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Energy Efficiency Policies of the EU

Relaunch of the 2007-Strategy

BSPC Green Growth and Energy Efficiency

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2007: Climate & Energy Package

- 20/20/20 targets for 2020 (Spring Council 2007)
 - *20% lower GHG emissions (wrt 1990)*
 - *20% Renewable Energies*
 - *20% less energy use (not binding; wrt baseline projection)*
- Based on Green Paper (2005) & Action Plan (2006)



2007: Structure and Goals

- Goal: doubling the rate of annual energy intensity improvements
 - *Half of this by already existing measures*
 - *Half of this by new measures*
- New measures / Directives
 - *Energy labels (2010 – recast of 1992)*
 - *Energy performance of buildings (2010 – recast of 2002)*
 - *Ecodesign (2009 – recast & extension of framework 2005)*
 - *Energy Service (2006)*
 - *Efficiency of cars (2009)*
- National energy efficiency action plans under Energy Service Directive
 - *mid-2007*
 - *mid-2011 (including buildings)*



2010/11: Relaunch as part of Europe 2020

- Estimated -9-10% savings instead of -20% (to 2020)
- Europe 2020 (2010): (Re-)Commitment to Energy Efficiency as central pillar
 - *20/20/20 package as headline target (out of 5 targets)*
 - *Flagship initiative 'Resource-efficient Europe' (out of 7 initiatives)*
- Energy 2020 (2010)
 - *Energy efficiency as priority (out of 5)*



2010/11: Relaunch... Cont'd

- Flagship initiative 'Resource-efficient Europe' (2011)
 - *Roadmap low carbon economy 2050 (8 March 2011)*
 - ***Energy Efficiency Plan (8 March 2011)***
 - *Roadmap resource-efficient Europe (Sept 2011)*
 - ***Proposal for energy efficiency directive (June 2011)***
 - Energy Roadmap 2050 (Dec 2011)



COM(2011) 370: COM's Proposal

- Merges & strengthens legislation of several previous directives
- Cogeneration Directive
 - *Repealed*
 - *Minimum standards instead*
 - *National heating and cooling plan, start 2014, then every 5 yrs*
- Energy Service Directive
 - *Repealed, except indicative 9% target by 2016 and related annexes on methods*
 - *Nat. EE obligation: now mandatory, 1.5% savings p.a.*
 - *Public procurement of high EE products: now mandatory*
- Buildings directive
 - *Remains, complemented*
 - *Public buildings: double annual renovation rate to 3%, cost-effective levels*



COM(2011) 370:... Cont'd

- Energy Labelling Directive
 - *Public procurement part repealed*
- Transmission & distribution
 - *'pay due respect' to energy efficiency*
 - *National plans by mid-2013: assess efficiency potentials in infrastructure & concrete measures & investments (Article 12(2))*
 - *Priority/guarantee transmission of, access of & dispatch for cogeneration (Article 12(5))*
 - *Cogeneration shall offer balancing services*



28 Feb 11: Compromise Proposal

- General: more detailed, more precise language (binding, end-use, savings)
- Binding Targets (Article 1, 3)
 - *Ensure at least -20%*
 - *Binding national minimum targets & trajectory (Annex 0)*
 - *Proposal for 2030 targets in mid-2014 (Art. 3(2a))*
- Mandatory financing facilities; what & how (Article 2(a))
- Monitoring
 - *Annual MS reports end April, start 2013 (Article 19)*
 - *COM's assessment mid-2013; additional measures, if necessary (Article 3(1))*
 - *Additional 3-yrs MS report, start 2014, check trajectory*

28 Feb 11: Compromise... Cont'd

- Mandatory energy saving scheme (Article 6)
 - *Annual end-use savings of at least 1.5%; 3-yrs rolling average (Article 6(1))*
 - *Ensure it is new & additional (Article 6(2a))*
 - *Significant share of deep building renovations (Article 6(3a))*
 - *Independent measurement and verification every 2nd year (Article 6(4))*
- Buildings (Article 3a)
 - *Aim to -80% energy use of building stock by 2050 (wrt to 2010)*
 - *Policies & measures stimulating deep renovations*
 - *National plans from 2014, interim targets*
 - *annual renovation rate of public buildings of 2.5%*

28 Feb 11: Compromise... Cont'd II

- Energy Audits more detailed:
 - *Training for auditors, actual implementation of recommendations (Article 7 (1))*
 - *Base on EN 16001 / ISO 50001 (Article 7 (3))*
 - *minimum criteria: clear policy, objectives, current data, life-cycle approach (Annex V a)*
- Smart meters, billing & consumer info:
 - *Higher requirements for meters and related consumer information (Article 8; Annex VI)*
 - *National strategy for energy efficiency promotion incl. single point of contact, range of policies (finance, info etc) (Article 8 a)*
- Heating and cooling
 - *Roadmap, start 2015, Broader, national circumstances, integrate cost-benefit-analysis (Article 10(1-1a))*
 - *COM develops cost-benefit-analysis by 2013, based on guidelines (Article 10(9); Annex VIII a)*

28 Feb 11: Compromise... Cont'd III

- Transmission & distribution
 - *More integrated approach: consider gas, renewable energies & distances, tariff structure (Article 12(1-2b, 3))*
 - *Align with European market (Article 12(2ba))*
 - *Infrastructure provider to improve efficiency (Article 12(4))*
 - *Include demand response in national plans (Article 12(7c))*
- Energy services: more details on info-requirements & barrier-removal (Article 14-15)
- COM reports on
 - *revision of effort sharing & better use of EU-funds etc for energy efficiency (by mid-2013, Article 19(5, 7a))*
 - *impacts on investment in technologies & on carbon leakage (by entry into force)*



28 Feb 11: Calculation Method (Annex V)

- Focus on End-use savings (Article 6(2)), Annex V
 - *Express end-use savings in terms of final energy,*
 - *then calculate primary energy consumption*
- Minimum requirements (Annex V b)
 - *Sectoral bottom-up approach; distinguish existing, new & planned measures*
 - *Monitor annual savings based on data*
 - *Total saving effect needs to correlate with national target; if not, monitor & adjust individually*

28 Feb 11: Calculation... Cont'd

- Calculation methods (Annex V(2))
 - *'Ex ante' deemed savings (reference to previously monitored savings)*
 - *'Ex post' metered savings (actual reduction)*
 - *Scaled savings (for similar but different installations)*
 - *Surveyed savings (behavioural change only)*
- COM establishes harmonised bottom-up methodology by 2013 (Article 9a; previously mutual recognition)
- Strong focus on Additionality and Verifiability (Annex V(2))
- Notify COM on scope, measures, duration etc of scheme (Annex V(2b))



Excursus: Calculation methods

- Top-down methods:
 - *For specific applications only (electric appliances, vehicles, solar water heaters & energy taxation)*
 - *Use existing statistical data*
 - *Often difficult to define the reference trend (baseline)*
- Bottom-up methods
 - *For all other end-use sectors, end-uses & energy improvement measures, esp. buildings, industry & tertiary sector, also for Modal shifts, eco-driving*
 - *Needs specific monitoring and data collection*
 - *may provide additional info (cost-effectiveness, additional GHG reductions)*



Excursus:... Cont'd

- >90% coverage with bottom-up case applications
- Combination of Bottom-up-top-down methods possible when using consistent elements for calculation
- Specific combination depends on national data availability
- Recommendation: harmonised rules for definition of formulars, parameters, monitoring, calculation procedure & reporting
- Reference: 'Evaluation and Monitoring for the EU Directive on End-Use Efficiency and Energy Services' (EMEEES);
www.evaluate-energy-savings.eu



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Thank You!

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