

---

# Boosting industrial energy efficiency investments through distributed internal fund in (b2b) Energy Efficiency Networks (EEN)

Panel 5: Business models and financing

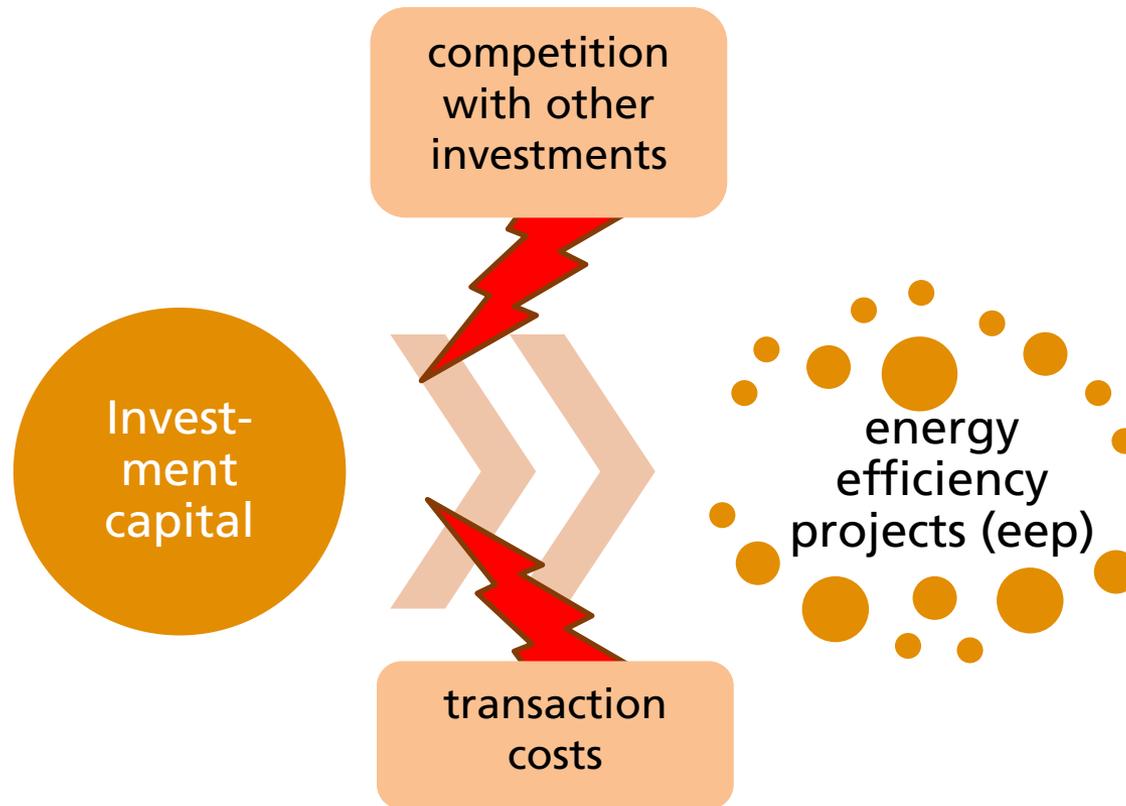
---



Diana Wang  
Martin Reisinger  
Alexander Sauer

Institut für Energieeffizienz in der Produktion  
EEP, Universität Stuttgart

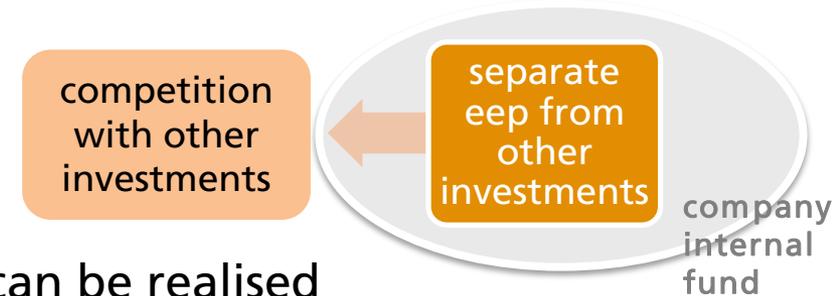
**Both transaction costs and the competition with other investments (especially in production) affect the allocation of investment capital to energy efficiency projects.**



➔ Are there existing approaches addressing those two obstacles?

# Company internal funds and Energy Efficiency Networks (EEN) address both obstacles.

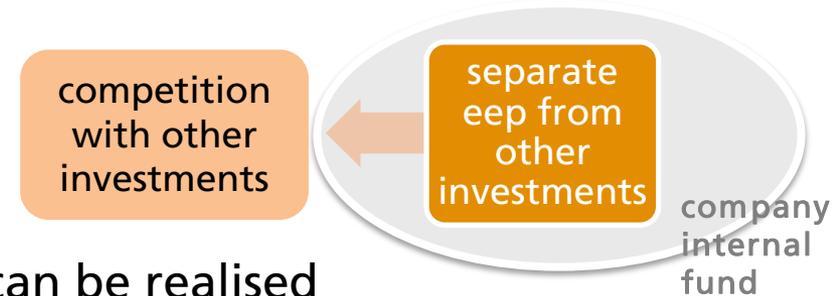
- Obstacle “**competition with other investments**” can be reduced through company internal fund
  - Money of the fund only for energy efficiency investments
  - a wide range of project sizes and ROI (compensatory pricing possible) can be realised
  - savings flow back to the fund and allow further investments



# Company internal funds and Energy Efficiency Networks (EEN) address both obstacles.

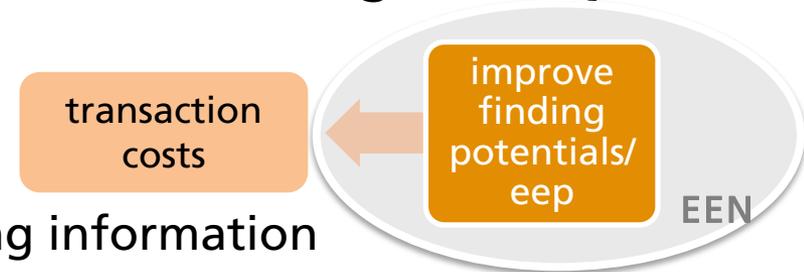
- Obstacle “**competition with other investments**” can be reduced through company internal fund

- Money of the fund only for energy efficiency investments
- a wide range of project sizes and ROI (compensatory pricing possible) can be realised
- savings flow back to the fund and allow further investments



- Obstacle “**transaction costs**” can be reduced through Energy Efficiency Networks (EEN)

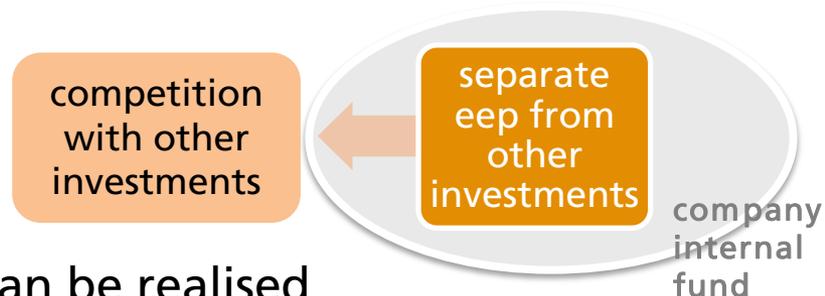
- exchange of experience and information within EEN
- reduces transaction costs for collecting information



# Company internal funds and Energy Efficiency Networks (EEN) address both obstacles.

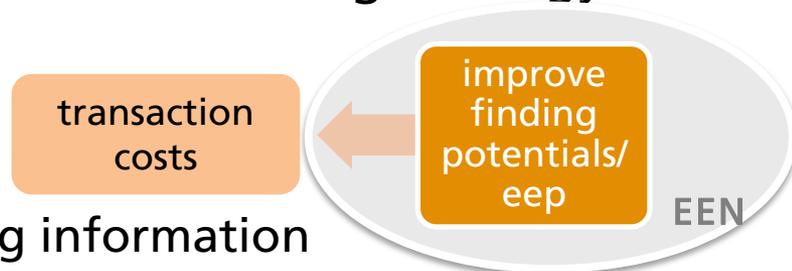
- Obstacle “**competition with other investments**” can be reduced through company internal fund

- Money of the fund only for energy efficiency investments
- a wide range of project sizes and ROI (compensatory pricing possible) can be realised
- savings flow back to the fund and allow further investments



- Obstacle “**transaction costs**” can be reduced through Energy Efficiency Networks (EEN)

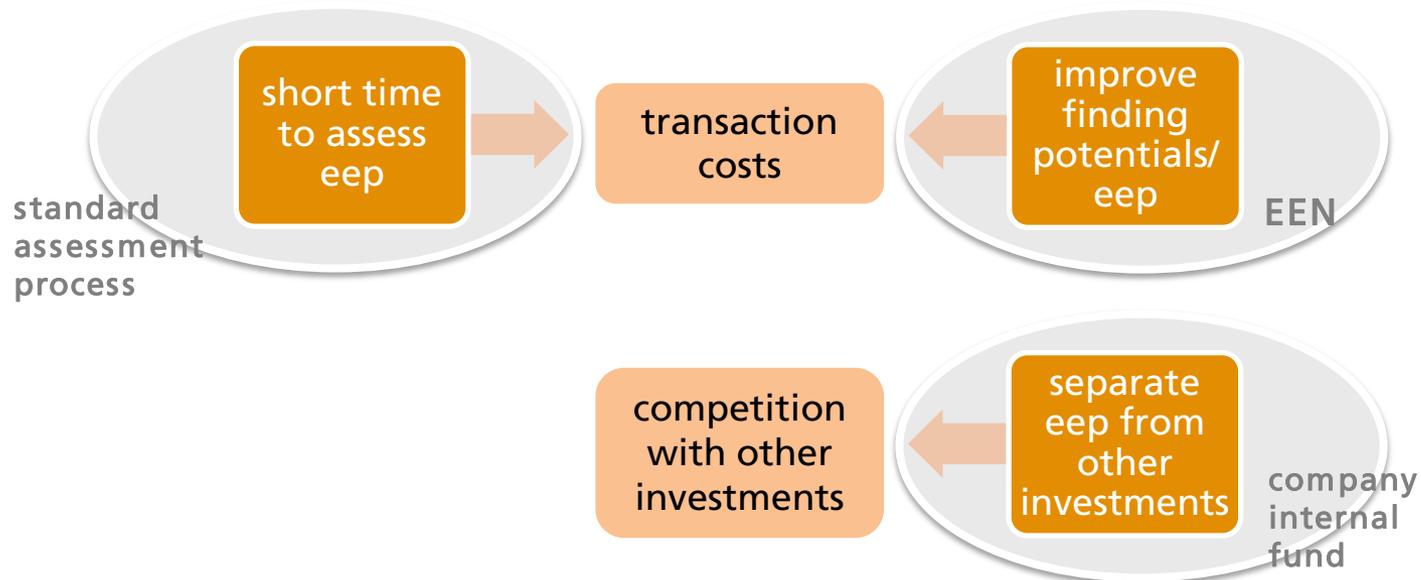
- exchange of experience and information within EEN
- reduces transaction costs for collecting information



- ➔ To boost investments in energy efficiency there are additional transaction costs in financing them. How to address those?

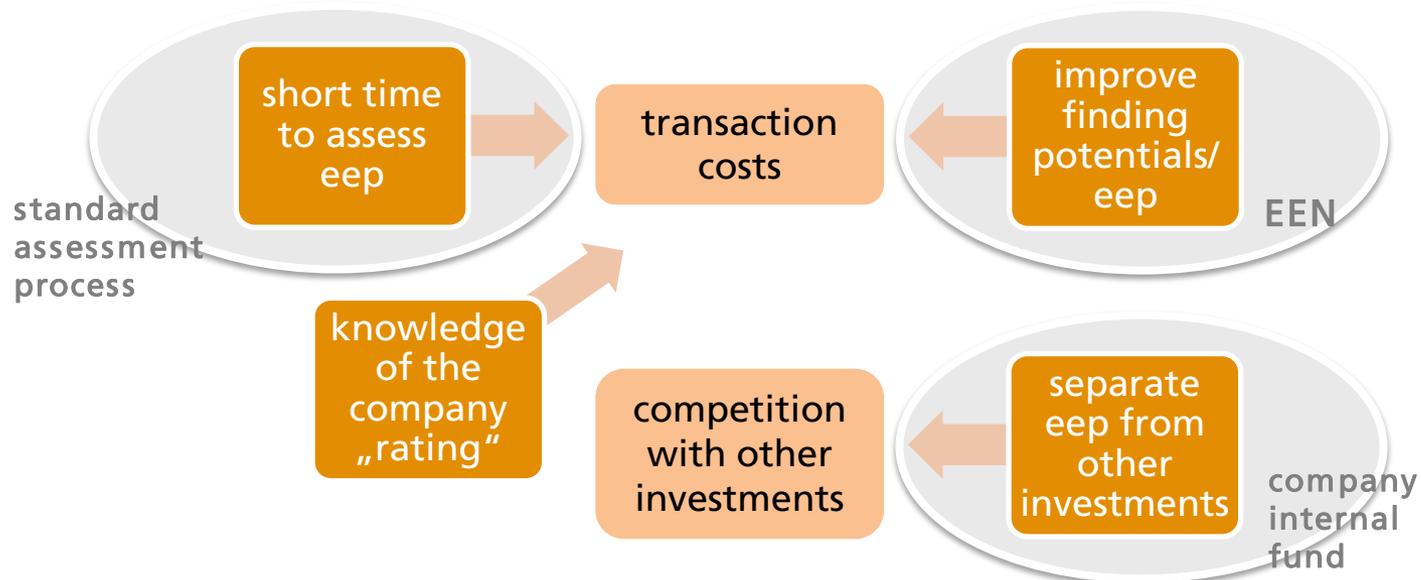
# For (external) financing of eep the obstacle „transaction costs“ is not addressed by EEN.

- „transaction costs“ of financing an eep: the evaluation of each company and each eep generates high transaction costs.
  - transaction costs for the evaluation of each eep can be reduced through a standard assessment process especially in case of external financing



# For (external) financing of eep the obstacle „transaction costs“ is not addressed by EEN.

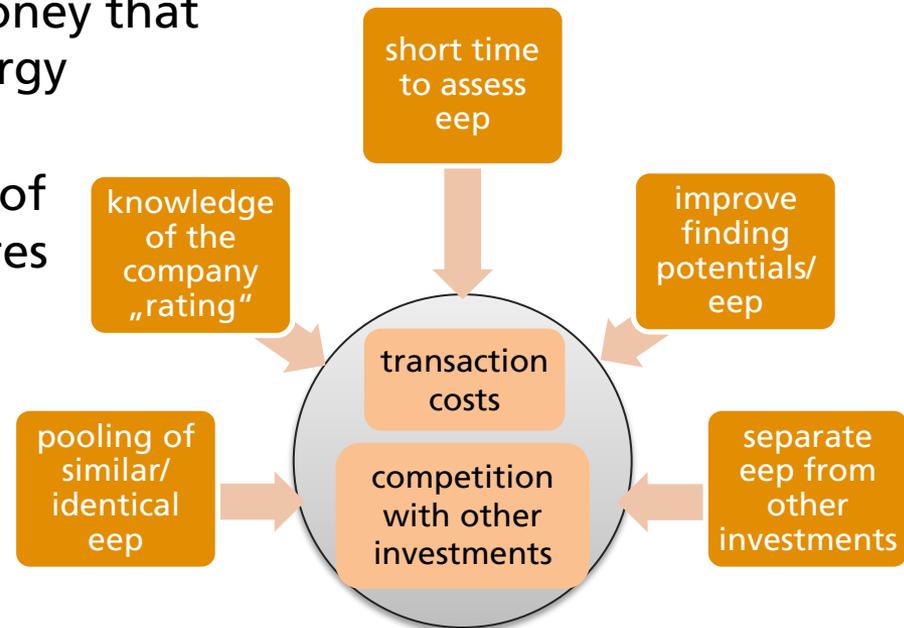
- „transaction costs“ of financing an eep: the evaluation of each company and each eep generates high transaction costs.
  - transaction costs for the evaluation of each eep can be reduced through a standard assessment process especially in case of external financing



➔ How can transaction costs for the evaluation of each company be reduced?

When combining the three approaches there are not only synergy effects but also the possibility to pool eep which in turn also reduces transaction costs.

- Innovative financing concept: **distributed internal fund within/across EEN** consists of a combination of internal fund approach, EEN and a standard assessment process.
  - fund only accessible for participating companies of EEN
  - secures an amount of money that can only be used for energy efficiency investments
  - finances bundles (pools) of energy efficiency measures
  - lower transaction costs through a standard assessment process especially in case of external financing



# Conclusion

- Two main obstacles (transaction costs and competition with other investments within a company) are identified which hinder allocation of investment capital for eep
- Distributed internal fund is a mix of
  - Company internal fund approach
  - EEN: EEN characteristics enhance the effect of internal fund
  - Risk analysis: Not only can transaction costs be reduced, but also the possibility to realise an eep (with external financing) can be increased.
- With an EEN as a framework a risk analysis can be used effectively.
- A “carrot and stick approach” can be used to support the establishment of the 500 Energy Efficiency Networks: Establishing a distributed internal fund within an EEN as a precondition for getting access to funding programs.

# Thank you for your attention.

**Dipl.-Wi.-Ing.  
Diana Wang**

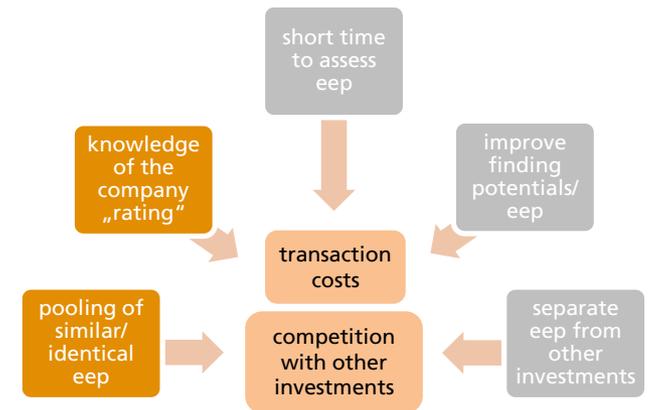
Nobelstraße 12 | 70569 Stuttgart  
Telefon +49 711 970-3839

diana.wang@ipa.fraunhofer.de  
diana.wang@eep.uni-stuttgart.de

www.ipa.fraunhofer.de  
www.eep.uni-stuttgart.de



Through the selection of companies joining the EEN pooling of eep can be facilitated and creditworthy members can be ensured.



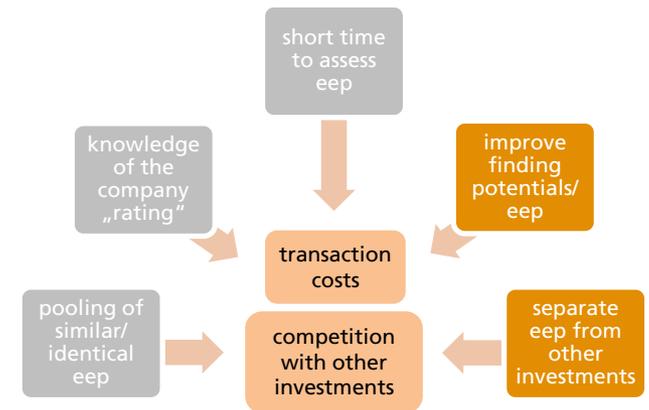
pooling of similar/ identical eep

- Companies joining EEN are generally interested in eep
- If companies are distributed/selected carefully, the possibility of pooling similar/identical eeps rises
- Pooling could be possible across EEN

knowledge of company „rating“

- Companies joining EEN undergo a screening process
- „Rating“ is done during application process
- Creditworthiness is given through membership

# EEN promote the attractiveness of eep through training and enables new evaluation frameworks for investments in eep.



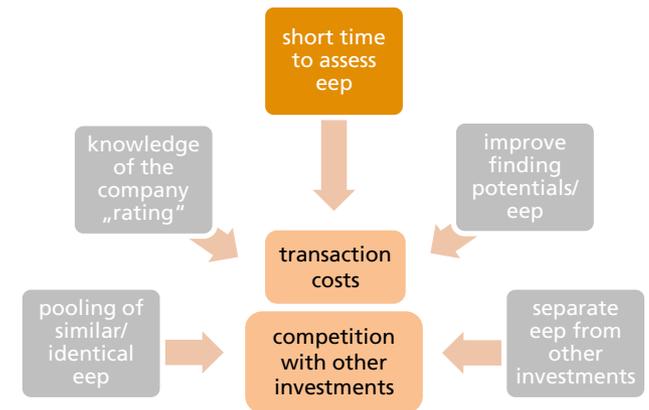
## improve finding potentials/ eep

- EEN support information exchange about energy efficiency potentials
- knowledge about savings/benefits of eep
- awareness of economically viable projects
- higher willingness to invest in eep

## separate eep from other investments

- companies joining EEN removes eep from the context of other investments
- evaluation of investments in eep can be done without only focusing on payback period
- EEN fund makes eep more attractive

# Risk analysis enhances „security“ on both sides: creditor and debtor. A standardised assessment process lowers transaction costs.



short time  
to assess  
eep

- relevant associated risks are assessed/evaluated
- assessment ensures quality and comparability which makes the eep transparent
- thereby creates trust/confidence and eases communication between creditor and debtor
- reduces time for decision makers on both sides
- definition of a „rating“ process only once for each (group of) energy efficiency measure