Europe & Energy Efficiency
Realizing the Potential of Energy Efficiency: Overcoming Barriers

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This presentation

- ECEEE
- EU
  - Climate- en energy targets
  - Recent EU-energy policy
- Overcoming Barriers?
We generate and spread knowledge on Energy Efficiency by:

- Summer studies
- Policy briefs
- Cooperation
- Participation in EU projects
- Electronic Newsflashes
- Conferences
- etc……
How do we get there.. in the EU

- **Experiment**
  - Framework programmes, IEE (Intelligent Energy for Europe)
- **Negotiate & Legislate**
- **Implement**
  - Translate
  - Enforce National Implementation
- **Monitor & Evaluate**
- **Improve & Enforce**
EU: Energy policy trends

Before 1990:
- Energy policy on national level
- Security of supply on OECD (IEA) level
- European R&D programmes

After 1990 (liberalisation, Climate policy):
- Liberalisation energy market
- Goals on RE / EE
- Programme's on sustainability & efficiency
- Participation in UNFCCC
- Frontrunner in international climate policy
- Frontrunner on emission trading
IEA Alternative Policy Scenario: Global Savings in Energy-Related CO₂ Emissions

- Increased nuclear (10%)
- Increased renewables (12%)
- Power sector efficiency & fuel (13%)
- Electricity end-use efficiency (29%)
- Fossil-fuel end-use efficiency (36%)

Improved end-use efficiency of electricity & fossil fuels accounts for two-thirds of avoided emissions in 2030
The EU is working on it…

EXAMPLES of possible savings

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<table>
<thead>
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<tbody>
<tr>
<td>Electricity production and cogeneration</td>
<td>70 Mtoe</td>
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<tr>
<td>Extension of buildings Directive</td>
<td>30 Mtoe</td>
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<tr>
<td>Eco-design</td>
<td>30 Mtoe</td>
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<tr>
<td>Transport</td>
<td>45 Mtoe</td>
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Energy intensity (toe/M€95)-2003
The EU is working on it…

- April 2006: Energy Service directive (ESD)
- January 2007: Communication “Towards a European Strategic Energy Technology Plan”
EU Action plan EE - 10 priorities

- Minimum efficiency standards appliances
- Energy production & distribution more efficient.
- Emission standards for new cars
- Financial support ESCO’s & SME’s
- Energy efficiency support for new Member States.
- Change energy tax directive
- Raise Public Awareness EE
- Covenant with majors – Exchange best practices
- International EE agreement
## EU targets vs. Dutch targets

<table>
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<tr>
<th>EU targets</th>
<th>Dutch targets</th>
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<tr>
<td>20% Energy Efficiency in 2020 (= 390 Mtoe)</td>
<td>Energy Efficiency increase 1% to 2% per annum</td>
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<td>20% Sustainable Energy in 2020</td>
<td>20% Sustainable Energy in 2020, based on cost effectiveness and realized potential</td>
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<td>20% less CO2-emissions in 2020 (30% in 2020 by international agreement)</td>
<td>Reduction emission greenhouse gases with 30% (2020, 1990 base year)</td>
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<td>10% bio fuels in 2020</td>
<td>10% bio fuels in 2020 if:</td>
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<tr>
<td></td>
<td>- sustainable</td>
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<tr>
<td></td>
<td>- cost effective</td>
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<tr>
<td></td>
<td>- 2nd generation bio fuels available</td>
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Overcoming barriers

Energy
Manufacturer
Model
More efficient
A
Less efficient
Energy consumption kWh/year
(Based on standard test results for 24h)
325
Actual consumption will depend on how the appliance is used and where it is located
Fresh food volume
190
Frozen food volume
126
Noise
(dB(A) re 1 pW)
Further information is contained in product brochures
Norm EN 15350:1990
Refrigerator Label Directive 92/75/EC
Overcoming Barriers

- Start Now…Energy Services Directive (1)
  - Promote cost-effective energy efficiency in EU Member States through obligations and the removal of institutional, financial and legal barriers.
  - Promote the development of a sustainable market for energy efficiency and energy services.
  - Covers all energy end-use suppliers (Aviation fuels and maritime bunkers excluded).
  - Covers all providers of energy efficiency improvement measures.
  - Covers all energy end-use sectors (Emissions Trading sector excluded.)
Overcoming Barriers

• Start Now…Energy Services Directive (2)
  • No binding EE targets
  • But a lot of obligations for governments, energy providers & public sector.
  • And consensus to work on binding targets, based on a common monitoring project (EMEES)
  • Start enforcement.

• Don’t waste time to set targets if you can start without
Overcoming Barriers

• Promote good examples:
  – Corporation by municipalities & regions
  – Long term agreements in industry (15 years running on average 2% per annum)
  – Use of district heating, CHP

• Work on international corporation
  – Standards industry (level playing field)
  – Tackle Transportation problems
  – Enforcement
  – Explore behavioural change
  – Encourage (Asian) Entrepreneurs
Conclusions (2)

Increasing Import Dependency

A low Carbon Future
Thank you!

Q&A?

www.eceee.org / www.senternovem.nl
Recent EU Energy Efficiency Policy

- European Actionplan
- ETS = Trading system industry

Directives on
- Renewable Energy, including bio fuels
- Labelling
- Performance of Buildings
- Energy Services = Non ETS, non binding, 1% per annum
- Ecodesign = Standards Appliances
- CHP