





#### CONSULTANCY WORKSHOP

Capacity development activities for Vietnamese public institutions with duties and functions on Energy Efficiency

# Energy-Efficiency and How to Get There: The Role of Capacity Development Through Collaboration

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## Christopher N. Müller – Energy & Climate Policy

- MSc. Business & Development Studies (Copenhagen Business School)
- Advisor at Business & Industry Advisory Committee to the OECD (Paris)
- Representation of Electronics MNE to the European Union (Brussels)
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  - Green Electrification
  - Green Hydrogen
  - Energy Market Design/ Energy Prices
  - Energy-Efficiency
  - •







# **ZVEI – Electro and Digital Industry Association**

Approx. 160 Employees

> 5.000 Members (approx. 90% of employees of E&D industry in Germany)

Almost 900.000 employees in GER + 800.000 globally

> 30% of national industry innovation in or enabled by our industry

20 Billion € R&D Budget annually

6 Billion € are invested annually

Revenue: > 180 Billion €







## Who is the Electro and Digital Industry?

Technology provider enabling green, efficient and digital solutions

For Industry, Mobility, Buildings and more ...

Multinational Enterprises and Hidden Champions

#### **Components for EE**:

- Pumps
- Fans
- E-Motors/ Speed drives
- Lighting
- Semiconductors
- Batteries
- Control cabinets

· ...



## Industrial and process automation







## Agenda: Energy-Efficiency

1)

Relevance & Instruments

2)

#### **Capacity Development:**

- Energy Efficiency Networks in Germany







## 1) It's the Energy, stupid!

#### **Every unit of energy not consumed is:**

- Money saved by consumers (firm-level viel)
- Money saved by the system (economy-level view, dual dividend)
- Saved CO<sub>2</sub>-emissions (environmental view)
- Reduced energy consumption ( (geo-)political view)

There are economic, political and environmental reasons for the efficient use of energy!







DEUTSCHLAND MACHT'S

**INITIATIVE** 

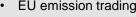
**NETZWERKE** 

**ENERGIEEFFIZIENZ** 

## 1) Instruments for Energy Efficiency

- Energy consulting for medium-sized businesses
- Competitive tendering program - STEP up

- Energy audit obligations
- **EU Ecodesign Directive**
- EU emission trading



Quantitative **Financial** assistance measures



Regulatory measures



Electricity tax

Price measures



Initiative Energy Efficiency Networks

Information & advice



Broad-based and well

networked energy

research

Research & development

Source: BMWi, dena

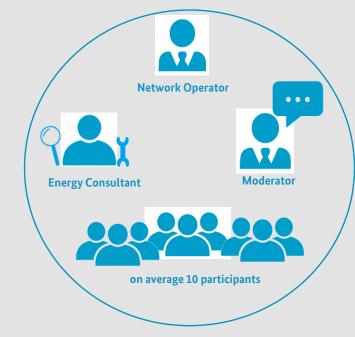






## 2) Energy-Efficiency Networks in Germany

- Energy Efficiency Network (EEN) is a voluntary, systematic, goal-oriented and non-bureaucratic exchange of experiences and ideas between its different participants (companies, company-sites, municipalities, etc.).
- Participants define an energy-saving goal for the entire network. This goal is based on the addition of the single energy-saving goals of each participant based on energy audits or similar procedures.
- For a successful exchange and to obtain the best results, the network activities are followed and supported by experts (operators, moderators and energy consultants) during the entire running time (usually 2-3 years).







Implemented by

Deutsche Gesellschaft für Internationale Zusammenarbeit (SIZ2) GmbH

#### 2) EEN - Structure



#### **Network Operator**

- Acquire network participants
- Propose of moderators and energy consultants to network participants
- Administrate the network (contracts etc.)
- Public relations

Possible actors

Tasks

- Industry associations
- Chambers
- Municipalities
- Service providers
- Energy agencies
- Companies of any kind and sector
- and others



- Organization and moderation of network meetings
- Serve as mediator between network participants
- Ensure exchange without sharing sensible information
- Qualified person from an organization of any kind and any sector
- Network operator (if qualified)
- Energy consultant (if qualified)



- Provide technical advice to network participants
- Help network participants to identify energy-efficiency measures
- Qualified energy consultant
- Qualified internal employees
- · Qualified external person



- Exchange experiences
- Identify and implement energy efficiency measures
- Define energy-saving goals
- Participate at the monitoring/evaluation of network results
- Companies of any kind and any sector
- Municipalities
- and others







#### 2) EEN Initiative with broad Stakeholder support

- 2014 2020: Initiative Energy Efficiency Networks (IEEN) → first period
- 2021 2025: Initiative Energy Efficiency and Climate Protection Networks → second period
- Broad industry support:



Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit































































### 2) EEN in Numbers

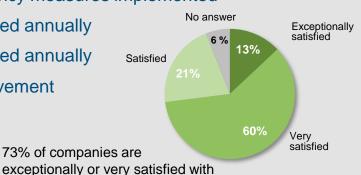
> 300 EENs (first period, 2014 - 2020)

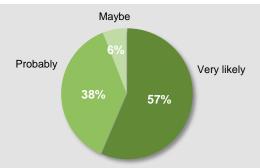
#### On average per EEN:

- 11 participating companies
- 41 energy-efficiency measures implemented

their network

- 31.000 MWh saved annually
- 12.000 t CO<sub>2</sub> saved annually
- 111% goal achievement





95 % of companies would recommend network participation to other companies

Survey results among EEN-participants (2016)







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### Thank you for your attention

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