

Monitoring information for EU reporting

Workshop on DMS, Everybody loves DSM

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Overview

1. Energy end-use Efficiency and Energy Services (ESD)
2. Targets & Reports
3. Monitoring; Top-Down, Bottom-up and Benchmarking
4. ESD monitoring committee and assistance to the EC
5. Summary

ESD

- On 17 May 2006 Directive 2006/32/EC on Energy end-use Efficiency and Energy Services entered into force
- 1st version was dated 10-12-2003
- Target: To enhance the cost-effective improvement of energy end-use efficiency in the Member States by:
 - ◆ **Indicative targets** and mechanisms to remove barriers and imperfections
 - ◆ Promotion of energy services and other EE improvement mechanism

Important dates (2006-2008)

- | | |
|---|------------------|
| 1. Directive into force | 17 May 2006 |
| 2. Updated list of harmonised lifetimes | November 2006 |
| 3. MS may submit own calculation methods for energy savings | 17 November 2006 |
| 4. MS submit 1st Energy Efficiency Action Plan (EEAP) | 30 June 2007 |
| 5. EC comment on MS 1st EEAP | 1 January 2008 |
| 6. EC harmonised system refine and complemented | 1 January 2008 |
| 7. EC rapport on Cost Benefit analysis | May 2008 |
| 8. EC rapport on setting indicators and benchmarks | 30 June 2008 |

Important dates 2011-2015

9.	EC publish guidelines on measuring and estimating energy savings effects	No deadline; after 2008 - 2011
10.	EC rapport on progress on setting indicators and benchmarks	May 2011
11.	MS submit 2nd EEAP	30 June 2011
12.	EC report on 2nd EEAP	1 January 2012
13.	EC raise the % of harmonised bottom-up calculations	1 January 2012
14.	EC report on White certificates	Mid 2012
15.	EC proposal for new or revised Directive	Early 2014
16.	MS submit 3rd EEAP	30 June 2014
17.	EC report on 3rd EEAP	1 January 2015

Annex 1 ESD Energy savings target

On the basis of this annual average amount of consumption, the national indicative energy savings target shall be calculated once and the resulting absolute amount of energy to be saved applied for the total duration of this Directive.

The national indicative energy savings target shall:

- (a) consist of 9 % of the annual average amount of consumption referred to above;**
- (b) be measured after the ninth year of application of this Directive;**
- (c) be the result of cumulative annual energy savings achieved throughout the nine-year application period of this Directive;**
- (d) be reached by way of energy services and other energy efficiency improvement measures.**

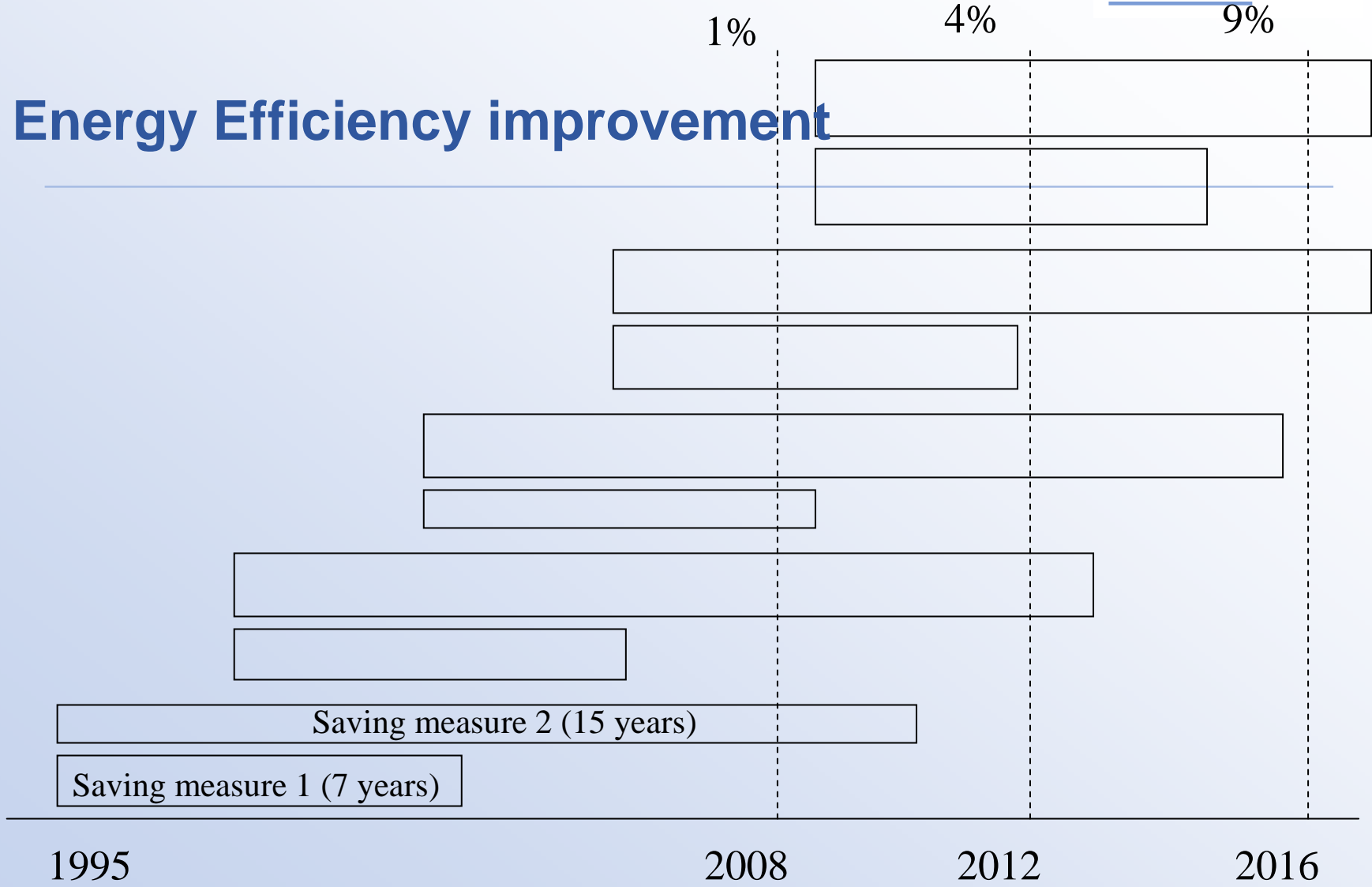
Example calculation

- **Energy use Netherlands**
 - ◆ 2005: 3 650 PJ
 - ◆ 2004: 3 400 PJ
 - ◆ 2003: 3 247 PJ
 - ◆ 2002: 3 141 PJ
 - ◆ 2001: 3 145 PJ
 - ◆ Total 5 years: 16 583 PJ
 - ◆ Average: 3 316.6 PJ
- **9%: 298.49 PJ (on average 33.17 PJ annual)**
- **but data should be excluding companies in ETS**

Energy Efficiency improvement & Energy savings

- Target is **additional energy savings equal to 9% of current use end of 2016 (from 2008 on)**
- Part of savings to be “proved” bottom-up
- Impacts (effects) of all measures from 1995 on may count as savings
- Lifetime of saving measure are needed for the bottom-up calculated contribution to ESD-target

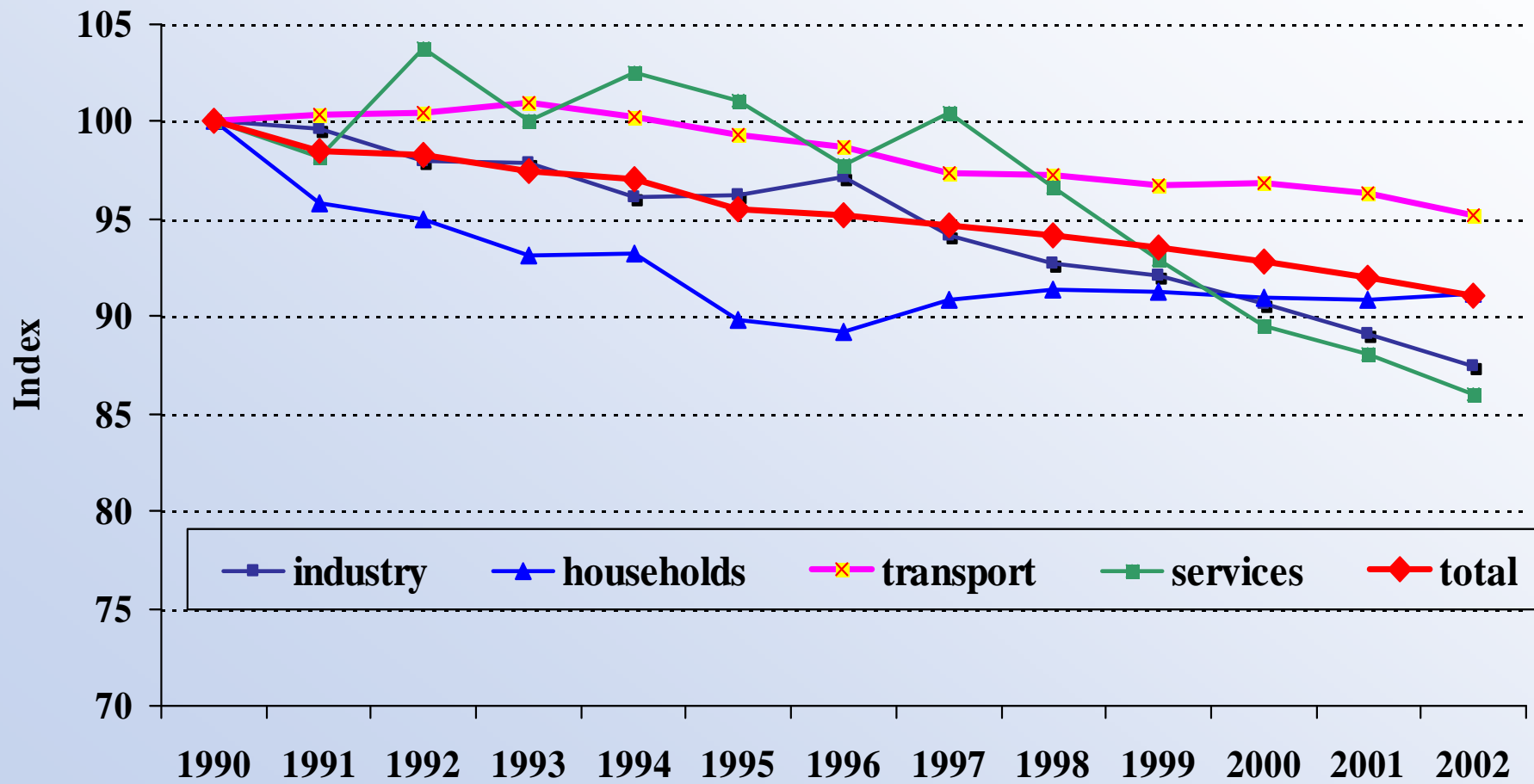
Energy Efficiency improvement



Harmonised monitoring system (Annex IV)

1. **Top-down**
 - National or large-scale aggregated sectoral levels
 - Base on existing methodologies such as ODEX model
- **Bottom-up**
 - Specific energy efficiency improvement measures that are measured
 - National authorities to avoid double counting
- **Benchmarks**
 - Household appliances and lighting
 - Domestic heating technology
 - Industrial ovens
 - Public sector institutions

ODEX for the EU-15



Top down indicators in the Odyssee/Mure project: improvements and developments 2005/2006

ODEX is improved in several directions to better measure energy efficiency improvements

- **By removing the effect of short term fluctuations** due to business cycles, behavior, statistical imperfections/disruptions
→ use of 3 years moving average
- **By incorporating some simple simulations using estimates or surveys** → super “ODEX”
- **By making extrapolations or projections** to update more rapidly the indicators → short term ODEX
- **By removing the effect of heating behavior** still included the ODEX for households

Harmonised Bottom-up method

- Before 1 January 2008 a harmonised model covering 20-30% of annual inland energy consumption
- Till 1 January 2012 continued development of the harmonised model to an increased % of inland energy consumption
- Standardised methods and focussing on relevant sectors

- Data and methods based on measurements
 - ◆ Energy sales data
 - ◆ Equipment and appliance sales data
 - ◆ End-use load data
- Data and method based on estimates
 - ◆ Simple engineering estimated data
 - ◆ Enhanced engineering estimated data: inspections

Life time energy saving measures CEN workshop

Characteristics	CEN Workshop
1 Participation	Direct participation
2 Geographical limits	None
3 Representing	Interested parties only
4 Decision made by	Workshop participants
5 Adoption through	Participants
6 Work financed by	Participants
7 Business Plan	Participants
8 Secretariat	CEN NSBs
9 Output	CWA

CEN Workshop Work Programme

1. Kick-Off meeting 30 August 2006

To revise and adopt the Business Plan

To agree on some basic requirements amongst conformed participants, The first discussion on life time

2. A second Workshop meeting will be held 23 October 2006

A revised text and additional technical data and requirements will be discussed
If necessary, intermediate electronic discussions will be organised to find consensus on technical matters.

No public commenting period is envisaged.

The Workshop is intended to provide a draft CWA before the 17th of November 2006.

3. A third and final Workshop Plenary meeting, may be held in November, depending on progress overall.

4. Following the availability of the draft, editorial **finalisation** and Workshop formal approval are expected before **31 December**.

5. The adopted text for publication will be sent to the CEN Management Centre, and publication is targeted after a maximum of 5 months. The CWA will be first published in English only

Monitoring committee and assistance to the EC

New ESD Committee

- to assist the Commission among others with methods of measuring energy efficiency improvements
- First meeting was on 25 July 2006
- One expert a country

EMEES project: consortium of 21 institutes

- a system of bottom-up, top-down and integrated methods, harmonised between countries
- A set of harmonised default data and benchmarks
- A template and guide for Member States EEAP
- Agreed method for the EC to assess the EEAPs

EMEES consortium: co-ordinator Wuppertal Institute

Analysis of good practice	STEM
Distinction of measures by type of evaluation method	Fraunhofer
Bottom-up evaluation methods	SenterNOVEM
Top-down evaluation methods	ADEME
Integration of bottom-up and top-down approaches	Fraunhofer
Planning and reporting requirements	A.E.A.
Pilot testing	eERG
Platform for exchange and dissemination	Wuppertal
Common dissemination activities	Wuppertal

EMEES: 30 months and 21 organisations

Wuppertal Institute	DE	ISIS	IT
ADEME	FR	STEM	SE
SenterNOVEM	NL	ARMINES	FR
ECN	NL	EDF	FR
ENERDATA	FR	Enova SF	NO
Fraunhofer	DE	Motiva	FI
SRCI	DK	DEFRA	GB
eERG	IT	ISR-UC	PT
AGH-UST	PL	KEM	DK
A.E.A.	AT	CRES	GR
Ekodoma	LV		

Summary

- **Monitoring preparation is ongoing on EU level**
- **Countries should be aware of the consequences of the monitoring choices for their EEAP**
- **Additional savings based on policy measures should be proven**
- **Mid 2007 for (the first) EEAP is already soon**
- **The preparation of data collection should start in time to be available for the second EEAP (in 2011)**