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Energy efficiency networks as an instrument

- › to achieve climate goals
 - › to realise economically viable efficiency potentials in companies
 - › that has been established in several European countries and beyond applying different standards
- What factors make them successful?
- › First answers based on an empirical study using network evaluation data.

Learning Energy Efficiency Networks (LEEN)

Network-Actors

Network
administrator

Moderator

Engineers

Companies

Network Initiation

Network initiator
contacts potential
participants from a
region

Network
administration and
moderator are set
up

Organisation of
kick-off meeting

Audit and goal-setting

Identification of
possible measures
through extensive
audit

Agreement on
network targets

Within 6 months

Network phase

Regular meetings
(3-4 per year) incl.
Presentations from
external experts,
site tours, exchange
of experiences on
efficiency issues

Annual **monitoring**

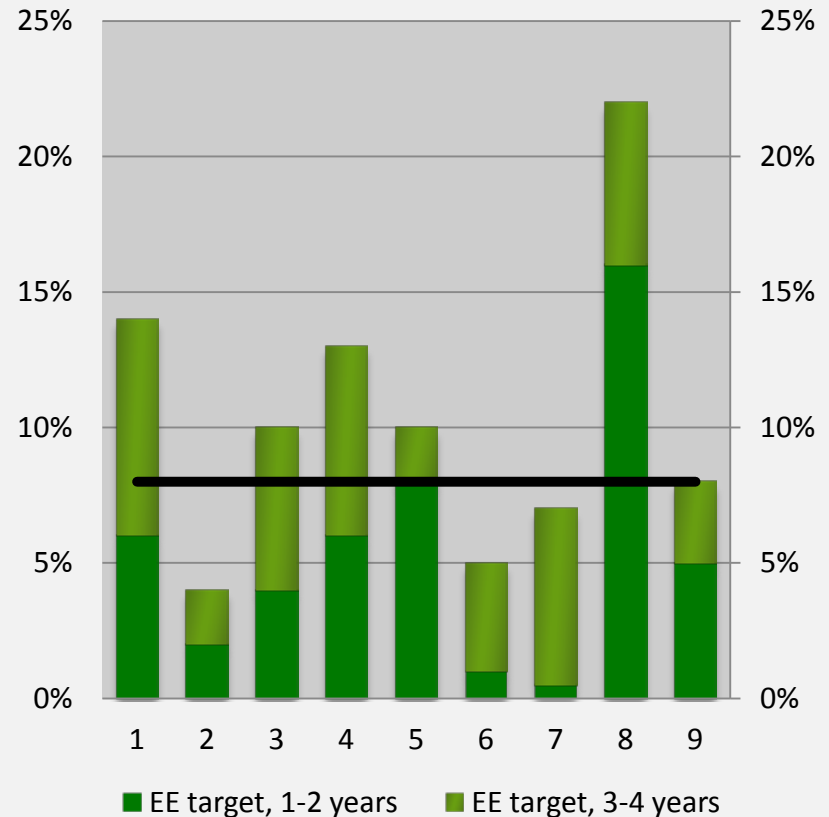
3-4 years

What are the success factors? - *Hypotheses*

- › Audits make profitable potentials visible
 - › *agenda-setting for energy efficiency*
- › Motivation from joint network and company targets
 - › *to sustain motivation*
- › Regular meetings and site visits act like an intensive training
 - › *supporting motivation and increasing knowledge*

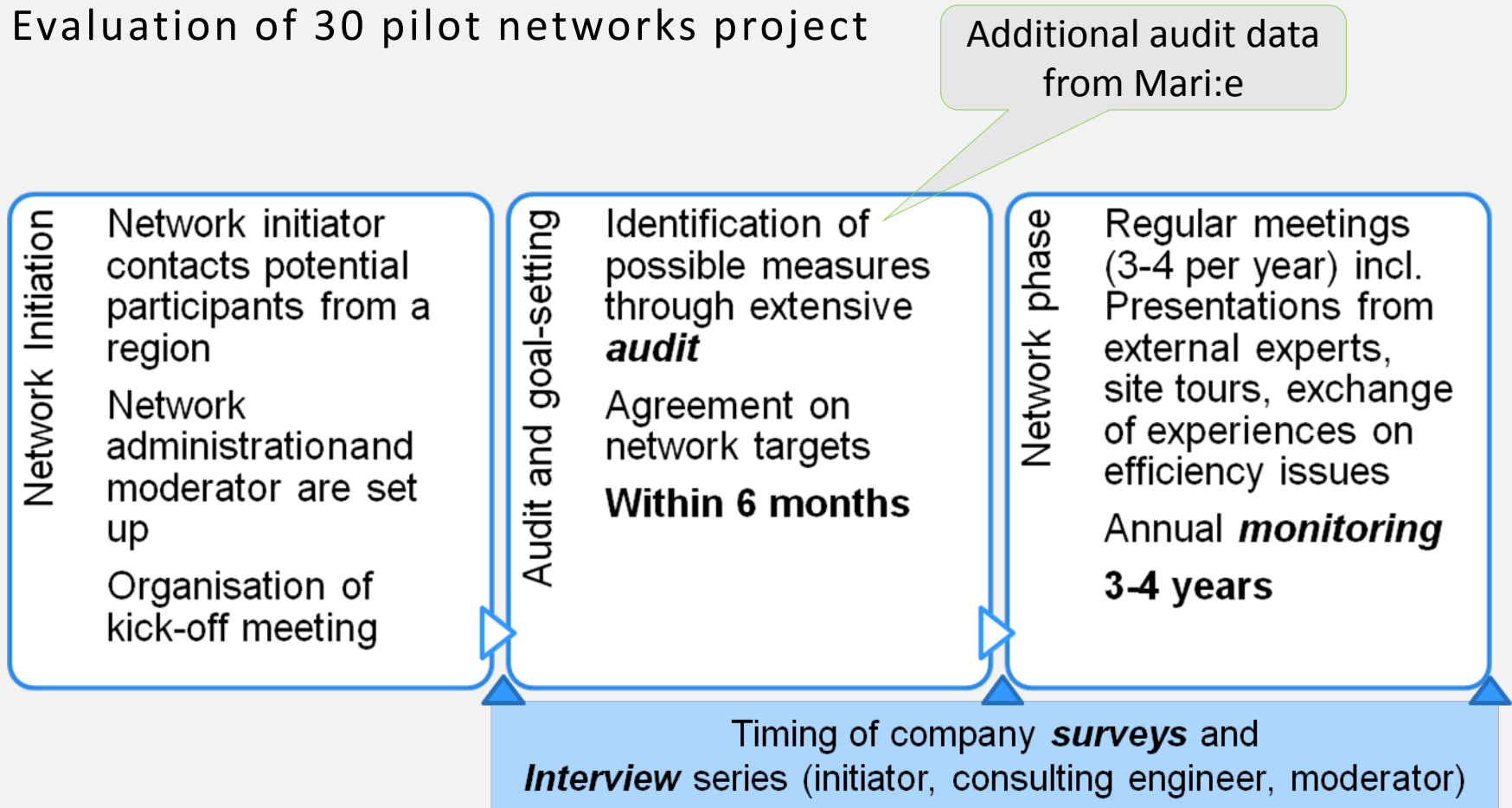


Short and medium term EE targets
Common network target 8%



Methods and data

Evaluation of 30 pilot networks project



Audits make profitable potentials visible (1/2)

› Audit reports from “30 Pilot-Networks” and “Mari:e”

Evaluated reports (measures overview)	400
No. of measures identified	8'050
thereof evaluated in financial terms	7'920
thereof profitable (profitable: IRR larger than 12 %)	3'870
Ø investment per measure [EUR]	40'730
Ø values per organisation/site	
Ø energy savings if all profitable measures realised [MWh/year]	2'520
Ø No. of profitable measures	10
Ø total additional investment realising all profitable measures [EUR]	365'000
Ø reduction of energy cost if all profitable measures realised [EUR/year]	173'000

Audits make profitable potentials visible (2/2)

› findings from the second survey wave

Dependent Variable		Overall evaluation of energy audit standardised regression weight β
Independent variables	Report comprehensive	.371**
	New aspects identified	.174**
	Sufficient length of audit	.192**
	Competent advice	.180**
	Comprehensive advice	.109*
R^2		.556
R		.751**
F		59.4

Dependent and independent variables were rated on a five-point scale, 1=negative rating, 5=positive rating

Cells give β s, i.e. standardised regression weights, from final equation.

Levels of significance are indicated as follows: ** - $p < .001$, * - $p < .050$

R^2 =variance explained; R=regression coefficient

Insignificant independent variables include: whether the audit ... was complex; was well-priced; confirmed earlier expectations; identified immediate measures; needed adequate time effort; was sufficiently specific; report covered relevant topics; report was well structured; report was comprehensible; report was sufficiently extensive.

› interviews with consulting engineers

“They [the participating companies] often no longer see what is under their noses”

Motivation from joint network and company targets

- › interviews with moderators

“It was good to have defined targets! However, I did not have the impression that it was important what these were exactly, when to reach them or how the effort was shared within the network. Maybe this was too abstract.”

- › findings from the second survey wave

50 % agree: no problem defining a target for the company

32 % do not agree

- › interviews by the consulting engineers:

“If there is a participant who is very cautious about this and then makes a critical statement, this influences the whole group.”

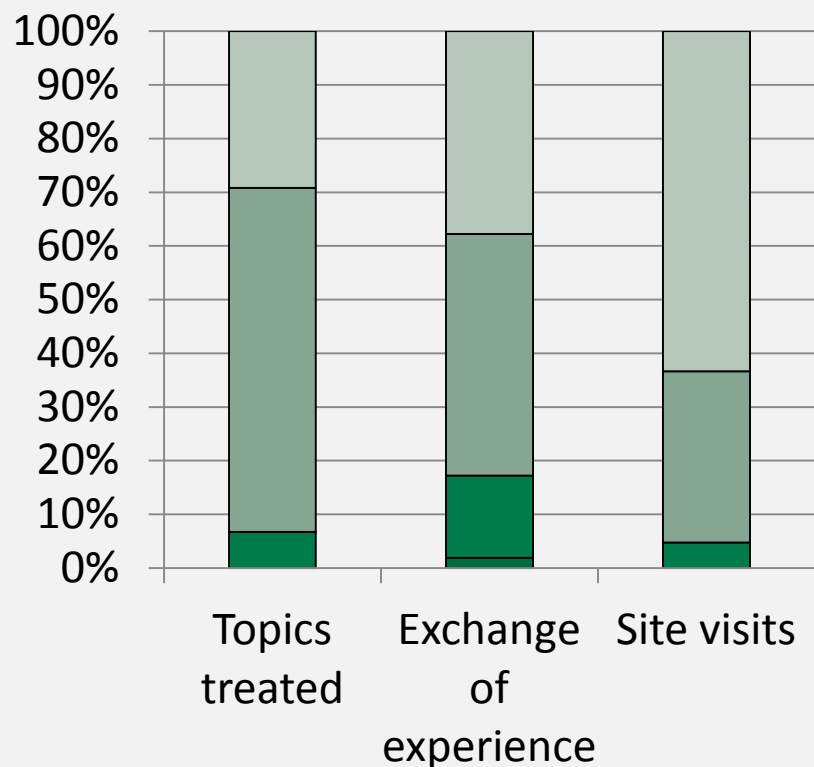
- › Unsettledness in the group

- › Network timeframe repeatedly too short to reach (ambitious) targets
(comments from survey participants and statements in moderator interviews)

- › It might be a challenge to work successfully with targets!

Meetings and site visits as an intensive training

Evaluation of network meetings



Third survey wave

- › 59 % are in contact with other network members outside the network meetings
- › Expectations fulfilled
 - identifying new ideas to reduce energy consumption
 - the exchange with other companies

Moderator interviews:

"[The direct exchange about experiences] is the most important measure."

Summary and conclusion

- › Audits make profitable potentials visible
 - › Motivation from joint network targets?
 - › Regular meetings and site visits act like an intensive training
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- More specific testing in future studies
 - Enhance insights into working mechanisms

Thank you for your interest!

Further information

www.energie-effizienz-netzwerke.de

www.marie.streks.org

www.leen.de

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30 Pilot-Netzwerke für Energieeffizienz und Klimaschutz



Gefördert durch:



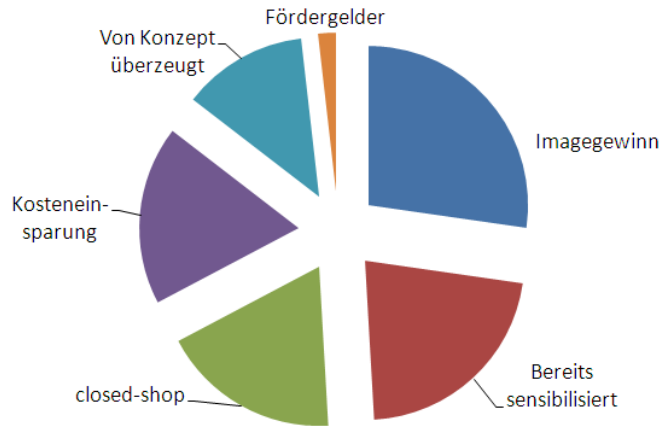
Bundesministerium
für Umwelt, Naturschutz,
Bau und Reaktorsicherheit

aufgrund eines Beschlusses
des Deutschen Bundestages



Why do companies participate in networks?

Motivationen teilnehmender Betriebe



1. Image

- “First Mover” regarding an innovative concept
- Present themselves as a sustainable company (especially those who are watched closely by consumers)

2. 75 % of participating companies state that energy issues have always been important

- Network participation as a consequence of prior engagement, systematic evaluation

- 3. Limited number of participants and confidentiality agreement is precondition for open exchange
- 4. Cost reductions are expected
- 5. Convincing concept: initial energy audit plus exchange of experiences (now changing to continuous monitoring plus exchange)

- Recommendations of trusted contact (z.B. energy company, consulting engineer)
- Recommendations of other (past) participants
- Interesting companies are already participating
- “trial participation” at network meeting

findings from the first survey wave and interviews with moderators

Reduction of transaction costs

