Comments EU Energy Strategy 2011-2020

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Low carbon energy supply is the wrong goal for the future EU energy strategy.

- "Low carbon" most often is synonymous with continued use of coal and gas with carbon capture and storage.

The goal should be to completely decarbonize the energy supply, by

- Reducing energy demand by genuine energy savings in all sectors
    - minimizing the waste of energy due to inefficient production and distribution
    - minimizing the waste of energy due to unnecessary end use
- Increasing energy efficiency through research and development and through tightening of standards
- Meeting the remaining energy demand by transition to a 100% energy supply from real renewable resources: solar, wind, geothermal energy, wave power and existing hydro power.

The strategy should have as a main target to reduce greenhouse gas emissions to at least 95% below 1990 level by 2050.

But the reduction pathway is equally important as demonstrated in the Copenhagen Diagnosis Paper[1] (figure 1) and in other recent reports.[2]

[1] WBGU, 2009. Solving the climate dilemma: The budget approach. Special Report. (Berlin 2009). Available at: www.wbgu.de/wbgu_sn2009_en.html

[2] Meinshausen, M; Meinshausen, N; Hare, W; Raper, S C B.; Frieler, K; Knutti, R; Frame, D J & Allen, M R; 2009. Nature, Vol 458|30 April 2009. Available at: http://www.nature.com/nature/journal/v458/n7242/full/nature08017.html

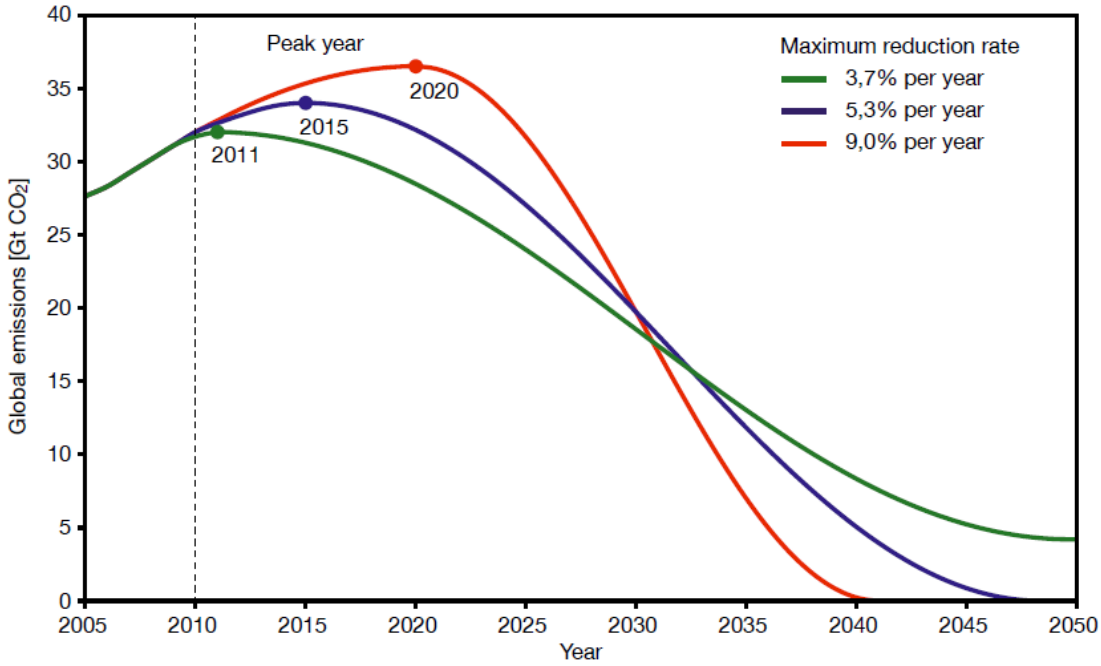

Figure 1. "Examples of global emission pathways for the period 2010–2050 with global CO_2 emissions capped at 750 Gt during this period. At this level, there is a 67 % probability of achieving compliance with the 2 ℃ gu ard rail (…). The figure shows variants of a global emissions trend with different peak years: 2011 (green), 2015 (blue) and 2020 (red). In order to achieve compliance with these curves, annual reduction rates of 3.7 % (green), 5.3 % (blue) or 9.0 % (red) would be required in the early 2030s (relative to 2008)." Source: WBGU, p. 16, Figure 3.2-1

The Member States should change course from centralized production of electricity using fossil fuels and nuclear to local or regional production based on the real renewable resources.

The energy strategy should eliminate the import of fuels of any kind. That would ensure the independency from foreign political unrest/actions and rising prices.

The future energy strategy should secure a shift from serving the short term economic interest of the present energy industry and big power companies to serving the interests of citizens and the environment.

Going for CCS and more nuclear power will increase the demand for import of fossil fuels and uranium and increase the environmental damage connected to these industries from mining to waste management.

CCS will not be developed and cannot be deployed rapidly enough to contribute to the tough reduction targets that are necessary as we have shown in a recent report.[3] CCS can only result in 11-23% avoided cumulative emissions over the next 40 years.

3 P. Bendsen and K. Ejlertsen, An assessment of cumulative CO2 reductions from carbon capture and storage at coal fuelled plants in a carbon constrained world. June 2010. Available at http://ccs-info.org/ and attached here.

CCS and nuclear have similar drawbacks in relation to a development of a flexible energy supply system based on renewables. Nuclear plants are by default inflexible and coal fired power plants with CCS will be so expensive that there will be a pressure to keep the plants running around the clock delivering a constant base load - very much like a nuclear power plant. Neither can play a balancing role in a system with a large part of fluctuating renewables like sun and wind [4] and the large base load will limit the room for renewables.

Energy savings

Energy savings is a crucial cross cutting issue for security of supply, energy costs and environmental sustainability:

- The EU is one of the most energy dependent regions of the world, currently importing close to 84% of its oil, 60% of its gas and over 97% of its uranium (Eurostat). **Reducing energy consumption is a geopolitical must.**
- Second, cost uncertainty is a major drain on Member State budgets: the price of oil reached an all time high of 147 dollars a barrel in July 2008. Energy savings are the simplest fix: **The total savings linked with achieving the EU's present 20% by 2020 energy savings target is estimated by the Commission to be between 100 and €150 billion Euro annually by 2020.**
- Third, climate change: the Commission made it clear in its post-Copenhagen climate policy analysis that the EU's emission reduction targets are insufficient to meet its 2 degrees commitment. **Only an extremely sharp decrease in fossil fuel consumption and an accelerated transition to renewable energies (which reduced demand will make easier to achieve) will put Europe on track to helping prevent runaway global warming.** However, in an increasingly urgent situation, not enough is being done to ensure that energy savings are prioritised.

Shaping the 2020 energy savings target

The target must put energy savings before energy efficiency: Historically, increases in energy efficiency have always led to a *rise* in overall energy consumption, as more uses were found for better performing technologies. But this means 1) maintaining import dependency and high energy expenditure, 2) slowing the move to renewable energies, 3) exceeding the atmospheric CO2 "budget". **The EU's policy must be to do more with less** - using energy more efficiently, to be sure, but doing so within the framework of a consumption cap.

[4] Mathiesen, B.V. (2009); Carbon Capture and Storage (CCS) renewable energy systems and economy. Presentation at Klimaforum09, 16 December 2009, Copenhagen.

The target must be based on a fixed reference year: The current practice of calculating the 2020 target relative to business as usual forecasts requires constant adjustments as the Primes models used for these calculations are made obsolete by fresh economic data. Using a fixed reference would bring a clear sense of direction and emphasise ties with the EU's 2020 emissions target. It would also give the definitive political signal Europe is waiting for to boost investment and job creation in the green economy.

The target must include primary energy savings: According to the European Environmental Agency, the EU's final energy consumption in 2005 (energy provided to end users *after* transformation losses) totalled 1168 Million tons of oil equivalent (Mtoe), while at the same time primary energy consumption in the 27 member states amounted to 1826 Mtoe. Centring the target on final energy consumption would therefore mean excluding close to 40% of the EU's energy use.

The target must cover all sectors (ETS and non-ETS): Arguing that emissions targets in the ETS framework suffice to achieve energy savings – or that the sector, already subjected to one EU level target, should not be compelled to meet another – is not convincing (especially as the non-ETS sector is already covered by a mandatory emissions target *and* energy efficiency legislation). Energy savings achieve CO2 cuts far more simply and surely than exchanging freely allocated emission permits (more than 50% of which can in any case be acquired on the international market).

Financing energy savings

Energy taxation: The EU only taxes energy when it is used as fuel or for heating, and not as raw materials in industrial processes, or as input in the making of other energy products (in refineries) **or even as inputs for electricity generation**. Energy taxation – which currently adds up to €240 billion per year – would be a powerful incentive to invest in energy savings and renewable energies.

CO2 and uranium taxation: Based on 2007 emissions figures an EU wide CO2 tax of €30 a ton (as proposed by the European Commission when analysing the options for increasing the 2020 emissions target) would contribute roughly €115 billion Euros per year to national and EU budgets, which should be allocated for financing EU's contribution to establishing sustainable energy supply systems in developing countries. In order not to favour nuclear power a similar taxation on uranium (based on output in MWh) should be implemented.

Redirect structural funds for energy saving investments: Especially in Central and Eastern Europe - where energy savings potential is highest - there is a strong need to increase absorption capacity of EU funds and to increase the funds themselves (**only 2.5% of the total budget is allocated for energy savings and renewables** according to CEE Bankwatch)

Rapid phase out of fossil fuel and nuclear subsidies: The present subsidies (this year for coal alone €3,2 billion) are counterproductive for the ambitions to **ensure safe, secure, sustainable and affordable energy for all**.

Elimination of R&D funding for fossil fuel and nuclear technologies: At present nuclear research takes up the larger part of R&D funding in FP7. This together with the recent massive funding of CCS is also counterproductive for the ambitions to **ensure safe, secure, sustainable and affordable energy for all**.

Recommendation: Energy savings are too important not to succeed: The EU must set a binding energy savings target for 2020 to facilitate the transition to a renewable energy system and slash GHG emissions, while systematically measuring energy savings legislation against the EU's 2 degrees commitment

Some sector-by-sector suggestions

Buildings: National buildings obligations to boost in-depth renovations are urgently needed as a complement to the Building Directive (EPBD). EU and Member State backing for green investment banking, third party financing and other innovative schemes will help households cover upfront investment, address fuel poverty and speed up the pace of deep renovations.

Power sector: Oil, coal and nuclear power plants average less than 33% efficiency (Massachusetts Institute of Technology, National Petroleum Council), meaning that before electricity reaches end users, roughly two thirds of the raw resource has already been lost in the conversion phase. Implementing CCS would further decrease the efficiency of power generation due to the 'energy penalty' of 25-40%. Wind, solar and marine resources, meanwhile, have zero conversion losses but require a level playing field to properly compete. This means *not* prolonging coal subsidies - as the Commission is planning – but setting a binding target and giving EU energy regulators the mandate and the authority to prioritise renewable energies.

Industry: In line with practices developed in Denmark, energy and CO2 taxation should be combined with subsidies and tax rebates for companies willing to invest in energy savings. **The best way to protect EU business is to make it competitive** – and efficient resource use is the starting point for any good business.

Transport: Professor Jacqueline McGlade, Executive Director of the EEA said: "We cannot deal with the increasing GHG emissions, noise pollution and landscape fragmentation caused by transport without dealing with the increasing traffic across the spectrum: on our roads and railways, in the air and by sea. Technical advances, such as cleaner, more fuel-efficient engines are very important, but we cannot innovate our way out of the emissions problem from transport." This is one very important statement.[5]

[5] http://www.eea.europa.eu/pressroom/newsreleases/transport-bottom-of-the-kyoto-class-again

The EU (and MSs) must address the issue of growth in transport demand by a variety of means: country and urban planning, demand management schemes for companies and public and private institutions, taxation of aviation and motorised transport (private cars and trucks) vs. subsidies for light rail and trains (infrastructure).

Reducing energy use in transport means taking action both at refinery level – with the fuel quality directive - and at vehicle level (where car engines average less than 25% efficiency). But above all, **the EU's vehicle efficiency standards must be high enough to progressively drive out fossil fuel use**, replacing it with electrified transportation and infrastructure investment to encourage a shift from road to rail and other alternatives.

Products and Appliances: The future implementation and revision of the Ecodesign and Energy Labelling directives - the core legislation for products and appliances - should be **guided by an overarching target,** rather than continue as a collection of individual objectives. Within this framework, market transformation should be pursued by top runner policies, taking the best available technologies as the benchmark for A-labelled products.

NOAH Friends of the Earth Denmark furthermore subscribes to the response made by our regional network FOEE, Friends of the Earth Europe.[6]

We want also to point to the "40% report", a study released by Stockholm Environment Institute in partnership with Friends of the Earth Europe in December 2009 that proved for the first time that Europe could double its greenhouse gas emission reduction target for 2020. The research shows how Europe can cut domestic emissions by 40% in 2020 compared to 1990 levels.[7]

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[6] Friends of the Earth Europe response to DG Energy's Stock taking document: Towards a new energy strategy for Europe 2011-2020. Attached here.

[7] http://www.thebigask.eu/40percentstudy/the_40percent_study.pdf