

Emission Reductions and Energy Savings

EEB-FoE Hungary Presidency Workshop
Budapest, Tuesday 16 November 2010

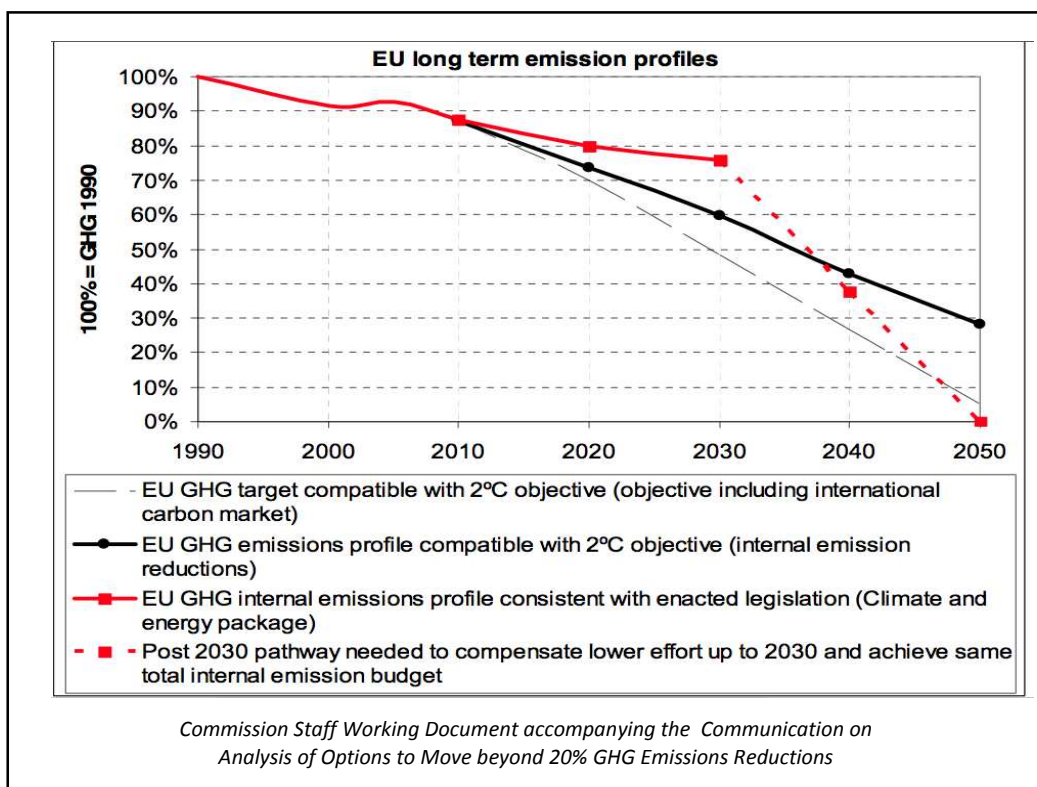
Erica Hope, CAN-Europe

Outline

- Emissions Reductions and Science
- EU deliberations on beyond 20%
- The Unifying Role of Energy Saving

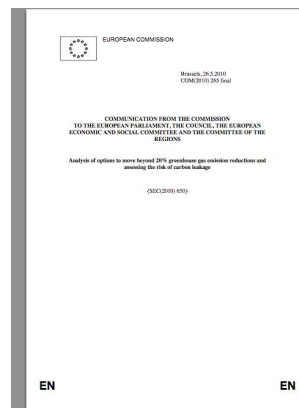
Science-Based Obligations

- To have a *50% chance* of staying on a **2 degrees** trajectory, developed countries must domestically reduce their emissions by **25-40% below 1990 levels** by 2020 (*IPCC 4th Assessment Report*)
- Copenhagen Accord Pledges add up to between **12% and 18% below 1990 levels ... excluding loopholes**



The EU's 2020 Target: Beyond 20%?

- **May 2010:** European Commission Communication on *“Options to Move Beyond 20% GHG Emission Reductions”*
- Recession → lower emissions than expected, so higher target will cost less
- **September 2010:** EU-27 GHG emissions in 2009: **17,3% below 1990 levels** (EEA data)



Benefits of Moving to 30%

Moving to **30%** would mean by 2020...

- 3 billion Euros annual savings on **pollution control**
- 3.5-8 billion Euros in **health co-benefits**
- Annual savings of 40 billion Euros in **oil and gas import bills** (\$88/barrel)

Staying at **20%** would mean

- Lost **ETS auction revenues** of 70 billion Euros (*Greenpeace/CAN-E calculations*)
- Falling behind in the **global clean tech race** (*lower carbon price means less incentive to innovate*)

Policy Options for Moving to 30%

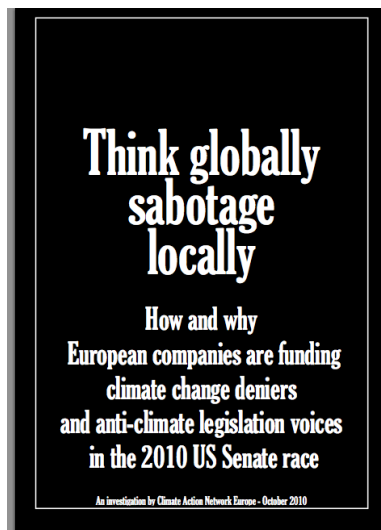
- Set aside emission allowances from the ETS sector
- Energy efficiency measures
- Emissions standards
- Use EU funds
- Carbon taxation in non-ETS sectors

Strong Opponents

- Business Europe / Alliance for a Competitive European Industry (job cuts, carbon leakage...)
 - Certain Member States (Italy, Poland...)
- Continued **conditionality**: EU will move to 30% **IF** as part of a **genuine global effort**
- **September 2010** - Belgian Presidency: concentrate on **'how'** not 'when'

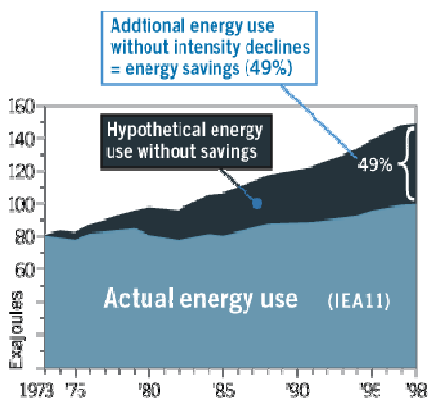
(It isn't all hopeless)

- UK, FR, DE, DK support a move to 30%
- Strong NGO efforts to expose flaws in business arguments



Also on our side... Energy Savings!

'Negawatts' - EE is the single most important energy resource



www.eceee.org

TO MEMBERS OF THE EUROPEAN COMMISSION, COUNCIL AND PARLIAMENT,

If someone said there is an **energy source** which offers all this...

- fight climate change
- save millions of Euros
- lower import bills
- training
- reduced emissions
- safety
- energy savings
- no waste
- education
- less fuel poverty
- enhance quality of life
- sustainable employment
- stimulate technology developments
- better health
- inexhaustible
- energy security

...would you **support** it?

ENERGY EFFICIENCY THE FIRST ENERGY SOURCE!

The Coalition for Energy Savings

What scale of emissions reductions can energy saving deliver?

- EU has a non-binding target to **reduce its energy consumption by 20%** by 2020
- If met - by coincidence! - this would deliver CO2 emissions reductions **equivalent to the 20% GHG target... ***
- BUT the GHG target can also be met by other means!

→ A HIGHER EMISSIONS REDUCTION TARGET IS POSSIBLE

**based on economy-wide emissions factor of 2.7*

Outlook to 2050

Energy Savings are Essential for the Decarbonisation of the European Economy

Energy savings have the potential to cover half of the EU's 80% emission reduction target for 2050
Achieving the EU's 20% energy savings target by 2020 is capturing that potential

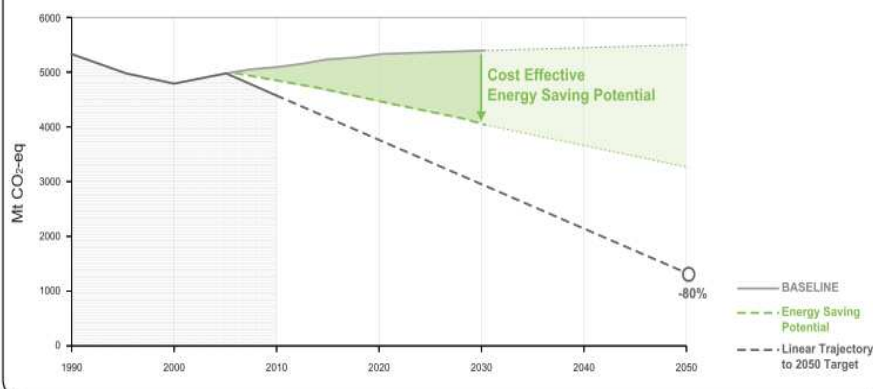


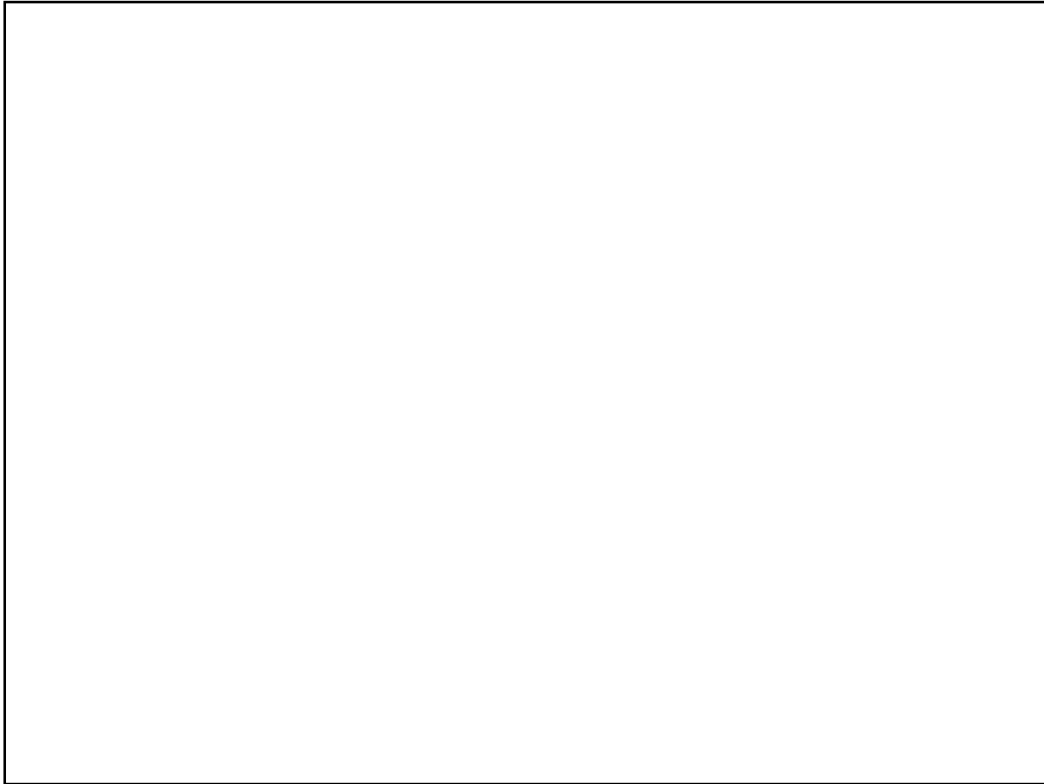
Exhibit 1 Greenhouse gas emissions in the EU 27: monitoring, baseline and linear trajectory towards the 2050 ambition of reducing emissions beyond -80% compared to 1990. The green wedge illustrates the impact of the cost-effective energy savings potential identified in this study.

Forthcoming Brussels Activity

- Communications on Energy 2020 Strategy and Infrastructure – *October/November 2010*
- Energy Efficiency Plan – *1st quarter 2011*
- Low Carbon Economy 2050 Roadmap – *1st quarter 2011*
- Roadmap to a Resource Efficient Europe – *2nd quarter 2011*
- Energy Roadmap 2050 – *3rd quarter 2011*
- Directive of Energy Efficiency and Savings – *3rd quarter 2011*

THANK YOU

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The EU's 20% Target

- The EU has a target to **reduce its primary energy consumption by 20%** compared to BAU (PRIMES) by 2020
- = *requirement for around 400 Mtoe additional energy savings by 2020 (=14% of 2005 usage levels)*
- Originates from 2005 Greenpaper on EE (*‘Doing More With Less’*), confirmed in subsequent Action Plans and Council conclusions
- Considered as 20-20-20 target **but not binding**

Saving energy across the economy

- **ENERGY SUPPLY:** increased use of renewables, more efficient fossil fuel power generation, combined heat and power generation, reduced energy use in refineries, reduced transmission losses
- **BUILDINGS:** reduce heating / cooling / lighting demand, improve energy conversion
- **APPLIANCES:** reduce energy consumption of residential appliances (fridges, TVs, washing machines...) and tertiary appliances (street and office lighting, air con, computers, copiers...)
- **TRANSPORT:** technical measures to improve fuel efficiency of vehicles, behavioural measures (eco-driving, modal shift, spatial planning, working patterns...)
- **INDUSTRY:** reduce energy supply of cross-cutting technologies (e.g. electric motors, steam boilers) and industrial space heating; sector-specific technologies

Current EU Energy Saving Policies

- Non-binding **20% Energy Saving Target**
- Energy **Services** Directive
- Energy Performance of **Buildings** Directive (EPBD)
- **Ecodesign** Directive
- Energy **Labelling** Directive
- Regulations on CO2 in **cars and vans**
- Combined Heat and Power (**CHP**) Directive

Current EU Energy Saving Policies

Legislation	Remarks
Energy Services Directive	<p>Requires Member States to draw up Action Plans (NEEAPs) to meet indicative target of 1% reduction in final energy use per year, until 2016.</p> <p>Intended to encourage delivery of efficiency programmes / measures to end users, and development of energy services market.</p> <p>Highly discretionary to Member States and level of ambition / delivery so far low.</p>
Energy Performance of Buildings Directive (EPBD)	<p>Addresses new buildings and those undergoing major renovation (= 40% EU energy use, 36% CO2 emissions).</p> <p>Transposition and implementation has been slow.</p> <p>Recast in 2009 strengthened the Directive but less than hoped, particularly regarding existing buildings, financing and urgency of deadlines.</p>

Current EU Energy Saving Policies

Legislation	Remarks
Eco-Design Directive	<p>Sets framework to decide measures to improve energy performance of products and appliances e.g. lightbulbs, boilers, TVs (= half of EU's CO2 emissions).</p> <p>Minimum performance / labelling requirements are set as implementing measures for individual product categories.</p> <p>Aims to progressively phase out worst-performing products in each category.</p> <p>Growing industry pressure to move towards industry-designed voluntary initiatives as basis (or even substitute) for implementing measures.</p>
Energy Labelling Directive	<p>Mandatory display of A-G energy label. Aims to direct consumers to best-performing products.</p> <p>Lack of rescaling since 1992 means large majority of products are now in A category.</p> <p>Recast in 2009 to update and extend its scope - interplay with EuP.</p>
CO2 in cars regulation	<p>Sets progressive CO2 emission limit values for passenger cars</p> <p>Unambitious limit values, timetable and penalty arrangements.</p>
Draft Regulation on CO2 in vans	<p>Will set progressive CO2 emission limit values for vans and utility vehicles.</p>

+ flanking policy instruments e.g. financing, information, Covenant of Mayors

How well is the EU policy mix delivering?

- EC November 2008: “if properly implemented” the existing policies should achieve savings of **13%** by 2020
- ... November 2009: **11%**
- Ecofys / Fraunhofer (forthcoming) : at present rates of progress, **the EU is on track to achieve only about 200 Mtoe of energy savings by 2020** - as compared to the 400 Mtoe target.

The “Policy Gap”

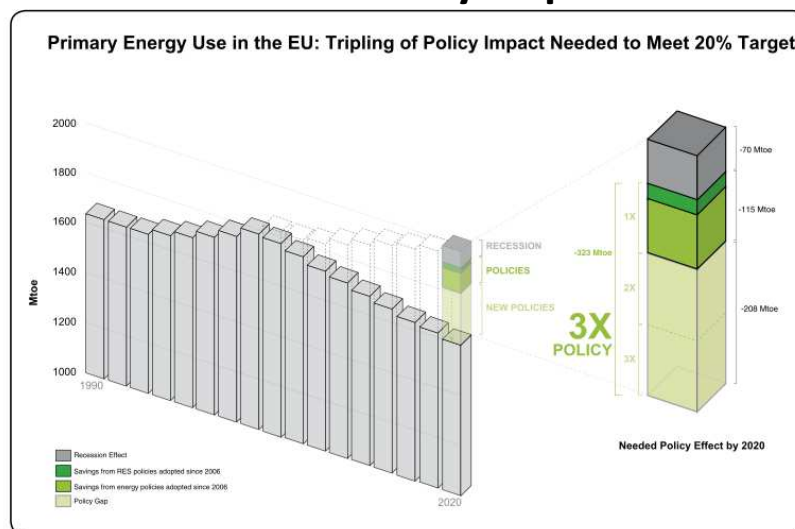


Figure 3 - 15 Even taking into account the economic recession and energy policies (since the adoption of the 2006 EEAP), meeting the 20% energy savings target by 2020 will require a threefold increase in policy impact.

Why are falling so far short of the target?

- **Unambitious and problematic policies**, due to lack of high level political drive, accountability and urgency
- **Poor levels of implementation**, due to low governmental priority, lack of clarity over responsibilities, and a range of (mostly) non price barriers
- **Policy framework incomplete**: 10% of EU primary energy use (freight transport, and heat and electricity transmission losses) not covered, or only indirectly

At last... action to address this?

- Review of **2006 Energy Efficiency Action Plan (EEAP)** awaited since November 2009
- Now foreseen for **early 2011...??** as “EE Strategy” (?)
- Headlines already expected in Energy Action Plan 2011-2020. due November 2010
- Review of Energy Services Directive and CHP Directive may result (during 2011)

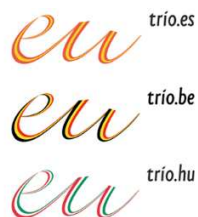


European Parliament reports

- Bendtsen report on EEAP -
*ITRE vote October, plenary vote
November*
- Kolarska-Bobinska report
on EAP



Council attention



- **4 February 2011:**
***Extraordinary
Energy Council***
- Belgian attempts to
prioritise...
- EU 2020 Strategy

Boilers and Water Heaters

- Ecodesign and Energy Labelling measures **delayed** since 3 years
- **Votes finally due** in October (heaters) and January 2011 (boilers)
- Could reduce energy spent on heating water in EU by **one third** within 10 years (= -80 million tons CO₂/year)

Advocacy activities

- Cross-sectoral Coalition
- ‘Energy Savings 2020’ study



Business and NGOs Unite to Urge Energy Ministers to Triple Efforts on Energy Savings and Efficiency Benefits Highlighted as Key to Success for 'Europe2020' Strategy

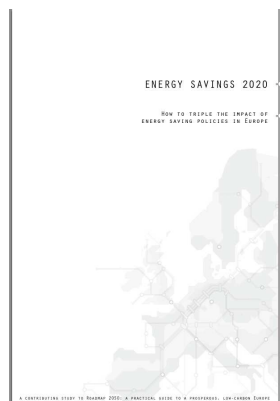
9 September 2010

Brussels, Belgium – Europe's energy ministers must lead the charge towards a three-fold increase in the impact of Europe's efforts to stop wasting energy. Huge benefits from energy savings and energy efficiency are still being missed in the EU's citizens and businesses – even where they strongly support it. This is the message that a novel coalition of 18 environmental and social NGOs, business and professional associations, today released at a meeting with Paul Magnette, Belgian Minister for Climate and Energy Policy and the current President of the EU Energy Council.

Welcoming the development of the coalition, Minister Magnette said: "The message of the Coalition is timely and important. It demonstrates that all parts of society agree on the need for energy efficiency and energy savings if it is to become a driver of growth, reduce the automobile energy – a message I shall take to my colleagues in the Council who should be emboldened by this support".

During the meeting, the new Coalition committed to demonstrating and acting upon the growing evidence of the huge potential benefits to consumers, economic competitiveness and job creation. The EU's 20% savings target must be prioritised at the heart of the Europe2020 strategy.

However, deep concerns that the EU will miss these targets and their benefits without high level political commitment, were also expressed by the Coalition. What is needed equally are additional and more tailored financial schemes and delivery mechanisms, greater professional training and public information, stronger implementation and enforcement of existing and future energy instruments as well as the adoption of specific binding targets.



NGO advocacy

- Big push on EP
- Meetings with DG Energy
- Input to Ministers
- CEE tour
- Planned publications and events

NGO Demands So Far

Central messages

- Meeting the 20% target is **in Europe's interests**
- The solutions to do so **already exist**
- More **EE-specific, targetted, policies** are needed to achieve it
- This needs the **lubricants** of **financing and delivery mechanisms**, plus **specific sectoral policies**
- This needs **political will** and **accountability**

The target is in Europe's interests...

- Ecofys and Fraunhofer estimate that **closing the energy savings gap of 208 Mtoe**, and thus meeting the EU's 20% target, will:
 - *reduce energy bills by 78 billion Euros annually*
 - *avoid the need to build new power generation capacity equivalent to 80 large coal fired power stations*
 - *reduce the EU's import dependency of coal, oil and gas in 2020 back down to the 1990 level (46%) - rather than a BAU increase to 62%*
 - *create hundreds of thousands of new, local jobs*
 - *establish the foundation for a renewable and low carbon infrastructure capable of reducing ghg emissions by 80-95% by 2050, at lowest cost to consumers*
 - *help European businesses take the lead in the global race for innovative, sustainable solutions and practices*

General Barriers to Energy Saving

- Despite the **theoretic cost-effectiveness** of EE measures, multiple barriers mean they are **not automatically tapped**
 - Consumers don't always **respond rationally** to price signals - *other factors than energy costs may override price, upfront costs may be prohibitive, split incentives -> need standards / labelling / financial schemes and incentives*
 - The **market may not invest sufficiently in new technologies** (e.g. electric vehicles) until costs are lowered due to economies of scale and learning effects -> *need subsidies, tax and other incentives to boost market growth*
 - **Private investor perspective** is different from societal perspective - acceptable payback times may be lower, risk aversion -> *need dedicated funds to provide low interest loans, publicly backed risk guarantees...*
 - **Price signals are weak** from ETS, taxation etc - due to lobbying by interest groups

Summary of policy recommendations

- **A binding energy saving target** is crucial to provide drive and focus for the implementation of existing policies, and to ensure sufficient ambition in the development of new ones. It is the European Parliament's role to maintain its often-repeated call for such a target.
- **Power sector:** greater clarity is needed on which parts of the energy production / supply chain are responsible for delivering energy savings, and a clear mandate for regulators to oversee this. Ownership unbundling is essential to the development of a free market for energy services, including for smaller players.
- **Financing:** financing facilities (such as 'green investment banks') are needed at national and European level to bring together multiple sources of public finance, to leverage private funds, and to direct this money towards appropriate energy saving opportunities and service providers at all levels.
- **Buildings:** energy use of the existing building stock should be drastically reduced by means of at least tripling renovation rates, meaning 'deep renovation'. Green banking institutions as mentioned above can help to facilitate this.
- **Transport:** all tools including vehicle and fuel taxation, minimum vehicle efficiency standards and public transport improvements should be employed to reduce energy use in this sector.
- **Products:** ecodesign of products and appliances can deliver major energy savings and should be continued and expanded with greater ambition and urgency, and better coordination with energy labelling, the ecolabel and green public procurement rules.

Binding 20% Target

- Needed to provide focus, **accountability** and ownership
- Should be a **primary** energy target
- Baseline / **ambition** level...?
- Energy **savings** not energy efficiency
- **Conclusion** not upfront demand, depending on audience
- messages and arguments
- Specific demands