# LEARNING ENERGY EFFICIENCY NETWORKS

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## Background

#### **Switzerland**



First network 20 years ago about 70 networks

#### **Germany**



first network in 2002 (Modell Hohenlohe) currently 30 networks at work

#### Framework

#### **Target group** from a local area (short distances)

- 10 15 enterprises, mainly manufacturing
- Min. 150.000 € energy costs / year, max. 50 Mio. €
- Different branches
- No direct competitors

#### Focus cross cutting technologies

- boilers, heat- and steam distribution systems
- Heat recovery
- Compressed air
- lighting, ventilation, cooling and air conditioning

Generally no process technologies



#### Benefits

- Good cost/benefit ratio by common use of project infrastructure
- Participation on Best-Practice-Examples
- Reduction of search and decision costs
- Independent evaluation of the measures
- Continuous monitoring
- Increased credibility in climate protection activities
- Continuous improvement of staff qualification

## Energy Efficiency Networks in Germany



- May 2010: approx. 40 Networks (equals 450 companies)
- Target 2020: up to 700 Networks
- Market potential EU: up to 3,000
- Market potential US: up to 3,000

### LEEN-Network process

## Phase 0 (3 to 9 month)

## Acquisition Meetings: LEEN-Concept

- organisation
- process
- costs

Letter of Intent/ Contract

Official Start of Network

## Timeframe 3 to 4 years

Phase 1 (3 to 6 month)

identification of profitable energy savings:

- initial questionnaire
- site inspection
- initial savings report

#### **Target agreement**

- Energy reduction
- CO<sub>2</sub>-reduction

Phase 2 (3 to 4 years)

Continuous network meetings (3 to 4 meetings per year)
Content:

- site inspection
- lecture on an efficiency topic
- presentation of realized measures
- general exchange of experiences

Phase 3 (1 month)

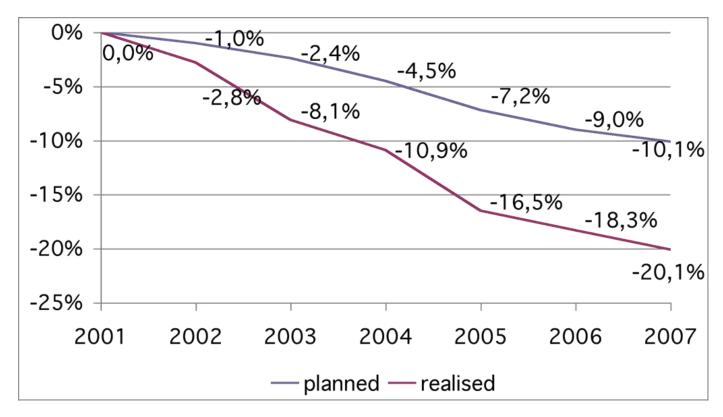
- communication on results
- Decision, if network will be continued

**Monitoring of results** 

**Communication on network activities** 



## **Energy Savings**



- Based on 9 companies
- Energy cost reduction: 120.000 €/a
- CO<sub>2</sub> recuction: 17.000 t/a
- Profit per reduced ton of CO<sub>2</sub>: 10-20 €



#### Conclusion

LEEN offers a Management-System to set up and run Energy Efficieny Networks. The LEEN-System includes a variety of computer based calculation tools (e. g. pumps, electrical drives, compressed air, lighting systems) as wells as Management Guidelines.

The launch of the LEEN-System is currently supported by the the German Environmental Ministry (BMU).