





Regions and Decentralization

RES - centralized or decentralized?

Project „Desertec“





Regions and Decentralization

RES - centralized or decentralized?

Project „Desertec“

- projected for the 2050s
- huge transfer losses
- high voltage direct current transmission very expensive
- still dependance on imports
- still vulnerability to political crises





Regions and Decentralization

New Structures of Energy Supply: Close Cooperation of RES and Energy Efficiency

Requirements:

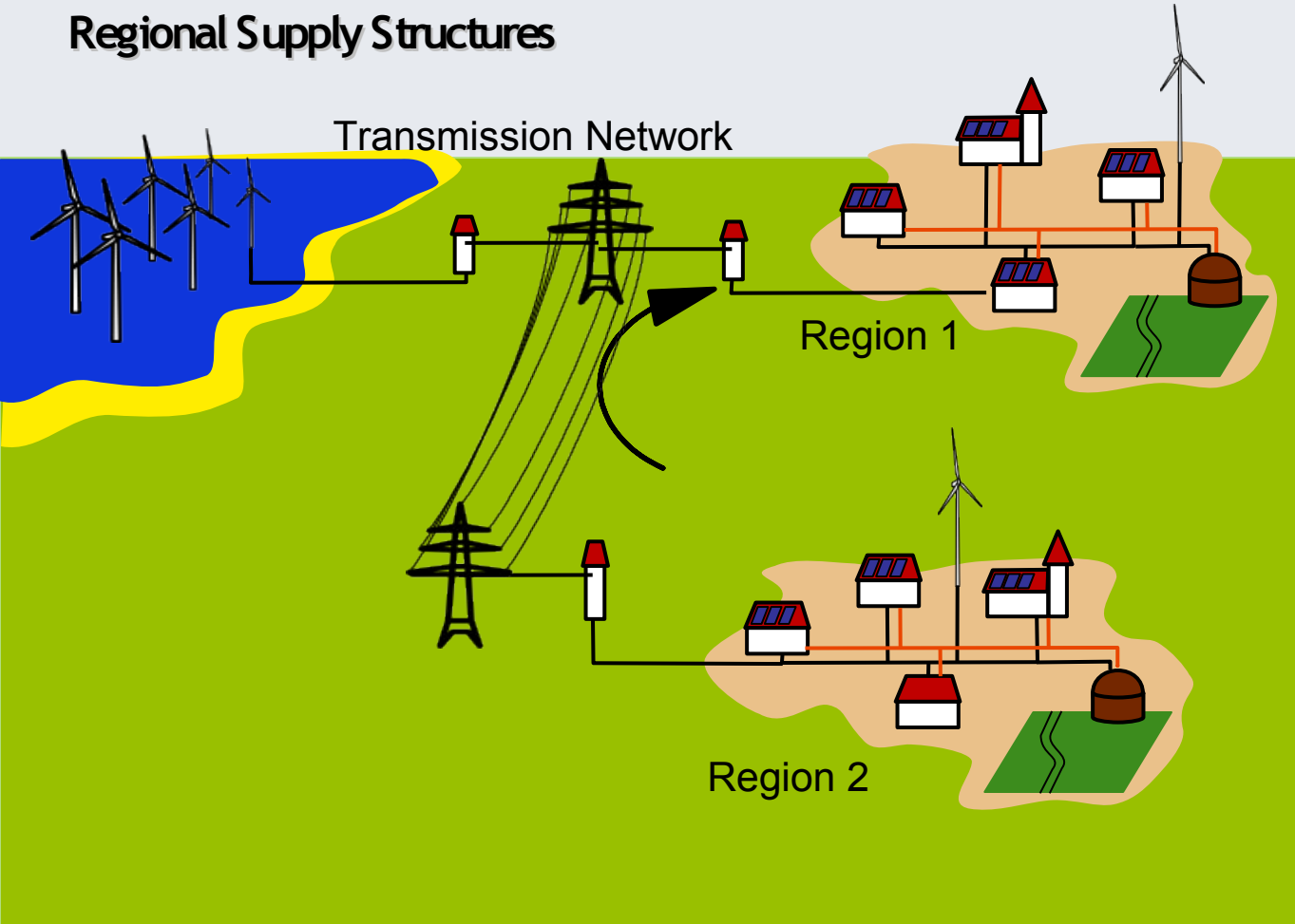
- An increase of energy efficiency requires technological progress as well as completely new user's behaviour
- A massive expansion of RES requires maximum utilisation also of regional RES potentials
- Both requirements are supported by regional supply structures



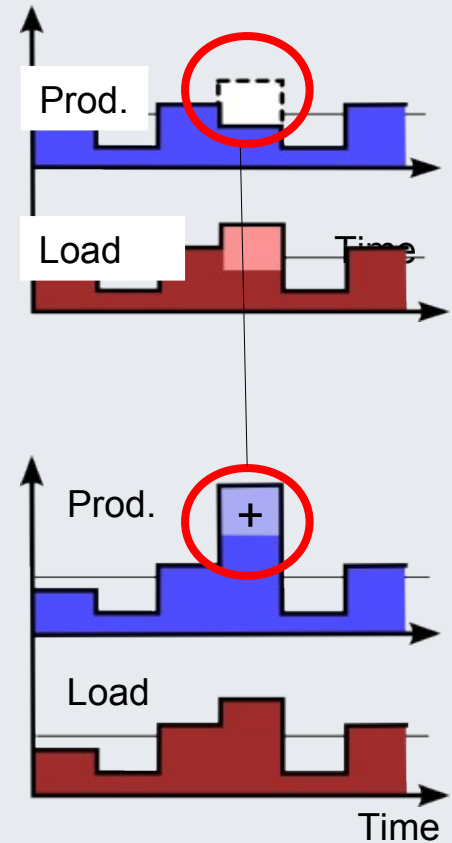


Regions and Decentralization

Regional Supply Structures



Energy Flow (15-min-intervall)





Regional Energy Supply as an Economical Pillar for Regions:

- An all-embracing approach allows the formation of new industrial complexes /clusters
- New structures of supply will be the **economical and social motor for regions** ! Effects on...
 - Work and employment
 - Research and development
 - Construction and habitation
 - Tourism
 - Education and qualification
 - Finance
 - City marketing



- For this reason the regional energy policy is the **centre zone of business development**



Nothern Hesse – a model region

Profile of the region

- 7811 m² (2,1% of Germany)
- 1,2 Million inhabitants
- biggest cities:
 - Kassel (193.000)
 - Marburg (80.000)
- Unemployment around 8%
- biggest Employers:
 - public sector : 118.000
 - car production: around 20.000



www.mygeo.info



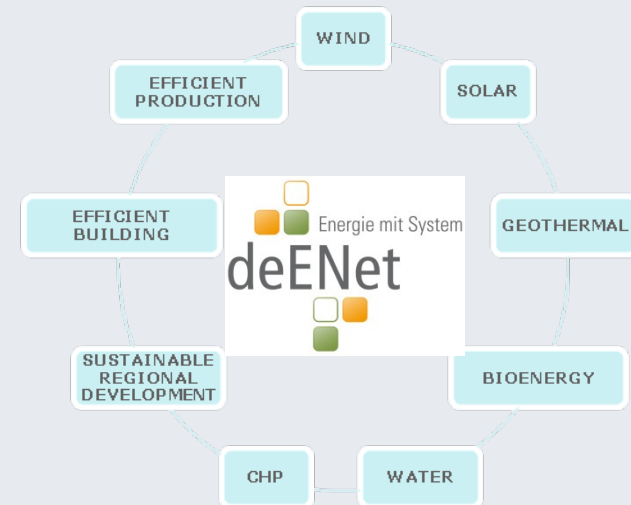
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deENet – Kompetenznetzwerk Dezentrale Energietechnologien e.V.



- covering the value chain in nine fields of competency

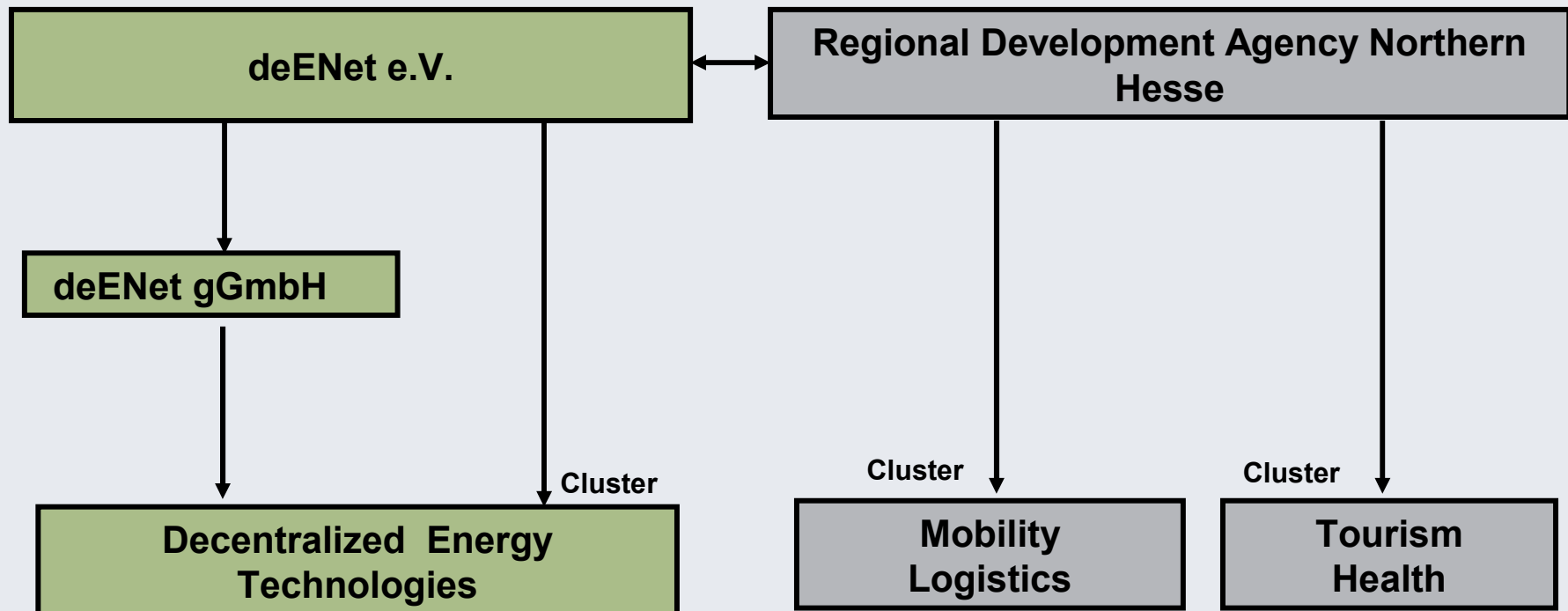
- regional network based in Kassel
- founded 2003
- appr. 110 members (companies, R&D, municipalities)





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Regional cooperation





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SMA Solar Technology AG

- world market leader in solar inverters, monitoring systems
- 680 Million € turnover, 3500 employees (2008)
- Headquarters near Kassel, subsidiaries in 11 countries
- Research activities in
e.g. efficient production facilities, smart grid systems





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ISET at Fraunhofer IWES

- Founded at Kassel in 1988, 2nd subsidiary in Hanau in 1995, part of Fraunhofer since 2009
- Interface to the University of Kassel, Engineering
- 180 engaged people (including students, doctoral candidates,...)
- around 9 mio. € annual budget, mainly funding
- Current research activities cover wind, tidal and solar energy
- www.iset.uni-kassel.de





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synovativ

- innovative energy consulting
- communication and education management for enterprises in the „Green Energy“ sector
- organisation of specific conferences
- energetical strategies for households, enterprises and administration



synovativ

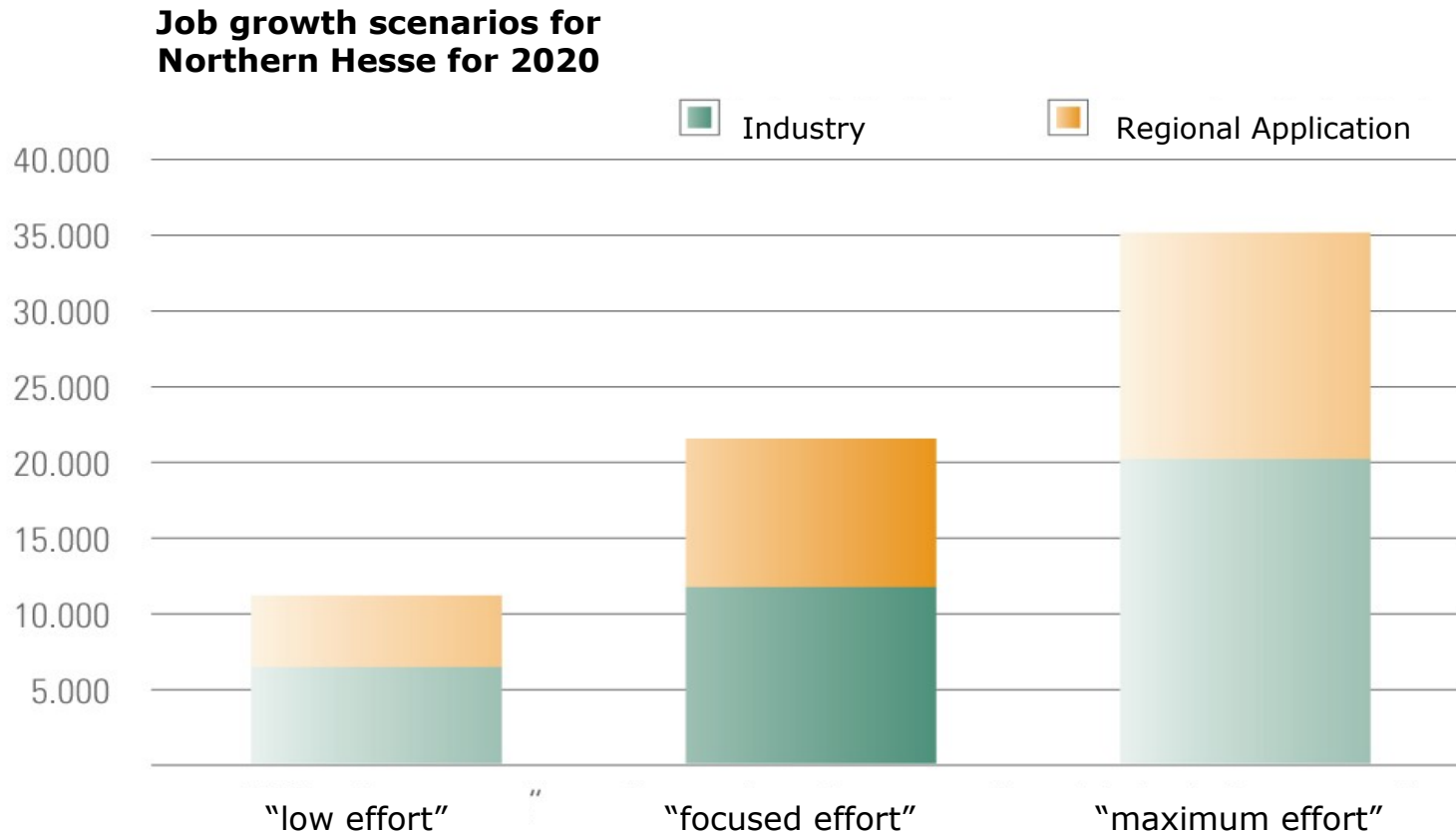
Network services for members

- Promotion of joint activities between companies and institutions
- Running a shared internet platform to present the competencies of members
- Implementation of R&D projects
- Feasibility studies and regional energy concepts
- Energetical training courses for engineers and other specialist staff
- Initiatives designed to open up markets (holding/attending conferences, trade fairs, contact events)
- Supporting regional marketing initiatives



Model projects of deENet

Development of a „Roadmap 2020“ for Northern Hesse



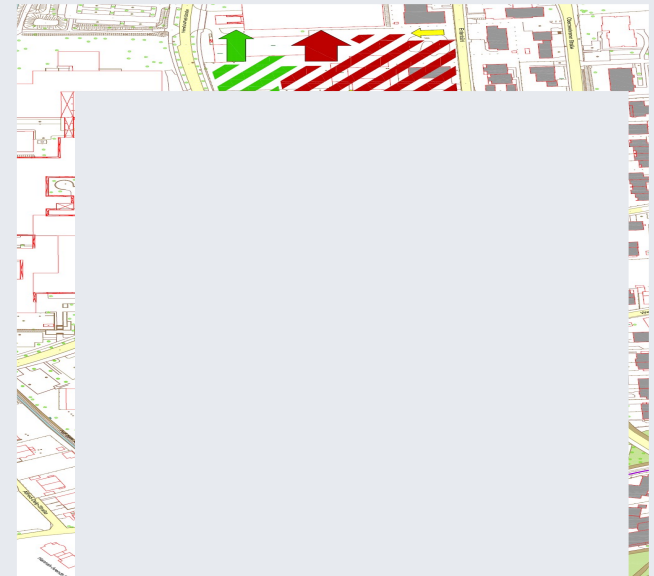


Model projects of deENet

Energy Concept Ecological Settlement Kassel

- Integrated Concept for Electricity, Heating and Cooling
- Energy Demand Calculation
- Heat Insulation Requirements
- Integrated Concept for regional Integration

Customer: Municipality of Kassel
Duration: 2006 – 2008
Partner: ZUB





Model projects of deENet

Carbon neutral Factory

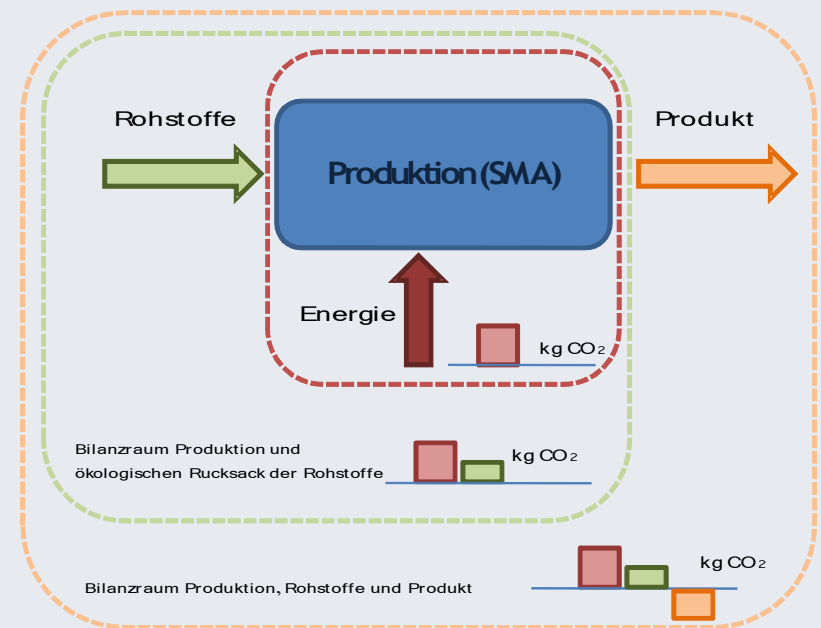
- Building and technical equipment
- Climate efficiency by RES
- Avoidance of CO₂-Emissions

for the product's life-cycle

Funded by: Hessian environmental
Ministry

Duration: 2007-2008

Partners: upp, ZUB, Seeger, SMA





Model projects of deENet

Regional development: KLIMZUG project

- regional joint research project in climate mitigation and adaptation (funded by BMBF)
 - 27 projects – scenario, resources, health, energy, traffic, tourism
 - university&research, companies, municipalities involved

klimawandel
zukunftsfähig | nordhessen
gestalten

KLIMAAANPASSUNGSNETZWERK FÜR DIE MODELLREGION NORDHESSEN



Thank you for your attention!

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