Energy Efficiency in Industry: What’s happening in Europe

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This presentation

• Introduction
• Some industrial energy data and trends
• EU instruments & (national) examples
  • Legislation
  • Collaboration
  • Subsidies
• Some EU results
RVO & IEA

- Netherlands Enterprise Agency (RVO): Part of the Dutch Ministry of Economic Affairs core business is policy implementation.
- Some activities:
  - (EU)subsidies, sustainable business support & development aid.
  - international collaboration (IEA, EnR with Odysee/Mure, TAFTI)

- International Energy Agency:
  - Multi national collaboration, among the members: Canada & The Netherlands
  - Secretariat in Paris with permanent staff
  - Technology network > 6000 researchers (public and private) working in specific topics like solar, smartgrids, DSM etc.
  - Coordination groups for specific topics like industry: Carol Burelle
Energy use EU

- Fishing, agriculture, forestry and non specified
- Services
- Household
- Industry
- Transport
Energy consumption of industry by branch (EU)

Source: Eurostat / EnerData
EU instruments for Energy Efficiency

- **Legislation**
- Policy Plan: EU Energy Market
- Directives:
  - Emissions Trading System *(ETS)*
  - **Ecodesign**: minimum mandatory requirements for energy efficiency of these products
  - **Labelling** Directive: complements Ecodesign.
  - **EED**: energy efficiency directive

- **Collaboration**: Concerted Action **CA ESD**

- **Subsidized RDD&D projects**: Intelligent Energy Europe / Horizon2020
Example legislation: EED & Industry (Article 8)

“To be implemented and supervised by independent authorities under national legislation by the end of 2015”

Energy audits and energy management systems.
- Mandatory for all large enterprises to carry out energy audits (or equivalent).
- Programs to encourage SMEs to undertake audits and implement recommendations.

(Source: Odysee-Mure 2015)
But there are “always” exceptions/alternatives

Status of Article 8 national level implementation

(Source: Odysee-Mure 2015)

- **Risk to business & Governments:** Potential that nations will fail to meet Article 8 requirements, but may have to comply by 5th December 2015

  - Greece, Hungary, Latvia, Lithuania, Luxembourg, Portugal, Slovenia

- **Risk to business:** Some parameters / aspects known but not fully defined and implemented. Likely to have to comply by 5th December 2015

  - Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Ireland, Italy, Malta, Poland, Romania, Slovakia, Spain, Sweden

- **Risk to business:** Parameters / aspects of legislation known but differ by nation

  - Austria, Denmark, Germany, Netherlands, United Kingdom
Alternative: long-term agreements in the Netherlands

Agreements with industrial branches since 1999. The main elements of the LTA3 are:

- An overall goal of 30% energy efficiency improvement in the period 2005-2020;
- Trade branches will produce sector roadmaps aimed at long-term innovation in the field of energy efficiency; and
- The Dutch government supports the private sector with a number of instruments which are developed and maintained by the RVO.nl
- Greentax is refunded
- Green deals as extra support
Where are the chances

“I need you to improve our Chain”

“I can learn from your approach”

“Your waste can be my feedstock”
Results Longterm Agreements 3 2005-2014

Ambition 2020

Ambition process efficiency 2020

Process efficiency  Chain efficiency  Renewable energy
Collaboration: Concerted Action

EU subsidises member states meetings/surveys to learn from each other
Main reports are freely available
Example EU Subsidized RDD&D projects

**Horizon 2020:**
- 80 billion € 2014-2020
- Several topical sections with dedicated budgets
- “Industrial Leadership” is one item.
- Tender procedure
- Open for multilateral consortia
Example of a running subsidized project.

- **STEAM UP** aims to assess the substantial and easy to reach energy-saving potential of steam systems in heavy industries, to support the EU objectives for energy efficiency.
- To this end, STEAM-UP is going to present concrete business cases to decision makers, based on 75 detailed audits from several European countries.
- A capacity building program for technical staff and consultancies ensures a good return on investments.
A valuable option

✓ **Total cost** of steam operation is known in 31%
✓ 77% thinks cost for steam operation can be reduced
✓ **Cost saving opportunities:** In 40% known, in 31% also management knows

potential cost reduction
Some results

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Until 2007, energy consumption grew less rapidly than Value Added in all countries → intensity decrease.
- This trend continued after 2007 in **17 countries** with:
  - a faster decrease in 7 countries (generally countries with an industrial growth).
  - a slower trend in 11 countries and at EU average (1.1%/yr compared to 2%/yr before).
- In **11 countries**, the intensity trend has reversed since 2007, due to the fact that energy consumption did not follow the reduction in activity.

(Source: EnerData/Odysee-Mure 2015)
Conclusions

• EU industry improved intensity by almost 19% between 2001-2011
• Reduction is slowing down.
• There is no silver bullet when it comes to an industrial approach.
Q&A