

Wuppertal Institute
for Climate, Environment
and Energy

How are the neighbours doing? Making energy efficiency efforts comparable through NEEAP screening

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Outline

- Background: The EEW project & our task
- Methodology
- Preliminary findings
- Conclusions & discussion

Background (I)

The Energy Efficiency Watch (EEW) project

- Initiated in 2006: **Parliamentarians** called for „**Action not talk**“ & co-operation of all political levels and stakeholders for “making Europe the most energy-efficient economy in the world“
- European cross-party network of parliamentarians supporting sustainable energy EUFORES to coordinate EEW project; co-financed by EC under IEE programme
- EEW aims to support EE, especially by **facilitating implementation of Energy Services Directive (ESD)** at the national level
- Main **target groups**: parliamentarians (EU, national, regional), civil servants & experts involved in designing and implementing EE policy
→ raise awareness, disseminate knowledge & foster **exchange of experiences and good practices**
- But also: gain **feedback from the field** via survey/interviews
- **Project consortium** includes important EE networks (EUFORES, eceee, Fedarene, EnergyCities), research (Wuppertal Institute, Ecofys) and policy implementers (Upper Austrian Energy Agency)

Background (II)

Our task in EEW – Integrating NEEAP analysis and market feedback

One key product of the EEW project: **27 National Reports** on **EE policy progress** in each MS (to be released in late 2012)

Objectives:

- Highlight **strengths and weaknesses** of national EE policy/ESD implementation (**good practice examples, implementation deficits**)
- Identify **policy gaps** and give policy **recommendations**

Sources of information:

- **NEEAP-based policy screening**
- Broad **survey** among experts/practitioners on their perception of EE policy progress
- In-depth **interviews** with selected national experts

→ NEEAP-based analysis **just one step** in overall assessment of national EE policy progress & **work in progress** → results are **preliminary**

Methodology (I)

Approach & focus topics of NEEAP-based policy screening

- No doubling of Commission's official assessment, plus limited time & budget
- Couldn't cover „everything“: No checking of target achievement / correct calculation of savings / in-depth analysis of evaluation methods used
- Need to **focus on selected aspects**:
 - **Effective governance framework** - i.e. institutions / structures / mechanisms that facilitate a smooth implementation of sectoral EE policies
 - **Comprehensive sectoral policy packages** – Adequate and well-balanced? Well-designed and implemented? (quality of implementation often impossible to assess due to lack of detailed information in NEEAPs → therefore market feedback needed)
- Developed policy screening criteria and template for standardised data collection on, and rating of, above focus topics

Methodology (II)

Analysing the governance framework

Screening criteria used:

Long-term strategy to signal reliable political commitment: targets, strategies, timelines, funding commitments?

Involvement of other actors in policy design & implementation: e.g. energy companies, housing associations, NGOs, researchers, cities and regions?

Energy agencies to coordinate/implement policies and measures at different governance levels

EE mechanism for coordination and financing of EE measures: e.g. white certificates, EE fund, or stable government funding & coordination?

Energy services: favourable framework conditions for development of energy services markets?

Horizontal measures: to tackle cross-sectoral market failures and barriers: e.g. R&D support, energy taxation higher than EU minimum rates, VAs?

MRV scheme: How are savings evaluated (bottom-up vs. top-down; is it possible to distinguish policy-induced from autonomous savings)?

Methodology (III)

Assessing sectoral policy packages

Screening criteria used:

A) **Comprehensiveness of policy packages**

Are the main elements of 'ideal sectoral packages' as derived in (Schüle et al. 2011) included?

→ 'ideal packages' = effective combinations of different policies and measures tailored to address relevant actors and their characteristic barriers in a specific sector → main elements differ in each sector (see next slides & full paper)

B) **Adequacy of policy packages**

Policy mix well balanced ('carrots, sticks and tambourines')?

Demand and supply side of EE markets addressed?

Relevant actors and their specific barriers taken into account in policy design?

Energy saving potentials considered?

Methodology (IV)

Sectors covered, rating scheme, other data sources

Sectors/end-use areas analysed:

- (Governance Framework)
- Public Sector
- Buildings
- Appliances
- Industry/Tertiary
- Transport

Rating scheme applied:

Each criterion/element of governance framework/sectoral policy packages is rated on a scale from 0 to 2 points (with half point ratings allowed): 2 = fully implemented, 1 = partly implemented, 0 = not (sufficiently) implemented

Qualitative indicators for achieving different ratings defined (but allowing some flexibility to consider MS-specific circumstances)

Other data sources used:

- MURE database (EE policies of EU 27 plus NO, CR) www.muredatabase.org
- Plus few other sources covering EU-27 (e.g. on taxation, energy agencies)

Why? NEEAPs do not always mention all existing measures or do not give enough detail → goal was to provide more realistic & complete picture of MS' policy portfolios

Exemplary results: Analysis at MS level

Example of an effective EE governance framework (1)

Overarching Governance Framework - Denmark

Criteria	Assessment
Long-term strategy Rating: 2	<ul style="list-style-type: none">• Goal to be independent of fossil fuels by 2050; 'Energy Strategy 2050' outlines interim savings targets, measures and focus areas for achieving this• Government work programme 'Denmark 2020' details how DK aims to become one of the three most energy-efficient countries in the world by 2020
Other actors involved Rating: 2	<ul style="list-style-type: none">• Involvement of regional and local authorities, e.g. via Voluntary Agreements• Involvement of energy companies via energy savings obligation• Knowledge Centre for Energy Saving in Buildings: likely to involve research institutions and building professionals (not explicit in the NEEAP)
Energy agencies Rating: 2	<ul style="list-style-type: none">• Danish Energy Agency as main co-ordinating institution• Strong link to regional and local activities established
Coordination/ Financing Rating: 2	<ul style="list-style-type: none">• Energy savings obligation for energy companies with cost recovery via grid charges (advice/audits & subsidies for households, businesses, public sector)• Energy Saving Trust (information, campaigns, funding for Knowledge Centre for Energy Saving in Buildings)

Exemplary results: Analysis at MS level

Example of an effective EE governance framework (2)

Overarching Governance Framework - Denmark

Criteria	Content
Energy services Rating: 0	<ul style="list-style-type: none">• No mentioning of supportive framework for energy services in the NEEAP or MURE
Horizontal measures Rating: 2	<ul style="list-style-type: none">• Energy savings obligation for energy companies; Energy Policy Agreement (February 2008) decided that targets be increased to annually 1.5% of final energy consumption• Increase of energy tax rates• Public Funding for Energy Research, Development and Demonstration (source: MURE)
MRV scheme Rating: 1.5	<ul style="list-style-type: none">• National bottom-up method: used to assess savings from energy companies' obligations (major part of Danish energy savings), then adjusted to ESD requirements (non-ETS, 2016 savings)• Top-down method (COM recommendation): used to assess savings per sector (except industry)• No differentiation between all and additional savings

Exemplary results: Analysis at MS level

Example of an effective policy package for buildings (1)

Policy package buildings sector - Estonia

Criteria	Content
Minimum Energy Performance Standards Rating: 1.5	<ul style="list-style-type: none">• In place since 2008 & regular tightening foreseen• Control and enforcement strategy unclear
Other regulations Rating: 2	<ul style="list-style-type: none">• Spatial planning for district heating regions• Mandatory advice for buyers of HVAC equipment• Further regulations planned (HVAC inspections, individual metering)
Economic incentives Rating: 2	<ul style="list-style-type: none">• Subsidies for EE renovation of apartment buildings (up to 35% of project costs, depending on level of savings)• Incentives for audits• Tax incentives to foster EE renovation
Financing instruments Rating: 2	<ul style="list-style-type: none">• Large soft loan programmes for EE renovation (funded through EU structural funds)
Education & training Rating: 0.5	<ul style="list-style-type: none">• Nothing implemented yet, but need for education and training of building professionals clearly recognised• Several measures planned in this area

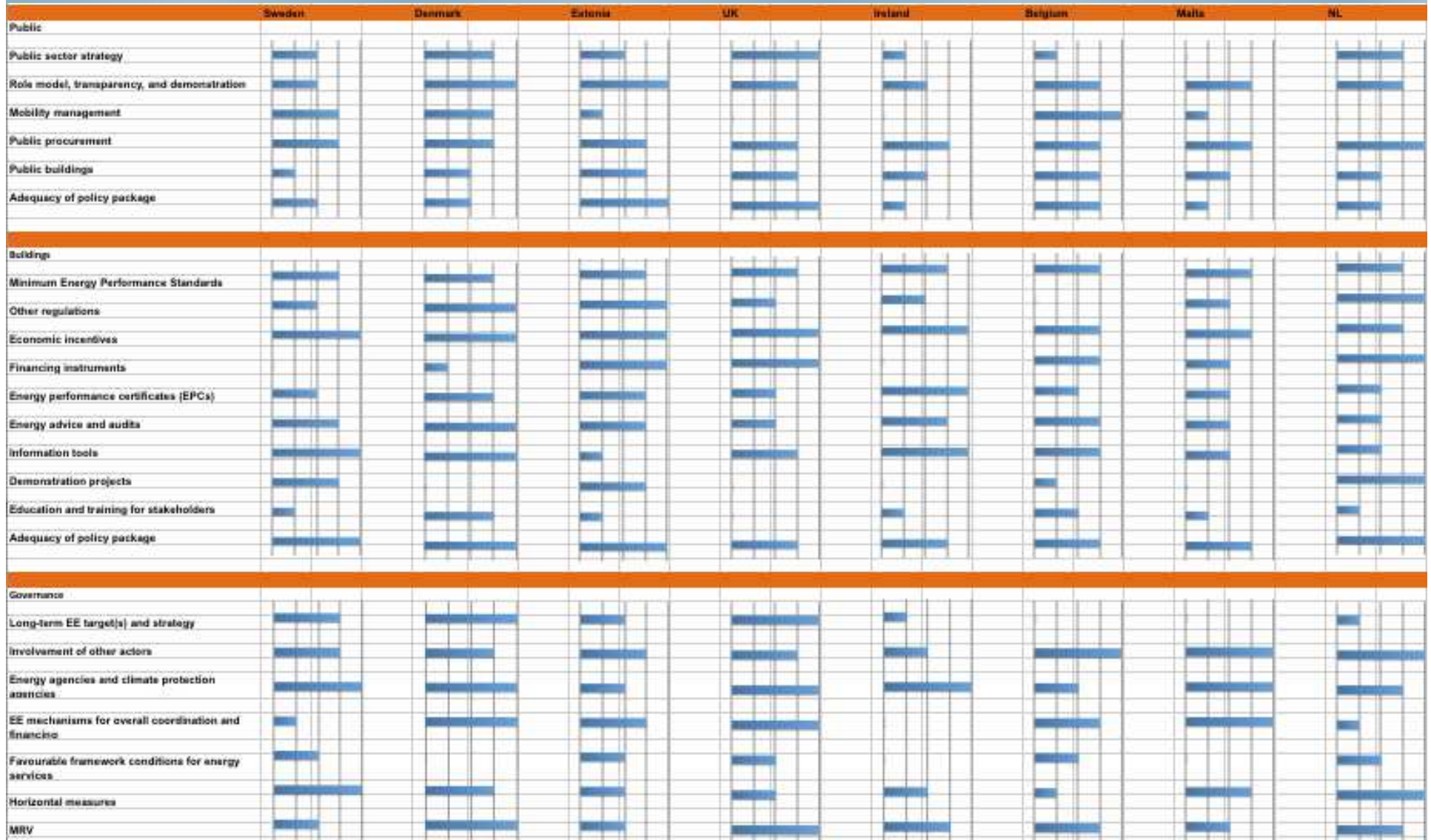
Exemplary results: Analysis at MS level

Example of an effective policy package for buildings (2)

Policy package buildings sector - Estonia	
Criteria	Content
Energy performance certificates Rating: 1.5	<ul style="list-style-type: none">• In place since 2009• EPCs include improvement recommendations• Publication of EPCs required• Pilot project for training and certification of auditors (MURE)• Responsibility for quality assurance defined (MURE), implementation unclear
Energy advice and audits Rating: 2	<ul style="list-style-type: none">• Subsidies for audits & audits required for public buildings• Assistance during design and construction for apartment associations• Planned: further develop auditing tools; training for auditors
Information tools Rating: 1	<ul style="list-style-type: none">• Only one awareness raising programme mentioned in NEEAP; addresses only residential buildings• However, many different activities, mostly project-based, took place under this programme (e.g. media campaigns, brochures, creation of Energy Efficiency Consulting Centre, energy weeks, etc.) (MURE)
Demonstration Rating: 2	<ul style="list-style-type: none">• €5 million funding for low-energy demonstration buildings from Swiss-Estonian cooperation programme

Cross-country analysis

How do we generate sectoral assessments across MS (extract)



Preliminary cross-country findings

Strengths and weaknesses of EE policy in different sectors (I)

Preliminary findings based on ca. **20 MS analysed** so far:

- **Governance framework:**

- + **Energy agencies** widely established
- Framework conditions for **energy services** mostly very weak

- **Public sector**

- + **Public procurement** requirements common (→ result of ESD provisions; however: implementation/ impact unclear)
- Lack of **mobility management** (exceptions: e.g. BE, SE, DK)

- **Buildings**

- + **Economic incentives** for EE in buildings & relatively **advanced packages** (→ large potentials recognised & EPBD effect)
- Huge gap regarding **education & training** for professionals (exceptions: e.g. AT, LU)

Preliminary cross-country findings

Strengths and weaknesses of EE policy in different sectors (II)

- Appliances

- **Generally** rather **weak**; mainly relying on **EU regulation** (ErP, Label), especially lack of incentives and education & training for retail

- Industry/Tertiary

- +/- **No clear trends** regarding strengths and weaknesses

- Many MS mostly relying on **EU regulation** (ETS, ErP, Label)

- + Several MS good in terms of „**other measures**“ (e.g. education and outreach, data collection and energy accounting, capacity building, EE networks, etc.)

- Transport

- +/- Overall **mixed picture**: weakest sector in several MS, but also good examples (e.g. FI, SE, UK)

Discussion (I)

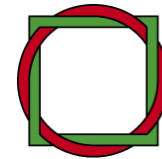
Lessons learned from 2nd round of NEEAPs?

- NEEAPs have improved (more structured, more comprehensive), but still many have gaps and insufficiently detailed measure descriptions → often impossible to assess quality of implementation and effectiveness of policies
 - NEEAPs cannot replace independent evaluations
 - MURE database as additional source of more in-depth information very useful
 - EEW market feedback may provide helpful insight here
- Biggest achievement of NEEAP process (or even of ESD as such): induced - in many MS for the first time – a comprehensive planning process for EE policies, addressing the most important sectors and potentials, and monitoring & evaluation of energy savings
 - Important that upcoming EED keep up this requirement

Discussion (II)

Lessons learned from 2nd round of NEEAPs?

- EC's non-binding template has guided (most) MS towards using NEEAPs as strategic document (not mere reporting tool), but left freedom to structure plans acc. to MS-specific needs/circumstances
 - No mandatory template needed, but binding requirements to meet quality criteria regarding types and level of detail of information provided (for reporting on overall strategy, individual P&Ms, and evaluation of impacts)
- Good plans are very important but we shouldn't forget that what counts is their implementation → needs funding & skilled actors (both on EE markets and in policy implementation)



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Many thanks for your attention!

See also: www.energy-efficiency-watch.org

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For further information
please visit our website:

www.wupperinst.org

Outlook

What do to expect in the National Reports

...plus other sectors & market feedback on actual implementation (survey & interviews)

Overarching Energy Efficiency Governance Framework



Long-term strategy	
Other actors involved	
Energy agencies	
Coordination/Financing	
Energy services	
Horizontal measures	
MRV	

Long-term EE target(s) and strategy	
Involvement of non-governmental and market actors, and sub-national authorities	
Energy agencies and climate protection agencies	
EE mechanisms for overall coordination and financing	
Favourable framework conditions for energy services	
Horizontal measures	
MRV	

Public Sector



Public sector strategy	
Role model	
Mobility management	
Public procurement	
Public buildings	
Adequacy of package	

Public sector strategy	
Role model, transparency, and demonstration	
Mobility management	
Public procurement	
Public buildings	
Adequacy of policy package	

Background (II)

Typical contents of a NEEAP

- ESD requires MS to submit three NEEAPs (2007, **2011**, 2014)
 - Guidance provided by EC, but no obligation to use the template → large **differences in structure, contents, and level of detail** (from 14 to >300 pages)
 - **Typical contents**
 - National energy saving **targets for 2010 and 2016** (usually 9%)
 - Calculation of **achieved and expected savings**
 - **Evaluation methods** used
 - **Policies and measures per sector** (described in more or less detail)
 - Reporting on specific ESD requirements: role of **public sector**, advice and **information**, contributions from **energy companies**, market for **energy services**
- Comprehensive plan of all national EE efforts, i.e. **strategic tool?**
Or merely **ESD reporting tool?**