The 27 National Energy Efficiency Action Plans – Results of the In Depth Analysis

Wels, 26 Feb 2009

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EEW In-Depth-Evaluation of NEEAPs

- Compliance with formal ESD requirements
  - Status of notification
  - Target setting
  - Exemplary role of public sector
  - Provision of information & advice
- Level of information provided in each NEEAP / General performance
  - E.g. role of ESCOs, information on financing etc.
- Calculation of targets
  - Relationship between ESD potential study, NEEAP, measures
- Innovative policy elements
  - E.g. new approaches, positive side effects etc.

Remark: Evaluation of documents submitted, i.e. effectiveness, efficiency, implementation of measures cannot be judged here

Criteria for selection of Member States

	South/north **Member State**	New/old **Member State**	Small/big **Member State**	**GDP per capita** (lower/higher than average	**Upcoming presidency** yes/no
Belgium	North	Old	Small	High	No
Bulgaria	South	New	Small	Low	No
Czech Republic	North	New	Small	Low	Yes
France	North/South	Old	Big	High	Yes
Germany	North	Old	Big	High	No
Hungary	North/South	New	Small	Low	No
Italy	South	Old	Big	High	No
Poland	North	New	Big	Low	No
Romania	South	New	Big	Low	No
Spain	South	Old	Big	High	No
Sweden	North	Old	Big	High	Yes
UK	North	Old	Big	High	No
Sum of evaluated NEEAPs	**North: 8 South: 6**	**New: 5 Old: 7**	**Big: 8 Small: 4**	**High: 7 Low: 5**	**Yes: 3 No: 9**

Compliance with formal ESD requirements (1)

- Status of notification
  - All MS finally submitted a NEEAP
  - Only two NEEAPs in time, last one in May 2008 (due: 30th July, 2007)
  - Belgium submits 4 plans (Brussels, Flanders, Wallonia, Federal)
- Target setting
  - Nearly all MS set required 9% savings target until 2016
  - Belgian regions set 9% targets, but not mentioned in Federal plan
  - Denmark and Spain apply differing time frames (11% by 2012)
  - Eight of 27 states set more ambitious targets (e.g. 18% expected in UK; 13,5 in Romania)
  - Most MS set interim targets

ECOFYS

Member State	Savings Target			Intermediate Target	
	Percent of average consumption	In GWh			
Austria	9%	22,333 GWh	☑	2% or 17900 TJ	☑
Belgium (Federal)		not mentioned	☒	not mentioned	☒
Belgium (BRX)	9%	2,929 GWh	☑	not mentioned	☒
Belgium (Wallonia)	9%	8,358 GWh	☑	not mentioned	☒
Belgium (Flander)	9%	16,959 GWh	☑	3% or 5653 GWh	☑
Bulgaria	9%	7,291 GWh	☑	3% or 2430 GWh	☑
Cyprus	10%	2,125 GWh	☑	3,25% or 60000 toe	☑
Czech Republic	9%	19,842 GWh	☑	1.6% or 4126 GWh	☑
Denmark	9.2% (10.7% expected)	16,667 GWh (20,167 GWh	☑	not mentioned	☒
Estonia	9%	2,125 GWh	☑	2008-2013 5.1 PJ	☒
Finland	9%	17,800 GWh	☑	3% or 5900 GWh	☑
France	9%	139,560 GWh	☑	5 Mtoe	☑
Germany	9%	231,389 GWh	☑	510 PJ(factor 1)/659 PJ(factor 2.5)	☑
Greece	9%	16,460 GWh	☑	5,100 GWh	☑
Hungary	9%	15,955 GWh	☑	1773 GWh	☑
Ireland	9% (12.5% expected)	13,117 GWh (18,274 GWh	☑	6500 GWh	☑
Italy	9.6%	126,327 GWh	☑	3% or 35658 GWh	☑
Latvia	9%	3,483 GWh	☑	581 GWh	☑
Lithuania	11%	4,652 GWh	☑	1.5% (54 ktoe)	☑
Luxemburg	9%	1,582 GWh	☑	527 GWh	☑
Malta	9%	378 GWh	☑	3% (126 GWh)	☑
Netherlands	9%	51,190 GWh	☑	11,376 GWh	☑
Poland	9%	53,333 GWh	☑	2% or 11878 GWh	☑
Portugal	9.8%	20,841 GWh	☑	639 ktoe	☒
Romania	13.5%	32,564 GWh	☑	4.5% or 940000 toe	☑
Slovakia	9%	10,338 GWh	☑	3% or 12405 TJ	☑
Slovenia	9%	4,261 GWh	☑	2,5% or 1184 GWh	☑
Spain	11.4% (Timeframe: 2007-	116,219 GWh	☑	not mentioned	☒
Sweden	9%	41,100 GWh	☑	6,5% 30 TWh (PE) 23.3 TWh (E-Use)	☑
UK	9% (18% expected	136,500 GWh (272,700 GWh	☑	149.9TWh expected)	☑

Compliance with formal ESD requirements (2)

- Exemplary role of public sector
  - Except for Czech Republic, all MS are formally complying
  - Huge differences regarding scope and design of actions
  - 15 plans clearly explain measures and intended implementation, all others only provide basic information
- Provision of information & advice
  - All MS formally complying
  - Great variety of suggestions (e.g. to be implemented by public authorities or utilities or private institutions)
  - Considerable differences regarding level of detail

Level of information provided (1)

- i.e. general performance of NEEAPs, additional information
- Role of energy utilities, ESCOs etc.
  - 80% of MS assign a role to utilities, retailers etc.
  - But: not always related measures drafted
  - Only 30% refer to ESCOs => underestimated (!)
- Financing of measures
  - Information provided in most NEEAPs
  - Partly not explained clearly
  - Denmark and UK already introduced an Energy Efficiency Fund, others have according plans

Level of information provided (2)

- Additionality and Early Savings
  - Most MS distinguish between measures already implemented and new ones
  - Unclear definition of additionality (weakness of ESD): which measures are induced by ESD?
  - Eight MS claim early savings, two explicitly do not want to => controversial point
  - In 10 NEEAPs the issue remains unclear => uncertainties
  - High amounts in Germany and Austria (45 and 43%)
- Monitoring and Evaluation
  - 12 MS have made ex-ante estimates (savings per measure and sector)
  - Nine MS do not mention evaluation at all

  => More attention in next round of NEEAPs needed

Member State	Additional Measures		Early Savings	
Austria	clearly mentioned	☑	claimed	☒
Belgium (Federal)	clearly mentioned	☑	claimed	☒
Belgium (BRX)	not transparent		not transparent	
Belgium (Wallonia)	not transparent (differnetiation between		not transparent (differnetiation between	
Belgium (Flander)	just mentioned	☑	claimed	☒
Bulgaria	just mentioned	☑	not transparent	
Cyprus	mentioned	☑	not transparent	
Czech Republic	not transparent		not transparent	
Denmark	just mentioned	☑	not claimed	
Estonia	not transparent		not transparent	
Finland	just mentioned	☑	claimed	☒
France	just mentioned	☑	not transparent	
Germany	clearly mentioned	☑	claimed	☒
Greece	clearly mentioned	☑	not claimed	☑
Hungary	just mentioned	☑	not transparent	
Ireland	clearly mentioned	☑	claimed	☒
Italy	clearly mentioned	☑	not transparent	
Latvia	clearly mentioned	☑	not transparent	
Lithuania	clearly mentioned	☑	claimed	☒
Luxemburg	clearly mentioned	☑	claimed	☒
Malta	clearly mentioned	☑	claimed	☒
Netherlands	clearly mentioned	☑	not claimed	☑
Poland	clearly mentioned	☑	claimed	☒
Portugal	not transparent		not transparent	
Romania	just mentioned	☑	not transparent	
Slovakia	just mentioned	☑	not transparent	
Slovenia	clearly mentioned	☑	not claimed	☑
Spain	clearly mentioned	☑	not claimed	☑
Sweden	not transparent		claimed	☒
UK	clearly mentioned	☑	claimed	☒

Calculation of targets (1)

- Overall savings potentials (according to ESD potential study, low profile scenario) are similar to 9% ESD target => more ambition possible
- Differing reasons for respective potentials (e.g. low natural potential OR cost efficient potential already realised)
- Sector wise, transport has highest technical & economic potentials => not adequaltely reflected in NEEAPs

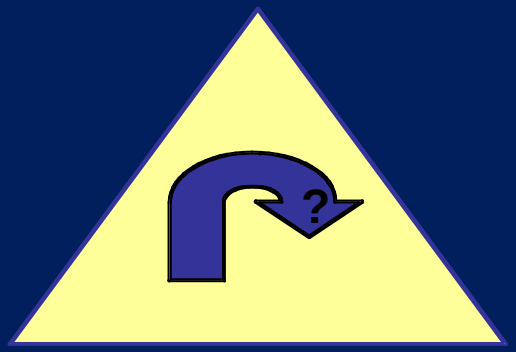
Calculation of targets (2)

- No harmonised set of evaluation methods provided by EU yet
- Only a few MS calculate target as impact of measures listed in NEEAP
- Methodological gap in most NEEAPs between calculation of target and measures listed

=> Handicap for evaluation of NEEAPs

Calculation of targets (3)

Calculation of Energy Savings Targets



Assessments of Effects of Measures
by BU ond/or TD Methodologies

Energy Savings Potentials in Sectors
(national studies, sectoral studies, ESD Potential Study)

Calculation of targets (4)

Effects of measures are calculated

- Either as **aggregated sum on national level**
- Or as estimations **per sector**
- Or as **expected impact per measure** (then aggregated to sectors and compared to savings targets)

Innovative policy elements (1)

- Innovation is of key importance as NEEAPs and the related ESD process provide an opportunity for mutual learning among MS
- Different starting points: some MS with long tradition of EE measures and strategies in place, others (e.g. NMS) just establishing basic infrastructures
- Learning process: from single measures towards comprehensive policy packages
- Cross sectoral thinking: measures address actors across sectors
- Policy packages:
  - Basic: addressing final consumers / end energy use
  - Advanced: basic PLUS measures addressing supply side

Innovative policy elements (2)

a) basic policy packages

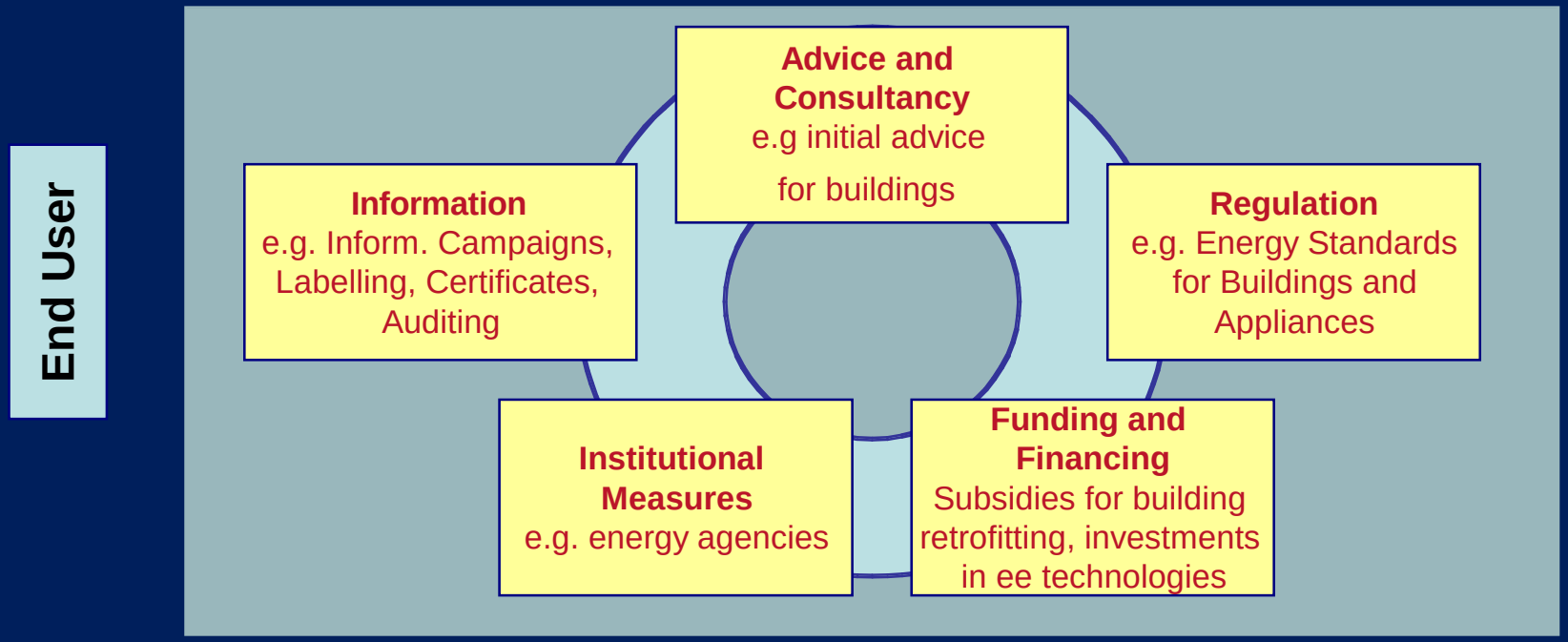
1. Provision of information
2. Provision of advice and consultancy
3. Provision of funding and financing schemes
4. Establishing an institutional framework
5. Creating legal regulations and standards

b) advanced policy packages

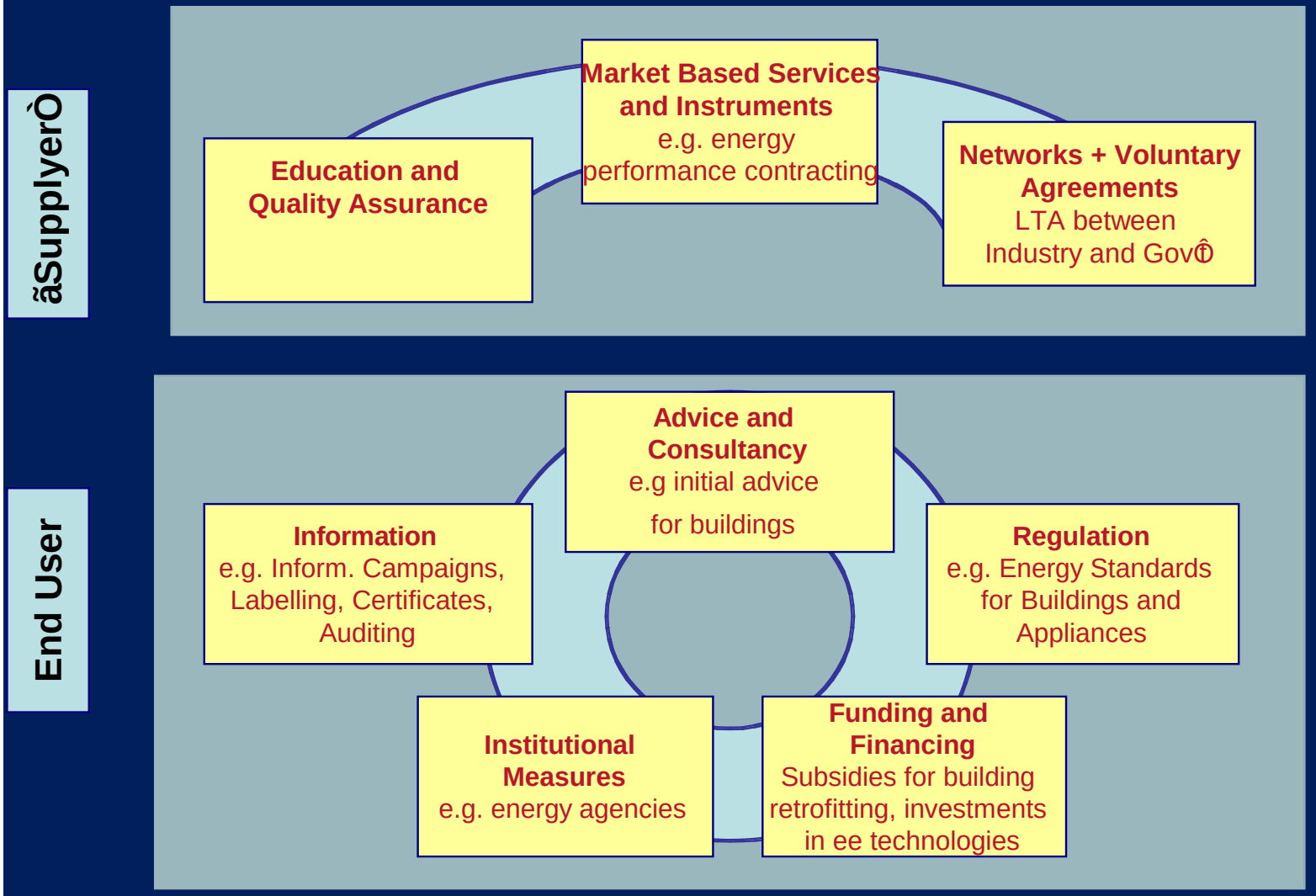
1. Education and quality assurance
2. Market-based instruments and services
3. Involvement of sercoral associations and producers (e.g. in voluntary sectoral agreements)

Innovative policy elements (3)

- Basic policy package, addressing demand side



Innovative policy elements (4)



Policy packages: good practice (1)

- Information and advice
  - Industry / Tertiary sector
    - Finland – mandatory audits for private service buildings (Czech republic following)
  - Private households sector
    - Ireland – ‚Power of one'-campaign: integrated campaign on information, education, change of behaviour
  - Public sector
    - Malta - ‚Green Leaders' in each Ministry: make public building stock more efficient

Policy packages: good practice (2)

- Financial incentives
  - Private households sector
    - Germany – KfW ‚CO2 Building Retrofit Programme': soft loans. Similar approach in Austria.
    - Bulgaria - residential ‚Energy Efficiency Credit Line' (REECL)
- Institutional measures
  - Industry / Tertiary sector
    - UK – ‚National Carbon Fund': Loans for SME for EE investments

Policy packages: good practice (3)

- Legal regulation and standards
  - Energy companies:
    - Italy - White certificate system: large power and gas distributors are obliged to invest in savings projects or purchase white certificates (France following, Poland planning similar scheme)
  - Private households sector:
    - Austria, Ireland – role of spatial planning: raise overall level of EE in municipalities
- Voluntary Agreements / Stakeholder Networks
  - Industry / Tertiary sector:
    - Ireland - ‚Large Industry Energy Network' (LIEN) of 100 largest energy consumers: site visits, workshops, performance reporting

General remarks on sector coverage

- Buildings/Residential Sector
  - Regulatory approach (according to EU Directives)
  - Focus on establishing a funding structure
  - Focus on multi-family houses
  - Social aspects (energy poverty)

- Industry and Service Sector
  - Focus on establishing a funding structure
  - Networks and voluntary agreement

- Transport Sector
  - „weakest part in the chain“
  - Transport sector not or not adequately addressed
  - Focus on improving the transport infrastructure
  - „soft measures“ (Information etc.)

- Agricultural sector
  totally neglected in most NEEAPs (incl. those with high sector relevance)

Conclusions 1st set of NEEAPs

- Very heterogeneous NEEAPs => difficult to compare, especially regarding calculation
- Minimum requirements fulfilled
- Public sector coverage rather weak
- General performance: measures, calculations etc. often intransparent / not very elaborate
- Impressive scope of new measures

=> source of inspiration / for mutual learning

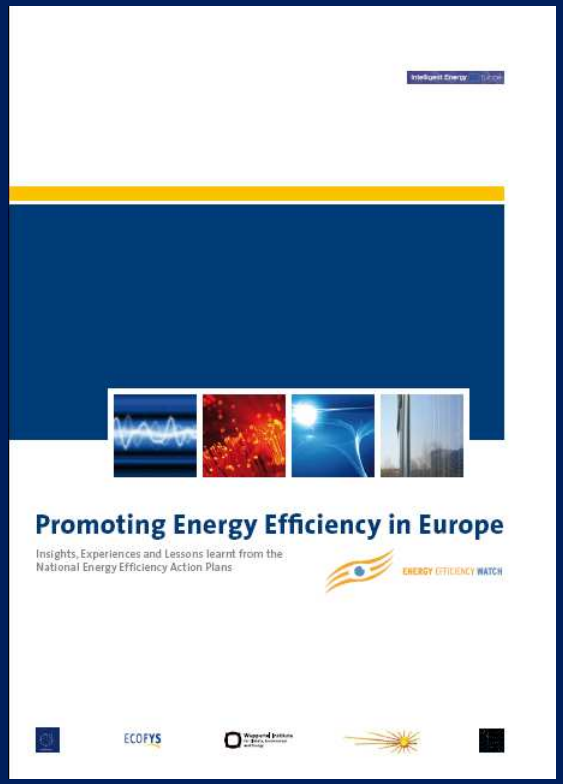
- Step towards coherent policy packages

Recommendations for 2011 NEEAPs

- Standardised reporting format
- Harmonised methodology for calculation of targets and effects of measures
- Clear definition of additionality (what is meant by ‚early action' / ‚early savings'?)
- pay specific attention to issues as
  - role of ESCOs
  - coverage of transport and agricultural sectors
  - Elaboration of measures regarding supply side

Thank you for your attention!

Please see for details:
www.energy-efficiency-watch.org
(brochure for download)



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