Energy Efficiency Networks: The new unique selling proposition of voluntary agreements?

Antoine Durand
Fraunhofer ISI

eceee Industrial Efficiency Conference, Berlin, 11–13 June, 2018
Side event arranged by Tractebel Engie in cooperation with IPEEC and UNIDO
Voluntary agreements on industrial energy efficiency: key success factors and best practice designs
History of the Energy Efficiency Networks

EnergieModell Zurich (1987)
EnergieModell Switzerland (1990-2002)

Environmental communication and energy efficiency in SME (2006-2009)

30 pilot-networks (2008-2014)
30 EnBW-networks until 2015


EnergieModell Hohenlohe

Mari:e LEEN-SME-Modell since 2012

LEEN 100 plus (2014-2017)

Initiative 500 energy-efficiency-networks (2015-2020)

Energy efficiency-networks in Germany
LEEN-networks in Deutschland
Networks in Switzerland

© Fraunhofer ISI
Page 2
The different phases of a network

- **Energy audit**
  - Energy saving potential

- **Target agreement** (energy saving and CO₂ reduction): at company and network level

- **Monitoring**

- **Regular network meetings and site visits**

- **Year 1**
  - Acquisition if participating companies
  - 1st meeting with energy consultant

- **Year 2**
  - Thematic workshops: e.g. on cross-cutting technologies, introduction of ISO 50001 (Energy Management System), organizational measures,...
Pilot phase: 30 pilot networks project

- Project:
  - Funded by the Federal Ministry for the Environment (BMU)
  - 2008 – 2014
  - Partners: Fraunhofer ISI and IREES

- Average results per participating company:
  - 10 economic measures implemented
  - 2,700 MWh/a Energy savings
  - 940 t/a CO2 reduction
  - 580,000 € total investment
  - 180,000 € annual energy cost savings
Energy Efficiency Networks in Germany: Pillar of the strategy

In Germany, the pilot projects (LEEN and Mari:e) were considered as very convincing.

Energy Efficiency Networks are one of the pillars of the National Action Plan on Energy Efficiency 2014 for the private sector.

See:

https://www.bmwi.de/Redaktion/EN/Publikationen/nape-national-action-plan-on-energy-efficiency.pdf?__blob=publicationFile&v=1
**EEN Initiative (IEEN): Target**

- **Voluntary agreement** between German government and 22 economic associations/organizations to support the foundation of **500 new EENs in Germany** by end of 2020

- **Expected impacts:**
  - Overall primary energy saving and a greenhouse gas reduction of up to **75 PJ** respectively **5 Mt CO$_2$-eq.** (German government assessment)
  - Increase energy efficiency in Germany to improve international competitiveness

EEN Initiative (IEEN): Criteria

Criteria for EEN of the IEEN:

- have been founded after December 3rd, 2014,
- agree to at least 2 years running time,
- have at least 5 participating companies or company sites in Germany,
- be supported by qualified moderators and internal or external energy consultants,
- define a common energy saving target, and
- participate in the monitoring process of the IEEN.

dena (German Energy Agency): head office of the IEEN

Website: http://www.effizienznetzwerke.org
**EEN Initiative: Current results**

- 176 EEN created (June 6th 2018), involving over 1,600 companies

- According to the first results of the mid-term monitoring (2018):
  - Almost all sectors are covered
  - Most of the EEN (around 75%) are regional EEN
  - Quite similar share of companies
    - (< 50 ; 50-250 and > 250 employees)
  - The performance of the EEN of the IEEN are on track in terms of savings
EEN Initiative: Current results

Survey (head office IEEN 2016):

➔ all indicators of the survey show a very high satisfaction of participating companies
Conclusions

The experience in Germany shows that EENs:
- deliver very good performance in terms of savings
  (energy efficiency improvement: x 2)
- are a catalyst for the implementation of EE measures
- are an adequate instrument for companies

And... good news: EEN can be promoted as and integrated in a VA!
- ... and a very successful one (see IEEN in Germany)
- ... if agreed with associations and not directly with companies:
  - it allows to reach many sectors
  - it has the potential to reach companies of different size
  - it allows a flexible approach to promote EEN
- IEEN can also be considered as a good practice for VA (target, a monitoring, evaluation...)
Do you want to learn more on the Energy Efficiency Networks?

Come to Panel 1 “Policies and programmes”
(Wednesday 13 June 2018 | 11.00–12.30)!

<table>
<thead>
<tr>
<th>Panel 1 Policies and programmes</th>
<th>Energy efficiency networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-072-18 (A)</td>
<td>The Swedish National Energy Efficiency Network Program for SMEs – a review of methodology and early experiences</td>
</tr>
<tr>
<td></td>
<td><em>Ernka Strömwall, Swedish Energy Agency, Sweden</em></td>
</tr>
<tr>
<td>1-075-18 (A)</td>
<td>Energy Efficiency networks – first results from the monitoring process</td>
</tr>
<tr>
<td></td>
<td><em>Anton Barckhausen, Adelphi Consult, Germany</em></td>
</tr>
<tr>
<td>1-100-18 (P)</td>
<td>Energy Efficiency Networks: lessons learned from Germany</td>
</tr>
<tr>
<td></td>
<td><em>Antoine Durand, Fraunhofer ISI, Germany</em></td>
</tr>
<tr>
<td>1-121-18 (P)</td>
<td>Effects of the energy audit obligation for large companies in Germany</td>
</tr>
<tr>
<td></td>
<td><em>Michael Mai, IREES, Germany</em></td>
</tr>
</tbody>
</table>
Thank you for your attention!

Antoine Durand
Fraunhofer Institute for Systems and Innovation Research ISI
Breslauer Str. 48
76139 Karlsruhe, Germany
antinoine.durand@isi.fraunhofer.de