



European Commission

National EU ESD Workshop: Implementation of the Directive

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The Energy Services Directive Proposal: Legislative Process

- **Joint meeting EP & Council Jurists/Linguists: 17.02.06.**
- **Adoption by Council as “A” point: Early March.**
- **Signing by EP & Council Presidents in EP Plenary: as early as 23.03.06. (Clock is ticking.)**
- **Publication in Official Journal: mid-April 2006.**
- **Entry into force (= +20 days): Early May 2006.**



The Energy Services Directive Proposal: Comitology and M & V

- **An Expert Group on M & V has met 3 times in past 4 months. Objective: to prepare work for committee and meet timetable.**
- **During discussions on ESD in Council and Parliament, 3 M & V workshops were held.**
- **Committee established by ESD. Commission can call meeting after entry into force of Directive (i.e., in May).**
- **Committee representatives (political & technical) to be selected by Member States. (Commission may invite experts on ad hoc basis.)**
- **One or two sub-groups to be created by committee. Commission will also use remaining resources from Expert Group on M & V.**



The Energy Services Directive: The 3 pillars of M & V

- **Bottom-up calculations of energy efficiency measures to show estimated or metered impact of measures taken.**
- **Top-down systems of energy efficiency indicators can shown past improvements, including effects of horizontal measures and market transformation.**
- **Benchmarking of selected energy efficiency indicators (including from bottom-up measures and top-down systems). Annex IV a.**



ODEX and bottom-up measurements of energy efficiency

1. **“Ex-post bottom-up”** : give less savings as restricted to policy savings; more costly to monitor, especially to assess all policy measures;
 2. **“Bottom-up deemed savings”** give the highest evaluation of savings, as rebound effect and behavioural factors not fully accounted for: need to be regularly adapted to account for actual savings achieved
 3. **Top down “bottom up” (ODEX)**: give an intermediate evaluation of savings, especially with sector with strong behavioural components
- **Complementary approaches :**
- ✓ Possibility to combine method 1 & 2 (use of simulation tools such as MURE)
 - ✓ Difference between the approaches very instructive (may inform on the difference between potential savings and the reality)
 - ✓ ODEX completed with an ex ante evaluation come closer to approach 2
 - ✓ Approach 2 & 3 can be more easily harmonised across countries



Top down versus bottom-up measurements of energy efficiency

- **“Bottom-up ex-post”**: evaluation of policy measures (based on sample surveys) (eg audits programmes) → **policy related savings**
- **“Bottom-up** evaluation of **deemed savings** from actual **market sales** of energy efficient appliances (e.g. monitoring of UK efficiency commitment, white certificates): assess impact of autonomous technical trends, savings from prices & non price measures → **deemed technological savings**
- **“Top down bottom up”** (eg ODEX): assess the impact of autonomous technical trends , savings from prices and non price measures and **behavioural factors** : measure of **net savings**
- Traditional **“aggregated top down”** (e.g. energy intensities): measure all previous effects, plus economic and lifestyle change: **not relevant**



The Energy Services Directive

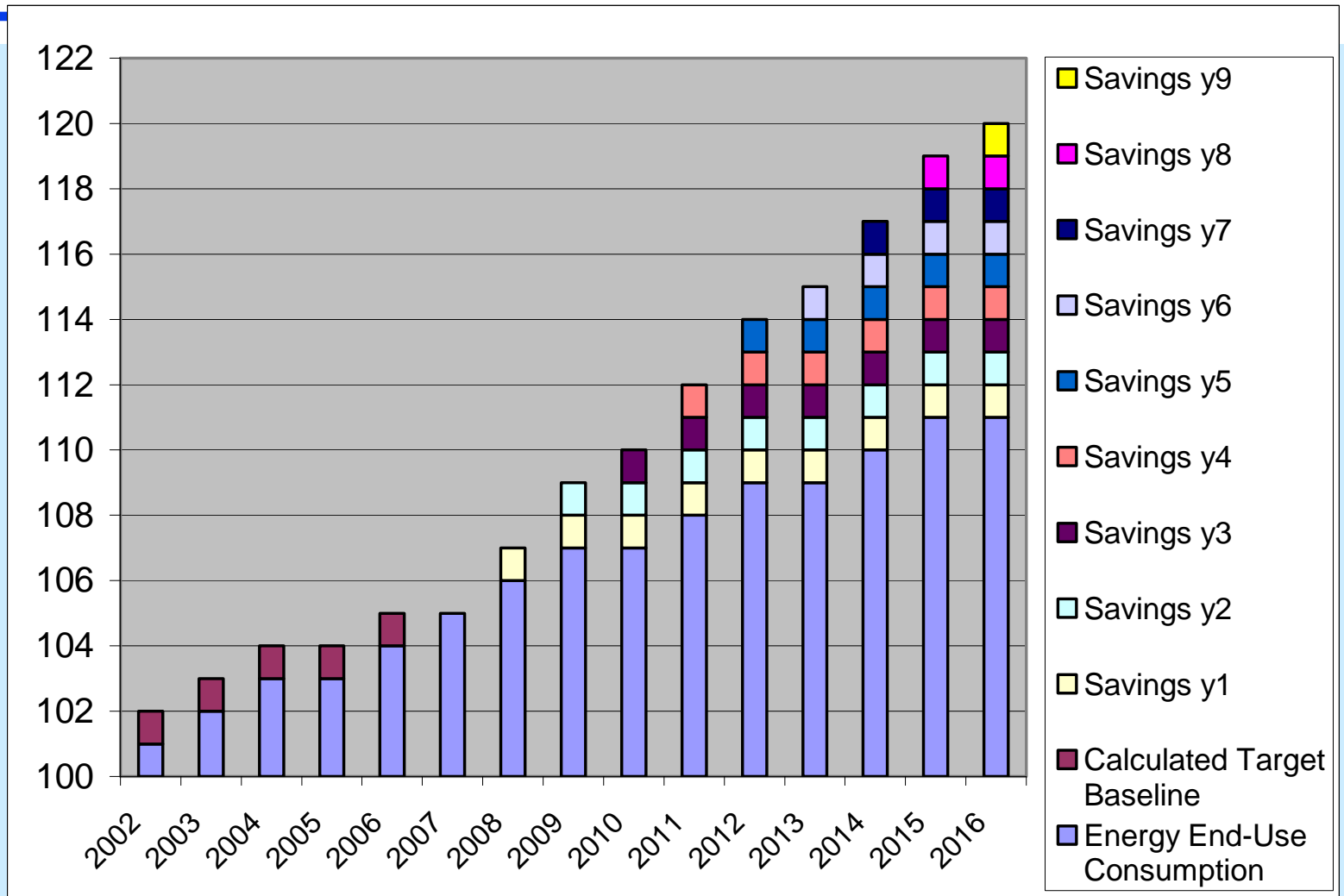
Target: Article 4 and Annexes I, II,

- **Measured as from 1.1.2008.**
- **9-year 9% target (cumulative annual savings).**
- **Intermediate target for 3rd year.**
- **Base for calculating target is 5-year average of unadjusted final consumption.**
- **Conversion table in Annex II (2.5 for electricity).**
- **Early actions initiated not earlier than 1995 (1991).**
- **Early actions of a technical nature should be updated or assessed in relation to the benchmark for such measures. (All must be verifiable and measurable or estimable.)**



The Energy Services Directive

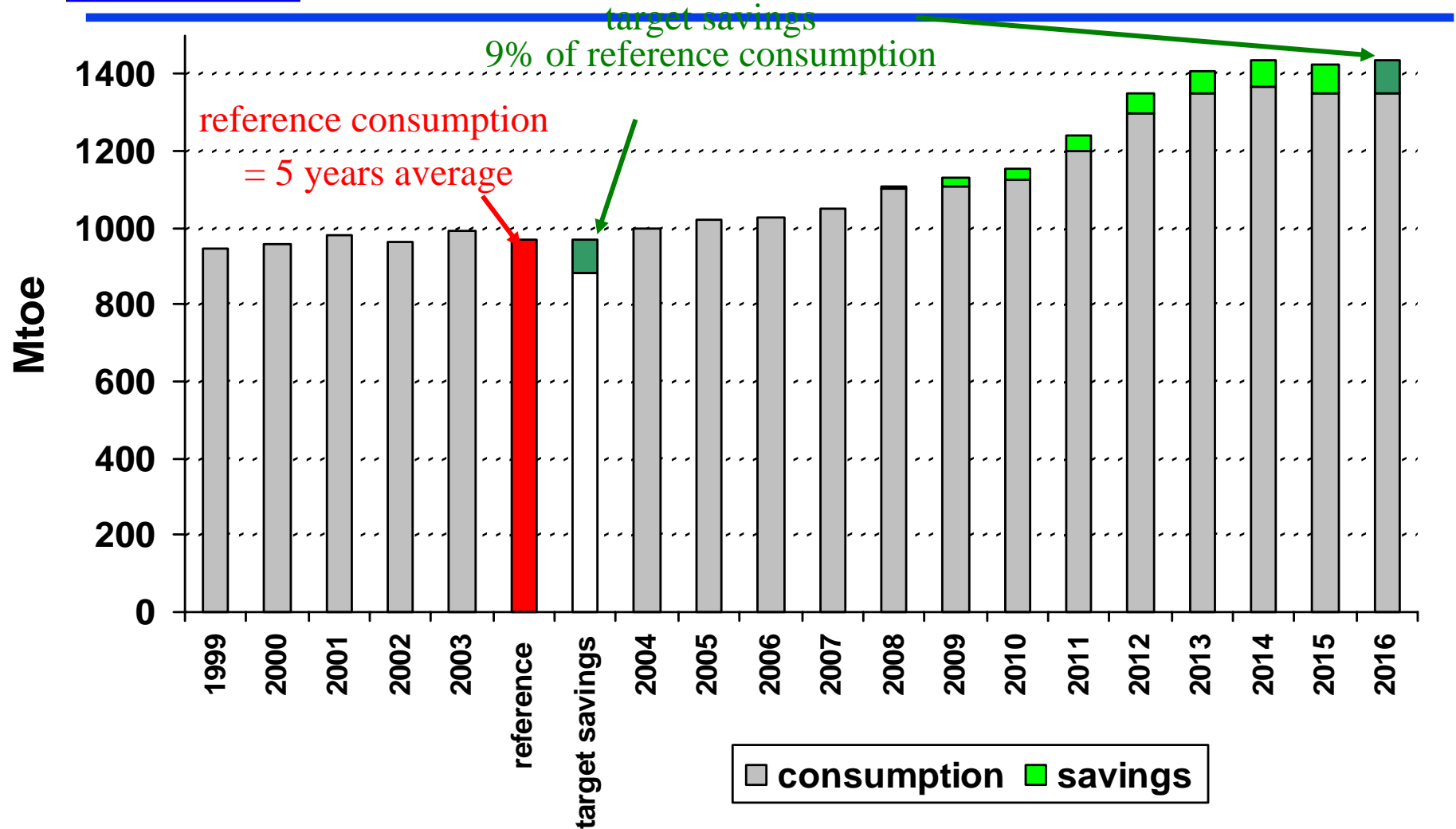
Target: Cumulative savings





The Energy Services Directive

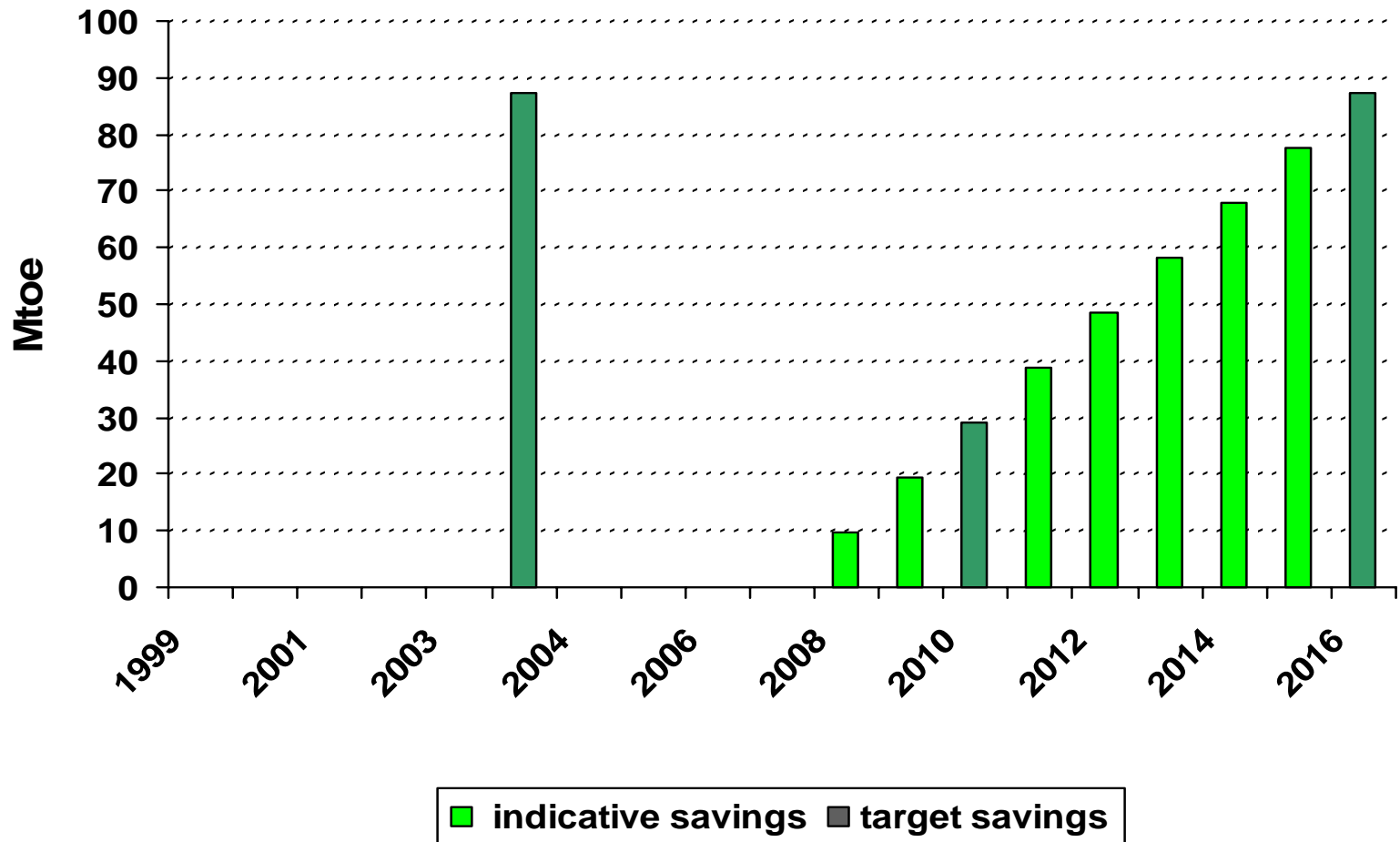
Target: Cumulative savings





The Energy Services Directive

Target: Cumulative savings





The Energy Services Directive's Annex III: Indicative list of eligible measures

- **Residential and tertiary, industry, transport.**
- **Cross-sectoral measures such as standards, labelling, metering, training and education.**
- **Horizontal measures such as regulations, taxes, and focused information campaigns.**
- **Measures must be clearly measured and verified or estimated according to guidelines in Annex IV.**



The Energy Services Directive Annex IV: General Framework for M & V

- **Harmonised calculation model using combination of top-down and bottom-up methods.**
- **Committee to use if possible available data.**
- **Top-down calculations to be adjusted for degree days, structural changes, product mix and other extraneous factors.**
- **Existing models such as ODEX used to extent possible.**
- **With top-down and bottom-up together, risk of double-counting to be avoided.**



./ The Energy Services Directive`s Annex IV

- **Before 1.1.2008, Committee to further refine and complement harmonised bottom-up model covering between 20 and 30%.**
- **By 1.1.2012 bottom-up model to cover a “significantly higher level” of final consumption.**
- **Bottom-up share ceiling shall take into account acquired experience of models; expected increase in accuracy due to larger share of bottom-up; and added cost and administration.**
- **Bottom-up method should be simplified and use standardised methods on most cost-effective sectors. Some top-down necessary.**



The Energy Services Directive M & V with Bottom-Up: Pros and Cons

- **Bottom-up method allows impacts to be added.**
- **Bottom-up promotes pro-active policy approach.**
- **Bottom-up helps with “de-fragmentation”, quantification & monetization of energy efficiency. Thus helps complete internal market.**
- **Bottom-up works ex ante, i.e. no statistical lag.**
- **Bottom-up can be corrected for extraneous factors at measure level. Closer to “real savings”.**
- **Bottom-up seems daunting but IT makes it work.**



./ M & V with Bottom-Up: Pros and Cons

- **Energy efficiency improvements in all end-use sectors can be measured bottom-up. Most MS start with residential and tertiary, followed by industry. Transport comes last.**
- **Databases for EPBD will provide good contribution to bottom-up tracking. (Operational and asset ratings.)**
- **Early actions can also be modelled bottom-up.**
- **Bottom-up will require simplifications (average and discounted lifetimes). But quality can be assured.**
- **Some flexibility for lifetimes & values of measures may be necessary to reflect differing national and local conditions.**
- **Re-bound effects can be modelled, based on studies.**
- **Discounted lifetimes can reflect investment costs.**



./ M & V with Top-Down: Pros and Cons

- **Top-down can be complement for horizontal measures.**
- **Top-down (e.g. ODEX) needs refining for some parts.**
- **Top-down for market transformation/multiplier effects.**
- **Top-down useful for free-driver effects.**
- **Top-down can help track reinforcing/interaction effects.**
- **Sensitivity to price changes needs to be taken into account.**
- **Early actions of cross-sectoral type will require discounting or benchmarking (e.g. outdated building codes).**



The Energy Services Directive M & V: General considerations

- **Energy use statistics in M.S./Eurostat need to improve. Process has begun in both. E.g. Eurostat degree-day corr.**
- **Measurements and norms in other Directives can be used in ESD:EPBD (RES & CEN 31), CHP, Labelling, ECO-D.**
- **M & V can promote B/C, min. LCC analysis, “whole-life analysis” & sustainability measurements.**
- **M & V (especially B-U) if well harmonised can lead to EU White Certificate market (cross-border).**
- **New energy savings potential calculations to apply similar methodology (T-D, B-U and benchmarking).**



./ M & V: General considerations

- **Lifetime discounting can be applied to cross-sectoral and horizontal measures involving technologies.**
- **Non-energy policy measures may impact on energy consumption. Can be result of conscious political decision.**
- **Continuity and long-term viability of M & V system need to be underscored. An amended or new directive to come.**
- **Long-term measures (i.e., greater than 9 years) to be encouraged.**
- **Short-term measures acceptable. Then renewals needed.**
- **Harmonisation important. Harmonised definitions for M & V a first step in comitology process.**



The Energy Services Directive Proposal: more information

Sources of current information

- **EP and Council websites**
 - ◆ http://www.europarl.eu.int/meetdocs/2004_2009/organes/ITRE/ITRE_meetinglist.htm
 - ◆ <http://register.consilium.eu.int/servlet/driver?typ=&page=Simple&lang=EN&cmsid=638>
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