

# Renewable energies' impact on value added and employment in Germany

**Model results for 2012**



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Andreas Prahl  
IÖW – Institut für ökologische  
Wirtschaftsforschung, Berlin

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# 1. Background and Research Objective

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## **Municipalities and regions in Germany**

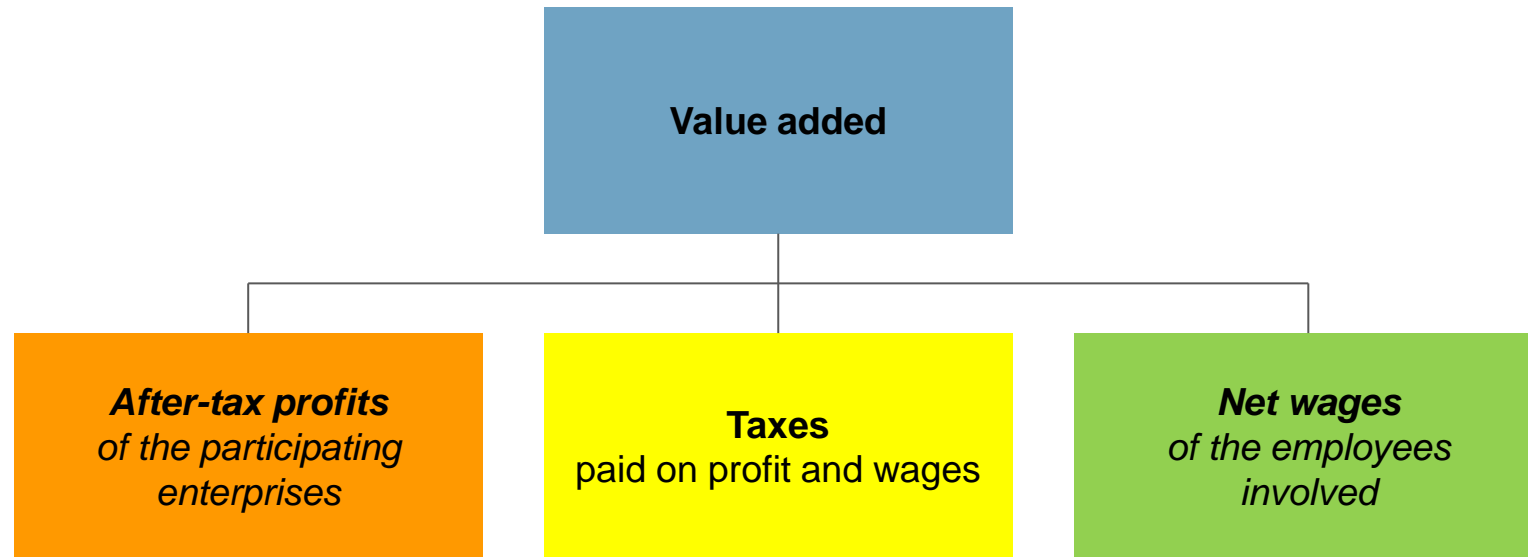
- Many have ambitious objectives with regard to an energy supply system based on RE, often exceeding national targets
- Therefore, they can play an important role in the energy transition
- Motivation: environmental **and** economic

## **Central questions:**

- What is the extent of value added and employment effects (on a local or regional level?) → How much can communities benefit?
- What are the components of value added and what is their proportion? → In which way can communities benefit?

## 2. Methodology: Defining net value added of RE

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## 2. Methodology: Value chain stages and value added components

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## 2. Methodology: Details

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- **More than 30 RE technology value-added chains**  
(electricity and heat generation, provision of wood and biofuels)
  - Value-added chains are derived from the specific cost structures of each RE technology
  - Basis for the assessment of value added: specific turnovers / cost item in relation to the installed capacity (€/kW) / installed collector surface (€/m<sup>2</sup>) / produced amount (€/l, €/t,...)
- Average technology-specific export and import figures are included in the production of technology components

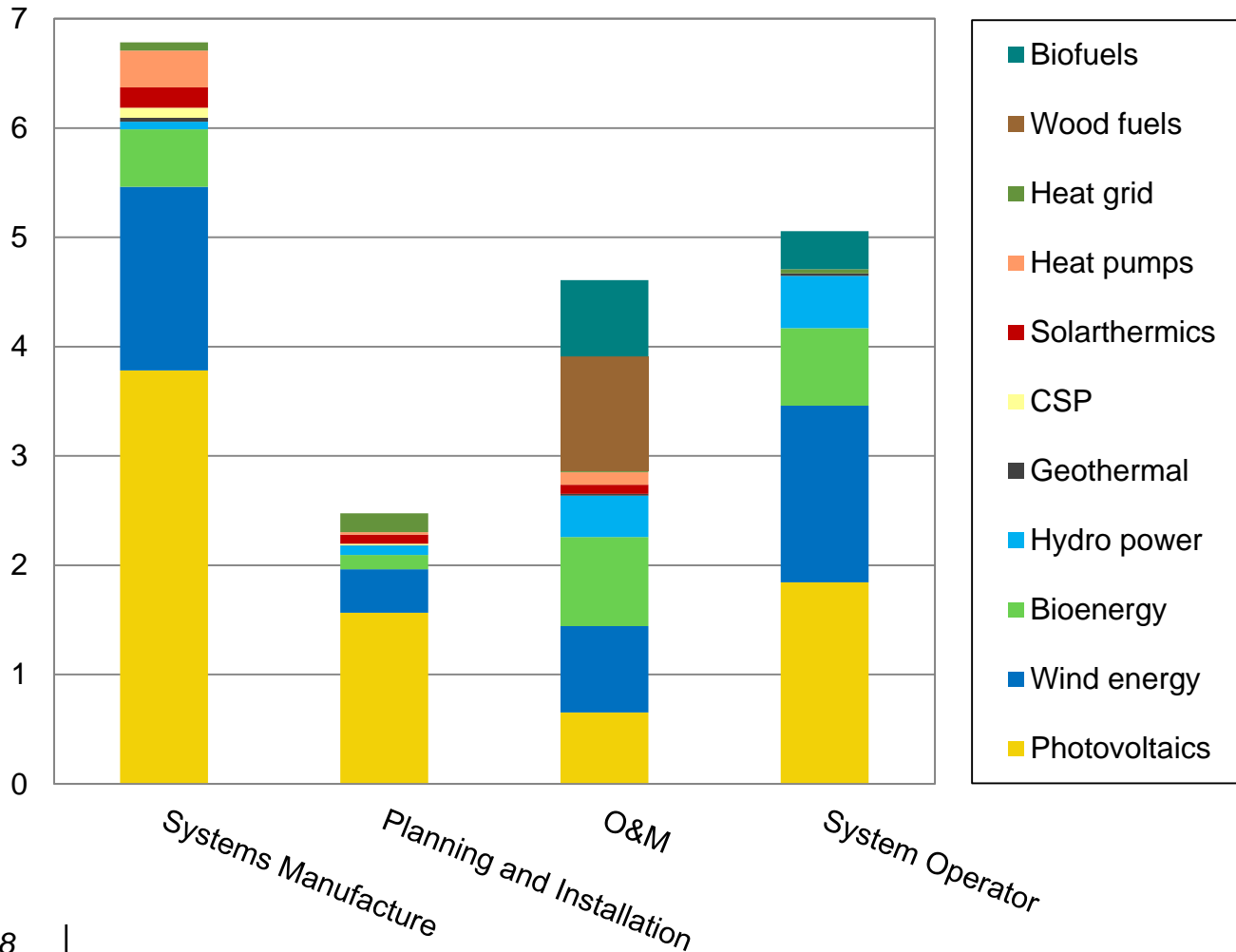
## 2. Methodology: Limits

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- **Only steps in the value chain that are directly connected to the REs are considered**
  - no assessment of indirect effects generated on upstream value-added stages (e.g. screw manufacturer, metal production etc.)
- **Impacts from a substitution or a crowding out of economic activities (e.g. in fossil fuels) due to the use of RE cannot be quantified**
- **Ecological and social aspects are not considered**

# 3. Results: Direct Value Added through RE in Germany 2012 (provisional data)

bn. Euro



Total Net Value Added:  
**18.9 bn. Euro**

Value Added Stages:

Production /Total: 36 %

Planning&Installation/Total: 13 %

O&M/Total: 24 %

System Operator: 27 %

Components:

Taxes: 7.7 bn. Euro

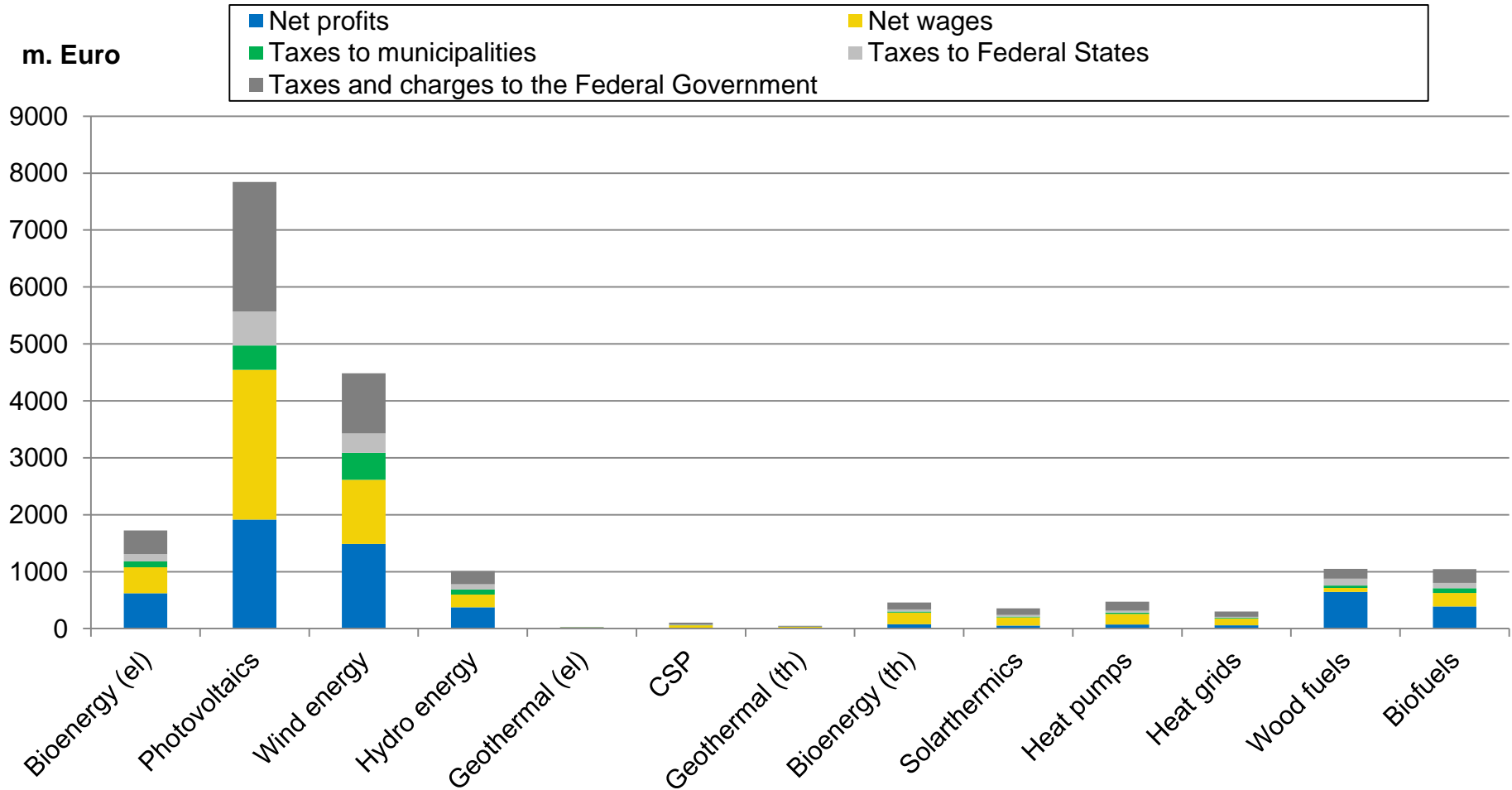
Profits: 5.7 bn. Euro

Wages: 5.5 bn. Euro

177,000 full-time employees

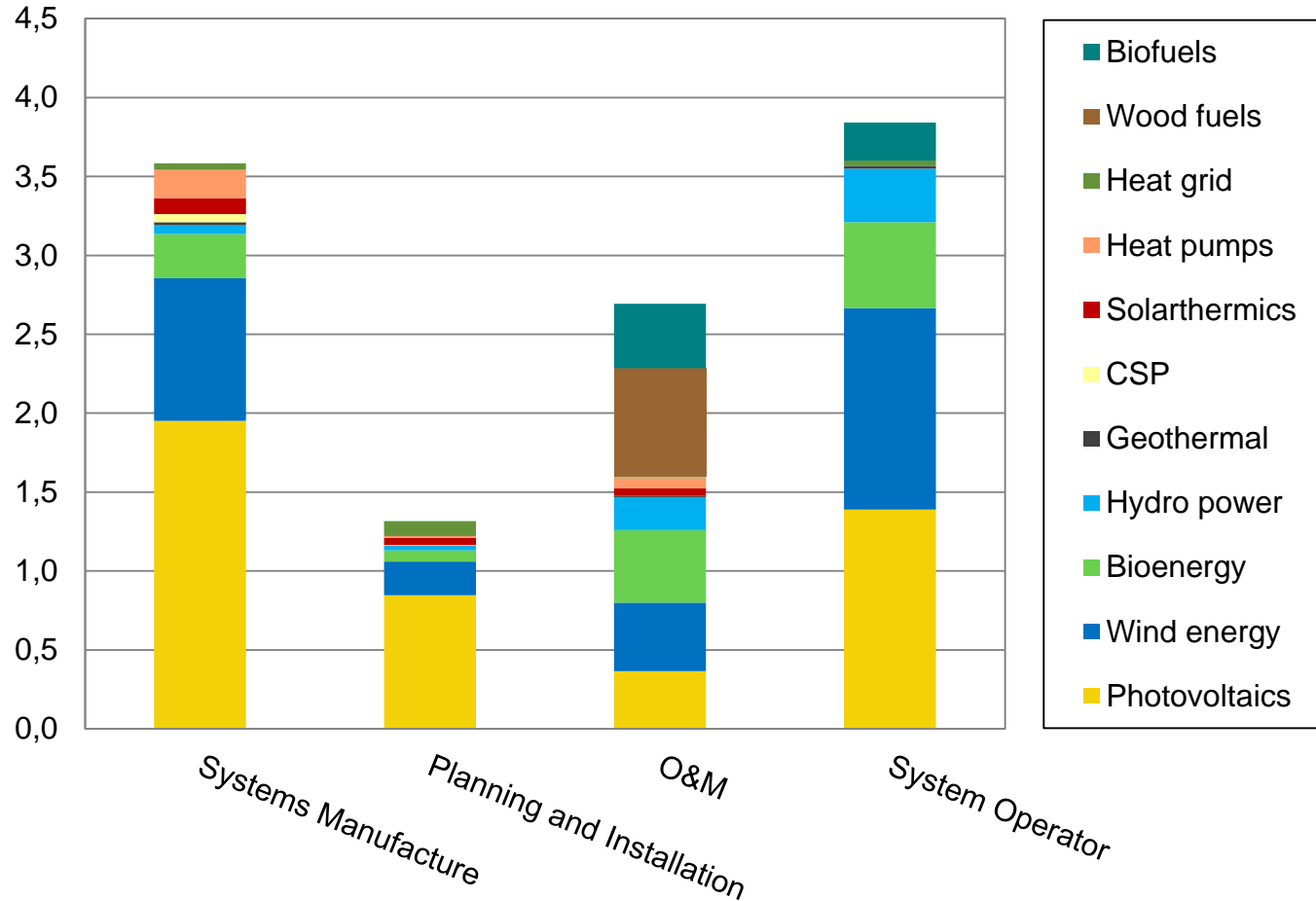


# 3. Results: Direct Value Added through RE in Germany 2012 (provisional data)



# 3. Results: Average community of 75,000 inhabitants (provisional data)

m. Euro



Total Net Value Added:  
**11.4 m. Euro**

Value Added Stages:

Production /Total: 31 %

Planning&Installation/Total: 12 %

O&M/Total: 24 %

System Operator: 34 %

Components:

Taxes: 1.2 m. Euro

Profits: 5.2 m. Euro

Wages: 5.0 m. Euro

162 full-time employees

## 4. Results: Brandenburg 2010/2030

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### – 2010

- 600 Mio. Euro value added by RE in Brandenburg
- RE sector already more employees than lignite (11.500 vs. 5.000 direct employees)

### – 2030

- Nearly 1.2 bn. Euro of direct value added
  - 190 Mio. Euro tax revenue to municipalities and the federal state (lignite: 25 Mio. Euro expected tax revenue)
- Nearly 20.000 employees

Source: Renewable Energy Potentials, Value Added and Employment in Brandenburg 2030

## 5. Conclusion

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- Economic arguments are a central driver for engagement of regional governments and municipalities in RE
- Due to mainly decentralized technologies, RE create possibility for many communities to profit from their introduction
- Effects of value added and employment creation are considerable and can exceed effects from fossil fuels (case Brandenburg)
- Trigger for value creation and employment are local and regional companies engaged in all parts of the RE value chains
  - Planning, installation
  - O&M
  - Local investors (energy cooperatives, municipal utilities, etc.)

# Hinweis: Vereinfachte Berechnung kommunaler Effekte mit dem Online-Wertschöpfungsrechner – verfügbar unter [www.kommunal-erneuerbar.de](http://www.kommunal-erneuerbar.de)

Gute Nachbarn  
Starke Kommunen mit  
Erneuerbaren Energien

Suchbegriff:

Kommune des Monats | Kommunalatlas | Kommunalratgeber | Technologien | Termine | **Kommunale Wertschöpfung**

## Wertschöpfungsrechner

**Willkommen!**  
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**Wie wollen Sie die Wertschöpfungseffekte berechnen?**

nach Jahren

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nach Wertschöpfungsketten

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**Weitere Informationen**

**Renews Spezial**  
Ausgabe 12/7 Dezember 2015

**Kommunale Wertschöpfung durch Erneuerbare Energien**  
Ergebnisse der Studie des  
Instituts für ökologische  
Wirtschaftsforschung (IÖW)

Thank you



Andreas Prahl  
IÖW – Institut für ökologische  
Wirtschaftsforschung, Berlin