European Commission, DG Climate Action
Unit A.4 – Strategy and Economic Assessment
Avenue de Beaulieu, 24, B-1049 Bruxelles, Belgium

European Commission, DG Energy
Unit A1 – Energy Policy
Rue De Mot 24, B-1049 Bruxelles, Belgium

Response from NOAH Friends of the Earth Denmark

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Consultation on the EU Green Paper

"A framework for climate and energy policy until 2030"

NOAH Friends of the Earth Denmark believes that it is important that the EU takes stock of the policy and learn from the experience. But we have previously seen how easy it is for politicians and authorities to set non-binding targets to be met far in the future rather than implement the necessary decisions here and now.

The launch of the Green Paper must not divert attention from 2020 and EU's capsized climate and energy policy. The EU has failed to raise ambition from 20% to 30%, although it is important for the international climate negotiations and the EU's own credibility. The costs of going to 30% have even proved much less than expected, but still EU wants not or can´t go on.

EU climate and energy policy is crippled by the economic crisis, reluctant countries and particular interests of industries. Directives that could have delivered large reductions end up toothless. The reductions we have seen are mainly due to Member States' own initiatives and the economic crisis since 2008.

The Green Paper's proposal of a 40% reduction by 2030 (1990 baseline) is completely inadequate, because it is a goal that should be achieved domestically already in 2020. The global climate situation calls for action of far wider scope than this both before and after 2020.

Based on the global 2-degree GHG budget and a fair burden sharing NOAH requires **domestic EU-27 reductions of 80% by 2030** (1990 baseline). Add to this an obligation for the EU Member States to **finance reductions equivalent to another 70%**, to be realized in co-operation with countries that are unable to finance the necessary greenhouse gas reductions.

In the following we will comment on the various issues raised in the Green Paper:

General

Which lessons from the 2020 framework and the present state of the EU energy system are most important when designing policies for 2030?

The current EU climate and energy framework for 2020 is completely deficient viewed in the light of what is required in relation to the remaining part of the global 2 degrees greenhouse gas budget.

And with information that even 2 degrees is far more dangerous than first thought, the greenhouse gas budget is narrowing further.

With climate science's bleak announcements in mind it is more than ever necessary that we drastically minimize our energy consumption through conservation and efficiency and take a direct path to 100% renewable energy systems – i.e. without considering the many attempts to make headway through so-called bridging technologies such as CCS, EOR (Enhanced Oil Recovery), 1st and 2nd generation biofuels and biodiesel, shale gas and other unconventional fossil energy resources or new "smart" nuclear power.

The shared competence between the EU and the Member States on energy and climate change has had a major impact on the Danish climate and energy policy - some positive, but mostly negative.

When the EU adopts goals in specific areas, we can expect directives and regulations that interfere with national policies. It can be good in relation to climate-foot-dragging countries, but for more ambitious countries such as Denmark who want a fossil free energy sector by 2035, EU harmonization efforts risk to counteract the necessary transformation of the energy system.

The 2030 framework should therefore in our view ensure that each Member State retains the right to go ahead and supplement agreed EU policies with the instruments, regulations, subsidies and taxes etc., they find necessary and most appropriate to meet common as well as national objectives.

It can, in our opinion, best be achieved by Member States adopting climate change legislation with strong targets based on greenhouse gas budgets respecting the 2 degree threshold (high probability). It is essential that the momentum is maintained. EU climate and energy policies should not lead to "convoy sailing", where the slowest country will set the pace.

The Green Paper reflects that the EU wants "convoy sailing". The EU has decided to make the ETS the central tool in the climate policy and combats the use of alternative regulatory instruments such as royalties on carbon-intensive fuels, and is also looking at national support and sector policies as a problem.

The questions in the Green Paper are imbued with the erroneous assumption that the climate and energy policy as a common EU policy area means that there must be harmonization and one common energy system should be established in the EU-27, making it possible to establish one common energy market of energy resources and power in the expectation that it will lead to lower prices. Market and liberalization mindsets have taken over from common sense and removed the focus from the physical reality.

The climate and energy policy must in our view first and foremost be about how you - as soon as possible and most effectively - can minimize energy consumption and establish 100% renewable-based energy systems at regional/national level. A range of renewable energy technologies, building on regional/national resources must be brought to play with decentralized CHP plants with heat pumps, smart electricity and heating networks that minimize transportation and consumption of electricity and heat. Biomass for energy must be minimized, and the biomass must be sustainable and locally grown.

Targets

Which targets for 2030 would be most effective in driving the objectives of climate and energy policy? At what level should they apply (EU, Member States, or sectoral), and to what extent should they be legally binding? Have there been inconsistencies in the current 2020 targets and if so how can the coherence of potential 2030 targets be better ensured?

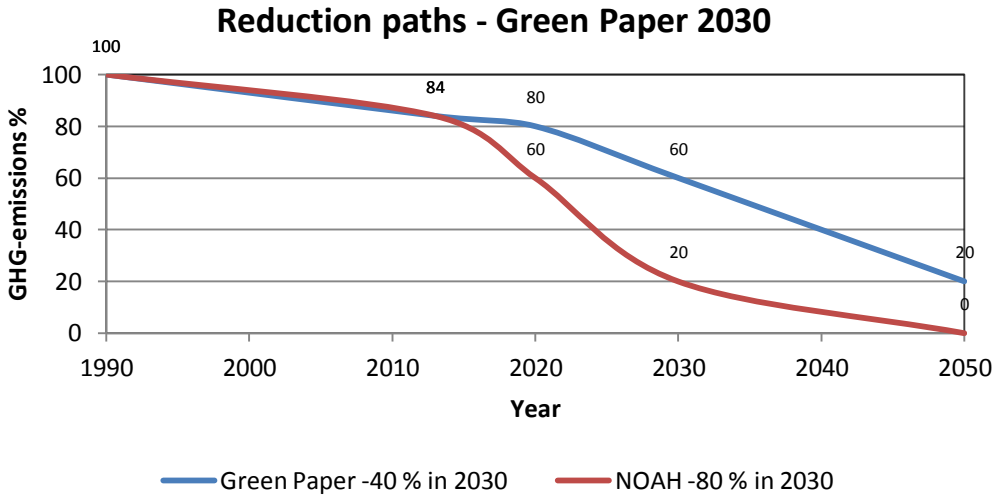
The Green Paper's proposal of a 40% reduction by 2030 (1990 baseline) is completely inadequate, because it is a target that should be achieved domestically already in 2020. The global climate situation calls for action of far wider scope, both in 2020 and in the period thereafter.

Based on the global 2-degree GHG budget and equitable burden-sharing (GDR-based) NOAH requires **domestic EU-27 greenhouse gas reductions of 80% by 2030** (1990 baseline). Add to this an obligation for the EU Member States to **finance reductions equivalent to another 70%** to be realized in co-operation with countries that are unable to finance the necessary greenhouse gas reductions themselves. This cooperation shall prevent these countries from pursuing a development based on fossil fuels, but instead goes quickly to a 100% renewable energy supply.

In connection with the climate package, NOAH made an environmental space calculation, which seeks global per capita equality in 2050, but without recognizing countries' historical emissions, and it also showed a need for domestic EU-27 reductions of about 80% in 2030.[1]

The figure below shows the Green Paper reduction path (including offsetting) and NOAH's proposal for the domestic EU-27 reduction (no offsetting) 2050. NOAH's curve reflects what we deem technically possible in the EU. On top of this is the obligation of 70% reductions in poor countries financed by the EU Member States.

[1] http://klima-sos.dk/onewebmedia/EU-27-emissions_and_ES_projections-2008.pdf (in English)



The area under each curve represents the EU's contribution to global greenhouse gas emissions. NOAH's proposal would keep the EU's greenhouse gas reductions calculated from 2013 onwards in line with what is needed globally, while the Green Paper proposals take up a much larger share of the remaining global 2-degree GHG budget.

If the EU is not willing to take on domestic reductions the size of at least what is needed in average globally, how can other, less prosperous countries with much less historical emissions then be expected to take the necessary action?

The Green Paper revolves constantly around the economy and the functioning of the market, as if we are free to choose to opt out of the most climate-optimal solutions if they turn out to be expensive here and now. The thing is that we for the sake of present and future generations can´t afford not to take action.

EU and the Member States - and the World - are faced with an urgent matter that should be compared to a war situation.

NOAH believes that the only way we can overcome the climate challenge is to think and act nationally and globally at the same time. Denmark and the EU Member States must assume a dual obligation:

National action. Over the next 20 years, energy consumption must be minimized and all fossil fuels and nuclear power replaced with 100% renewable energy. At the same time, GHG emissions from agriculture, forestry and land use by 2050 must be turned into net sequestration through afforestation, amended land use and better farming methods.[2]

[2] As to our idea of how it can be done for Denmark: see "NOAH's Energy Action Plan 2050" and our proposal for a Danish climate law with accompanying documents - see www.klima-SOS.dk. Our bid for the EU-27 is seen in the so-called "40% study" that demonstrates how the EU-27 technically can reach 40% GHG reduction by 2020 (1990 base) - See http://www.climatedatabase.eu/sites/default/files/the_40percent_study.pdf
- or the full report from Stockholm Environment Institute: 'Europe's Share of the climate challenge: Domestic actions and international obligations to protect the planet'
http://klima-sos.dk/onewebmedia/EU27_report_SEI_FoEE.pdf

International commitment. This refers to the proportion of a country's total liability which can´t be met through domestic action. A rapid transition to 100% renewable energy in Denmark and the EU is not enough to bring the global 2-degree GHG budget away from the brink of disaster. The rich countries should help poor countries overcome their combined climate and development crises. With the Greenhouse Development Rights (GDR)[3], we have now a concept that gives an idea of a new burden sharing regime in the climate negotiations. GDR can also be used as a framework for countries wishing to act quickly and ethically responsible through bilateral agreements or in large or small "coalitions of willing partners."

For the EU-27 to take its fair share of the climate challenge, we believe that the EU-27 to must reduce its domestic greenhouse gas emissions with 80% by 2030 (1990 baseline) and assume an overall reduction commitment of the order of -150% by 2030 (1990 baseline).

This corresponds to a domestic reduction of 4500 $MtCO_2$-eq by 2030 (1990 baseline) and a total GDR reduction commitment of around 8000 $MtCO_2$-eq by 2030 (1990 baseline).

For comparison, the EU's current 20% target represents a reduction of 397 $MtCO_2$-eq and a possible 30% target would represent a 957 $MtCO_2$-eq reduction by 2020 (1990 baseline).

NOAH believes that even for the period after 2020 there should be targets for 3 overall climate and energy ***indicators:***

1) The total emission of CO_2 and other greenhouse gases
2) Renewable energy's share of gross energy consumption and
3) Gross energy consumption (primary energy consumption corrected for imports and exports of fossil fuels, bunkering for external use, stock changes and foreign fuel consumption related to external trade with electricity) - include the conversion and distribution losses.

The hitherto prevailing view of biomass as by definition CO_2 neutral should immediately be replaced by **1)** specific LCA-based emission factors that recognize ILUC (Indirect Land Use Change) and **2)** a declaration of the biomass origin and its ecological status and biodiversity.

NOAH believes that biomass should be seen as a local / regional resource that should not be traded between continents and transported over long distances. Biomass is a scarce resource and it should be kept in the natural cycle in which the recycling of carbon, nutrients and minerals to the soil is essential for the maintenance of the ecosystems' structure and function. The use of sustainable biomass for energy generation should be minimized and used exclusively to compensate the increased

[3] The GDR concept calculates for all countries both their historical emissions of greenhouse gases (***R***esponsibility), expressed as a percentage of total historical emissions as well as their financial capacity (***C***apacity) expressed as a percent of global GDP. If, for example ***R*** and ***C*** are weighed equally you get a ***R***esponsibility ***C***apacity ***I***ndex (***RCI***) i.e. a percentage distribution among the world's countries with which the GHG reduction requirements for the 2-degree reduction curve can be distributed to the individual countries. The key can also be used to define how much each country should contribute financially. The rich countries' reduction commitments will typically far exceed their actual emissions as such. Denmark and the other EU Member States must take on an international reduction commitment besides the domestic commitment to create a 100% renewable energy system. See:
http://klima-sos.dk/onewebmedia/GDR_made_easy.pdf
http://klima-sos.dk/onewebmedia/EU27_report_SEI_FoEE.pdf
http://gdrights.org/calculator

fluctuations in the energy system that can be expected with an increasing share of renewable energy.

EU targets should be translated into national minimum targets for Member States to meet in the way that is most optimal for each country and using local renewable resources.

Are targets for sub-sectors such as transport, agriculture, industry appropriate and, if so, which ones? For example, is a renewables target necessary for transport, given the targets for CO_2 reductions for passenger cars and light commercial vehicles?

NOAH supports that the EU determines overall minimum reduction targets for each sub-sector, but we do not want the EU to set targets for renewable energy in the energy subsectors.

It should be up to individual countries how they meet these objectives. We therefore demand that the current renewable energy target in transport is removed.

How can targets reflect better the economic viability and the changing degree of maturity of technologies in the 2030 framework?

The question reveals a central problem in the EU's climate and energy policy: It will let the emergence of economically viable renewable energy technologies determine the objectives, rather than build on what is globally necessary from 2-degree GHG budget and support the necessary renewable energy capacity being established in EU Member States. The EU will in other words only address the problem, if it can be done with renewable energy technologies that can produce energy cheaper than current fossil technologies.

EU's current policy is largely designed to meet the fossil industry's and the nuclear industry's interests. Here it´s ok to use planning, financial support and clear technology choice in favour of e.g. coal (CCS), agrofuels and nuclear power. But when it comes to renewable energy technologies EU´s policy seems to be that market forces should determine the development – and politicians only have to make decisions that are "technology neutral".

It is an irresponsible approach to such a paramount issue, and there is a need for a paradigm shift in the EU's approach to climate and energy policy.

The alternative that we are advocating requires planning and prioritization of energy saving and renewable energy technologies that can help meet climate change targets.

The EU must adopt the Member States to develop a long term climate and energy planning with milestones for the short term (2020, 2025, 2030, etc.) in order to create a comprehensive climate and energy policy minimum framework which Member States must comply with. It will give market players assurance for the development direction and confidence for investment in renewable technologies. It will create a long-term demand for renewable energy technologies and rapid market maturation and thus competitive prices that can be independent of support.

How should progress be assessed for other aspects of EU energy policy, such as security of supply, which may not be captured by the headline targets?

Increased security of supply is achieved mainly through significant energy savings in buildings and transport and by replacing energy production based on imported coal, oil, gas, uranium and biomass with renewable energy sources. Increased employment is achieved particularly through energy renovation of the entire building stock.

Instruments

Are changes necessary to other policy instruments and how they interact with one another, including between the EU and national levels?

As mentioned under "General" NOAH believes that the EU should strengthen the planning instrument by requiring Member States to plan for significant energy savings and the transition to 100% renewable energy.

It will require a showdown with the belief that the market can do the job and an activation of the Structural Funds to combat climate change and acceptance of the Member States to use national taxes on fossil fuels.

The EU has decided that the CO_2 Emissions Trading Directive (CO_2-dir) and the related EU ETS (Emissions Trading Scheme) shall be the flagship of climate and energy policy up to 2020.

It was an erroneous decision that we have been warning about for many years. Instead, there should have been demands for national energy planning with energy conservation and phase-out of fossil fuels as the focal point and other policies and directives should have been designed to support these aims.

In the negotiations on the Energy Efficiency Directive (EE-dir), it was an argument against the introduction of binding targets and effective interventions that it would be contrary to the intention of the CO_2-dir., where a high allowance price in theory should send a market signal, leading to energy saving and technological development.

It was feared that energy savings would result in less energy consumption and thus an increase in the already large excess of CO_2 allowances, thereby reducing the currently low CO_2-allowance price further. The result was a watered down EE-dir. subject to considerations of the CO_2-dir.

It has been even more unfortunate, since the CO_2-dir has proved to be a huge failure with a very low allowance price (presently 1 ton of CO_2 costs only 3.5 €). ETS' 3. period (2013-2020) is unlikely to rectify the problems. ETS is, in other words, become an ineffective instrument that will not act as a driving force for domestic reductions within the ETS-sectors by 2020. Contrariwise it will rather weaken other policies such as energy conservation, improvement of instruments like rules and taxation, business innovation, domestic action, citizens' involvement, reduction of bureaucracy, initiatives to prevent cheating etc.

- ETS must either undergo an immediate radical reform, which we already proposed in 2008[4] by the adoption of the climate package, and it must have added mechanisms to adjust the quantity of allowances in the case of economic crises, or when the Member States are able to save extra energy as a result of the successful energy saving measures.
  NOAH is opposed to a guaranteed minimum share price through subsidization with public funds.

- Alternatively, ETS could be scrapped and a new climate package as proposed here should be built around energy planning and significant energy savings in all sectors.

The RE Directive´s binding target of 10% renewable energy in transport by 2020 has resulted in major negative consequences globally due to increased imports of non-sustainable biomass and rising food prices for the world's poor. We require the 10% target removed.

The CCS Directive (Carbon Capture and Storage) is likely to derail a trend of increased use of renewable energy. The CCS-dir. is the product of the fossil industry's extensive lobbying to extend the fossil era. EU's ambition on CCS should be dropped and the CCS-dir. repealed.

How should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?

See "Targets", where we describe our proposal for the EU to set overall minimum goals, overall and by sectors, while the Member States determine how their shares must be met – e.g. by national support schemes for renewable energy.

We believe that it is wrong to focus so exclusively on cost-effectiveness, because the construction of regional/national, intelligent, 100% renewable energy systems can demand technologies with varying degree of market maturity.

A future renewable energy system must for example use large heat pumps in CHP plants, but it is not certain that those currently would be the most economically viable choice. Solar cells are more expensive per kWh than wind, but we need a certain amount of photovoltaic power in order to optimize renewable energy system.

The Green Paper's one-sided market focus will prevent the establishment of 100% renewable energy systems. There is a need to prioritize planning and de-prioritize market by 2030 policies.

We also believe that public participation in the radical transformation of the energy supply should be promoted and strengthened through both EU and national legislation.

[4] Lower quota ceiling; 100% auctioning; no offsetting; no allowances for CO_2 storage; no interconnection with other CO_2-emissions trading systems.

How can fragmentation of the internal energy market best be avoided particularly in relation to the need to encourage and mobilise investment?

We do not believe that the common energy market is a good thing, because it requires one coherent energy infrastructure. This will counteract the rapid establishment of regional/national 100% renewable energy systems.

EU Member States should see diversity as strength rather than fighting the diversity through harmonization efforts. The EU should facilitate the dissemination of best practices and most effective systems to Member States.

The EU can contribute to increased investment in climate and energy by including these needs in the operation of agricultural subsidies and structural funds.

Which measures could be envisaged to make further energy savings most cost-effectively?

The most economical energy savings comes as a result of good regulation, long-term support schemes, counselling etc. But you have to look more broadly at energy savings than the individual project because the reduction of the total energy demand is a necessary condition for the establishment of a 100% renewable energy system to be cost-effective.

The useful EU rules of the Ecodesign and Energy Labelling Directives can be tightened. As mentioned earlier EU can support all Member States in their energy planning with decentralized CHP, large heat pumps and expansion of district heating in urban areas, tightening of national rules for buildings (Building Directive) and increased efficiency requirements for transport.

How can EU research and innovation policies best support the achievement of the 2030 framework?

It is important to support renewable energy, energy conservation and the development of flexible national and regional energy systems. Part of EU research funding can be used to support or strengthen development of 100% renewable energy plans in all Member States. Denmark has e.g. a long tradition of this kind of energy planning that could benefit other countries.

Conversely, we believe that it is important to phase out nuclear research, including stopping the ITER program, which takes up more than half of the EU energy research funding.[5] We also want research into CCS terminated because it has no chance to contribute to the necessary reduction in emissions of CO_2.[6]

[5] See http://energyintelligenceforeurope.dk/Documents/Energy_Intelligence_folder.pdf (In Danish)

[6] See our report "An Assessment of Cumulative CO_2 Reductions from CCS": http://ccs-info.dk/cumulative_co2.pdf (in English)

Competitive and Secure Energy

Which elements of the framework for climate and energy policies could be strengthened to better promote job creation, growth and competitiveness?

Increased employment is achieved particularly through energy renovation of the entire building stock and by setting ambitious GHG reduction targets with associated targets for rapid development of the national renewable energy capacity.

Increased security of supply is achieved mainly through significant energy savings in buildings, transport and industry, and by replacing energy production based on imported coal, oil, gas, uranium and biomass with renewable energy sources.

What evidence is there for carbon leakage under the current framework and can this be quantified? How could this problem be addressed in the 2030 framework?

The concept of CO_2 leakage is in our opinion a politically charged term coined by the energy-intensive industry, to have abolished / reduced energy and environmental taxes. The relocation of European jobs is driven primarily by wage differences, access to cheap raw materials and the desire to be present where new markets are emerging.

What are the specific drivers in observed trends in energy costs and to what extent can the EU influence them?

If we are to solve the global climate crisis, the EU has a fixed assignment. The energy system must as soon as possible be converted to 100% renewable energy, regardless of prices and tendencies, and further reductions must be funded in other countries. Increased use of renewable energy, especially solar and wind, and energy efficiency means lower prices. The EU can promote this by ensuring a continuous, ongoing expansion of renewable energy and higher efficiency requirements.

How do we account for the uncertainty regarding the efforts and commitment level, other developed countries and economically important developing countries undertake in the ongoing international negotiations?

The EU must take the lead to drive forward the international climate negotiations incl. international financing. In parallel with domestic efforts, the EU must establish cooperation with countries that also see the need and opportunity for rapid GHG reductions in their countries co-financed by the EU Member States. See our responses under "General" and "Target".

International agreements on phasing out subsidies for conventional as well as unconventional fossil fuels can create additional security on the direction of the development.

How to increase regulatory certainty for business while building in flexibility to adapt to changing circumstances (e.g. progress in international climate negotiations and changes in energy markets)?

Binding short and long term targets, sound engineering-based energy planning and a long-term economic incentive structure for energy conservation and renewable energy, will give the companies a stable and predictable framework to work within.

NOAH's work with a Danish climate law is an example of the creation of such a framework - see draft law with accompanying memo.[7]

The EU should encourage Member States to adopt ambitious national climate laws that can act as dynamos of the common climate and energy policy.

How can the EU increase the innovation capacity of manufacturing industry? Is there a role for the revenues from the auctioning of allowances?

Innovation can be many things. NOAH believes that there is a need for eco-innovation, which may lead to less resource and energy consumption. Such a development can be promoted through an ecological tax reform, shifting taxation from income taxes to taxes on resources and energy. Another option is to change the corporation tax by transfer taxation to corporate consumption of energy and raw materials. Both proposals would spur innovation in energy- and resource-saving technologies and services.

The proceeds from the auctioning of CO_2 allowances in a reformed ETS with 100% auctioning will generate very large amounts. We believe that Member States should be obliged to earmark such funds for the transition process with significant energy savings and 100% renewable energy.

How can the EU best exploit the development of indigenous conventional and unconventional energy sources within the EU to contribute to reduced energy prices and import dependency?

The EU should focus on as soon as possible to phase out the import of fossil fuels through energy savings and rapid expansion of renewable energy.

Shale gas and EOR with CO_2 should not be supported as there are plenty of fossil fuels viewed in relation to the greenhouse gas budget that is available globally.

Nuclear power should be phased out. High-risk reactors must be closed immediately and other reactors must be closed as they reach their end of life. Existing plants and reactors must not have life extensions. Nuclear power's tax advantages should be discontinued.

[7] http://kortlink.dk/climatedatabase/cgb8 (in English)
http://kortlink.dk/climatedatabase/cgb7 (in English)

Increased security of supply and lower energy prices is achieved mainly through significant energy savings in buildings and transport and by replacing energy production based on imported coal, oil, gas, uranium and biomass with renewable energy sources.

How can the EU best improve security of energy supply internally by ensuring the full and effective functioning of the internal energy market (e.g. through the development of necessary interconnections), and externally by diversifying energy supply routes?

We do not believe that the common energy market is a good thing because it requires one coherent energy infrastructure that will counteract the rapid establishment of regional / national 100% renewable energy systems.

EU Member States should see diversity as strength rather than fighting the diversity through harmonization efforts. The EU should facilitate the dissemination of best practices and most effective systems to Member States.

National and regional energy systems must adapt to an increased supply of intermittent renewable energy (wind and solar), and as part of this reduce bottlenecks. It should be done by a combination of increased local flexibility and in certain areas reinforced electrical connections.

Countries that already have strong international connections like Denmark should rather focus on greater local flexibility.

The EU should increase energy security by reducing fossil fuel consumption, not by investing in new fossil fuel supply routes or major trans-European electricity grid. The EU should not promote new gas pipelines or a CO_2 pipeline network.

Capacity and distributional aspects

How should the new framework ensure an equitable distribution of effort among Member States? What concrete steps can be taken to reflect their different abilities to implement climate and energy measures?

NOAH thinks that the starting point should be the individual Member States' international obligations in relation to the 2-degree GHG budget and a fair distribution of the effort – e.g. as it is implemented in the GDR concept. See our comments under "General" and "Target".

What mechanisms can be envisaged to promote cooperation and a fair effort sharing between Member States whilst seeking the most cost-effective delivery of new climate and energy objectives?

The EU should facilitate the dissemination of best practices and most effective systems to Member States.

Are new financing instruments or arrangements required to support the new 2030 framework?

The revenues from the following instruments can be targeted investments in energy conservation and renewable energy:

- Phased out subsidies for fossil fuels and nuclear power.
- Common minimum tax on fossil fuels and nuclear power.
- A share of the agricultural subsidies and structural funds.
- The revenues from the auctioning of a reformed ETS.
- Border duties attaching to the CO_2 content of the goods.

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Kim Ejlertsen
Palle Bendsen
Peter Arnborg

NOAH Energy and Climate
NOAH Friends of the Earth Denmark
Noerrebrogade 39, 1. tv.
DK-2200 Copenhagen N
Denmark
Phone +45 3536 1212
noah@noah.dk
www.noah.dk