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Response to the Green Paper “A 2030 framework for climate and energy policies”

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In developing a 2030 framework for climate and energy policy RWE recommends the following guiding principles to be taken into account:

1. **The reduction of Greenhouse Gas Emissions is and should remain the key climate policy target within the European Union.** It should be set as the primary target for 2030 and beyond. **Renewables and/or efficiency targets will not achieve emission reduction** beyond those set by the ETS and can only add to the cost of decarbonisation by requiring means which the ETS may not have chosen. But in the event that the EU sets more than one target these should be as coherent with one another as possible.
2. **The ETS is and should further be the key instrument in the pursuit of the EU emissions reduction target.** It has a proven track-record in effectiveness and efficiency. However, it is time to think about necessary structural reforms for the period beyond 2020, of which one element is certainly the setting of a revised emissions reduction target for 2030.
3. ETS and **non-ETS sectors should both be exposed to a carbon price signal** to ensure that emitters take into consideration direct and indirect costs of carbon emissions when making their decisions.
4. The guiding principle for the development of instruments should be: **As much of the market as possible, but as little state control as is necessary.** Essential design features should be: **European, market-orientated, technologically neutral and otherwise non-discriminatory.**
5. In the interests of efficiency and predictability the maxim of "one target, one instrument" is advised. This will help ensure a **stable and predictable framework** which is necessary to incentivise investments required to achieve the long-term European climate policy targets.

General

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

In the years, European energy markets have undergone major changes. Long-term oil-indexed gas contracts became less important. The share of electricity generated from renewable sources has reached unprecedented heights. While nuclear plants are phased out in Germany, other EU-countries press ahead with plans to build new reactors. The financial crisis has caused an economic downturn. In addition the financial position of all European utilities has been considerably weakened, putting them in a poorer position to invest in decarbonisation. Further changes must be expected and to accommodate these it is essential to design a robust and stable 2030 energy policy-framework.

While energy markets have developed further, climate policy approaches have also done so. Various regulatory interventions on the European as well as on the national level have distorted the internal energy market leading to inefficiencies and unnecessarily high costs. Private households and industrial customers are consequently suffering from high energy bills and the economic competitiveness is more and more impaired. More attention must be paid in the future to the principles of the internal energy market to prevent the risk of a failure of the EU's climate protection ambitions.

Nonetheless, the EU is making good progress towards achieving at least one of the 20-20-20 targets by 2020: a 20% reduction in EU greenhouse gas emissions from 1990 levels. The emission trading system (ETS) has proven to be an effective and efficient instrument in delivering this goal and the current debate around reforming the ETS should not distract from this fact. It is less certain whether the share of EU energy consumption produced from renewable resources will reach 20% or whether a 20% improvement in the EU's energy efficiency will be achieved by 2020. The fact that these targets are not the object of market-orientated instruments should be seen as an indication for the inferiority of command-and-control regulation to market-based approaches.

Under the current framework it has become apparent that a failure to coordinate instruments on European and national level can lead to unintended consequences, high costs and adverse effects in reaching the various goals. The current low carbon price in the ETS has resulted from lower industrial activity but also from the interplay between national renewable support schemes and efficiency improvement measures on the one hand and targets for greenhouse gas abatement on the other hand. While this combination of instruments has delivered a significant increase in renewable electricity generation and savings of energy consumption it has manifestly not delivered the associated greenhouse gas reductions in the most efficient way.

It is evident that national government interventions and regulatory barriers (such as energy taxation measures) as well as a wide range of uncoordinated national climate policy instruments continue to prevail. Lack of regulatory certainty represents a major obstacle to investment in a sufficiently wide range of low-carbon technologies and is thus making it more difficult to achieve the climate policy targets. For example, the latent uncertainty about the future of the ETS – whether it will continue to exist and if so, in what form – is a major impediment to investment (and even pilot projects) in low carbon plants and will postpone their entry into service. To overcome this, it is important to achieve rapid political agreement on long-term CO₂ reduction targets, which would ultimately lead to a more stringent CO₂ reduction path beyond the year 2020. The current state of the ETS underlines the importance of a new 2030 energy and climate policy framework to provide a more stable and predictable planning environment for all market participants.

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?

The overarching requirement is to set a legally binding long-term greenhouse gas target. A reduction path to 2050 with intermediate targets for e.g. 2030 and 2040 would set a suitable framework for low-carbon investment decisions and long-term planning. These targets should be set based on the EU's long term climate change goals as laid out in the 2050 Energy Road Map. A target of 40% reduction in greenhouse gas emissions by 2030 would be consistent with the Road Map.

The target setting should take account of the planned signing of a Global Climate Change Agreement in 2015. Without the commitment of other countries to comparable reduction efforts, the competitive position of the EU economy would be negatively affected with a potential creeping deindustrialization of the EU. The EU's share of Greenhouse gas emissions is approximately 11% today and will further decrease to roughly 6% in 2030. The European climate reduction efforts on their own will not suffice to reach the 2° C objective. Conditional emissions reduction targets as in the current Directive could be an option to reflect appropriately the progress in international negotiations. It must be transparent to market participants until when the conditionality is maintained. And it should be announced at which points in time a change of reduction targets may be carried out. A priority must be to create a stable and predictable environment.

A legally-binding long-term carbon target for 2030 would then set the framework for specific policy measures and instruments. As a first best option, emission reductions would be centrally coordinated to achieve abatement at lowest cost. As the different carbon-emitting sectors are too diverse it will be important to determine the split between those sectors covered by a single-market-orientated instrument – the ETS – and the other non-traded sectors. The necessary breakdown of the reduction target into two sub-targets should be based on abatement costs in the sectors (effort sharing).

Where the ETS is not the most appropriate measure for driving emissions reductions, other policies and instruments may be needed. Like the ETS, these should deliver a clear carbon price signal as well as exposing emitters to the full costs of carbon emissions. To keep the ETS functional, distortions of its price mechanism should be prevented. One-off measures to intervene in the market have to be avoided or at least severely restricted. Additional instruments to support the ETS are unnecessary and inefficient. In particular national price management mechanisms such as carbon floors/taxes or coal taxes do not deliver further emission reductions at the European level but increase abatement costs and costs to consumers. A functional ETS will be able to incentivise significant investment in mature renewable energies as well. Hence, all subsidy schemes for renewables should be phased out in due course and investment incentives be driven by the ETS alone (although the principle of grandfathering for existing support must be respected).

With the ultimate objective of greenhouse gas abatement, the main– potentially the only– target should be greenhouse gas reduction targets. Other targets, e.g. for renewables and energy efficiency both undermine the integrity of the ETS and cause a considerable rise in costs for climate protection. Furthermore these European targets will not be met in an efficient way whilst national rather than only European instruments continue to be used. A binding target for renewables and energy efficiency on European level cannot be recommended as a result.

Have there been inconsistencies in the current 2020 targets and if so how can the coherence of potential 2030 targets be better ensured?

A first step to achieve coherence in the future is to set a single over-arching target for 2030: a legally binding reduction of EU greenhouse gas emissions. In particular for the energy sector, there needs to be a return to the basic economic presumption that a single target is best delivered by a single instrument. The EU is therefore advised to review the existing European climate policy instruments for consistency with this simple principle. As some sectors are not covered by the ETS a single instrument may not be sufficient, e.g. some sectors may need different incentivisation to overcome specific barriers. In these cases the setting of sub-targets may be appropriate. However, if a set of instruments is implemented, these should not overlap but instead should be mutually reinforcing. This is particularly applicable for renewable support schemes.

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 CO₂ reductions for passenger cars and light commercial vehicles?

Sub-targets under the ETS should generally be avoided; we should be neutral as to which sector is delivering abatement provided that total abatement is on track. Departures from this principle will add unnecessary costs. The corollary of this principle is that we should seek to add additional sectors to the ETS where it is efficient to do so, for example, transport. Any enlargement broadens the choice in abatement options covered by the ETS and should consequently reduce the overall abatement costs. But it is necessary to fully integrate new sectors, so that allowances are freely transferrable between all sectors covered. If it is not sensible for a sector of the economy to be integrated in the ETS, this sector should be exposed to the cost of carbon by alternative measures. In these cases, targets for specific sub-sectors may be appropriate.

The electrification of heating and transport will be a key means for achieving decarbonisation in sectors not included in the ETS. It is important that policies or targets reinforce this. Creating increasing demand for electricity will further drive investment in low carbon generation. In some areas of the economy regulation may continue to be necessary to encourage appropriate behaviour from customers – for example by setting energy standards for buildings or new product standards.

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

First of all, the economic viability and the changing degree of maturity of technologies should be reflected in instruments rather than targets. But to guarantee efficiency, even with instruments, a technology-neutral design is the only way to minimize the costs to the economy. Different technologies should be allowed to compete in the market. Where technologies need support to reach commerciality, time limited support, e.g. for R&D, may be required to help achieve this. Direct, fast-reacting, tailor-made and time-limited approaches are therefore required, implemented on the basis of general guidelines developed by the EU. Appropriate R&D policies (at an EU level) will also be needed to ensure development of new technologies.

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?

The reduction of greenhouse gas emissions is only one element in the energy-policy triangle (security of supply, environmental objectives, and economic competitiveness). The significance of both the

other objectives is apparent in current discussions in a number of Member States, for example around the need for capacity markets (security of supply) and the cost-burden of support mechanism for end-consumers and industry (economic competitiveness).

The progress in meeting all three objectives should be closely monitored on an EU-level and attention given to the balance of CO₂ reduction, cost and supply quality. When setting-out the new 2030 framework for climate and energy policy, the EU can take into account the other objectives of the energy-political triangle in various ways. Firstly, instruments to achieve the 2030 emission reduction target should be designed in an effective and efficient manner to limit energy price effects. Instruments should be market-orientated, technology-neutral and free of any other form of discrimination. In cases, where a national solution is preferred to the implementation of a European approach, the EU should define general guidelines for the design of national instruments to ensure those principles are enshrined at national level.

Due to increasing electricity production from renewable sources, the running hours, revenues and profitability of conventional power plants are shrinking. Sooner or later this will result in the decommissioning of plants. As renewables production is intermittent, without adequate back-up from conventional plants the security of energy supply in parts of Europe may be at stake.

To prevent critical supply-situations, a coordinated European approach to capacity remuneration mechanisms is necessary. It should be based on the following European guidelines, which should include flexibility mechanisms for those countries with a lack of interconnections. Those guidelines must recognise the principles of: i) technology neutrality, ii) equal treatment of generation, storage and demand response, iii) no discrimination between existing plants and new plants, iv) no discrimination between market participants. Security of supply would then be monitored and controlled by the market.

Instruments

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

It is important that a clear hierarchy of targets be defined and agreed on by the EU and national governments. European policy instruments should be chosen for the achievement of European targets. National approaches should be the exception. Furthermore a coexistence of European and national instruments to deliver the same policy objective should be unnecessary as it increases the risk of policy incoherence. It is a basic economic presumption that a single target is best delivered via a single instrument

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

Wherever possible, a European approach is preferable to a national one. If this is not possible, it is a task of the EU to provide National governments with the guidelines and principles necessary to design an effective instrument: market-orientation, technological neutrality and non-discrimination. These principles should be considered by European as well as national administrations in a process of designing a specific instrument to fulfill a precondition for effectiveness and efficiency.

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

Full enforcement of the 3rd Energy Package is one key instrument to reach the completion of the internal energy market. Furthermore, state-aid control may help to limit excessive support schemes for renewable energy sources that are approaching commerciality.

As a general principle, Member States should commit themselves to a more European approach to tackle EU-wide or global challenges such as climate change. This would entail the EU gaining greater commitment in this direction and assuming increased competences. But to move forward, it must find appropriate ways to accommodate legitimate national interests and sensitivities. Additionally, the full potential of the European policy tool kit should be used to ensure national instruments align with European law and principles. Otherwise, costs for achieving climate policy targets keep high as the effectiveness of national, uncoordinated instruments is low (e.g. a capacity market in France, a coal tax in the Netherlands, a carbon floor price in UK).

With regard to the encouragement of investment, it would be helpful to strengthen the trust in the political environment and to improve predictability and certainty for investors. This could include actions such as the further development of the Internal Market or abolition of price regulations. It is important that interventions that distort the market are avoided.

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

The basic principles of market-orientation, technological neutrality and non-discrimination are equally valid for energy savings. Cost-efficiency can best be achieved, if the decision as to which specific measures should be chosen to save energy is taken by the market. Transparency around energy prices is a key factor in delivering energy efficiency. Energy consumers should be exposed to the direct and indirect costs of carbon emissions.

Additionally, existing barriers for customers to play their part have to be removed. Customers need to have access to reliable, unbiased information regarding energy-efficient appliances, refurbishment of houses, alternative heating systems, etc. Improved building and appliance standards are also important. In contrast, obligations on energy suppliers are not necessarily an efficient means to deliver energy efficiency improvements.

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

Research and innovation will play a fundamental role in supporting the transformation of the energy sector by emerging technologies and delivering emissions reductions at least cost. R&D support should thereby cover the full value chain including conventional generation (low carbon technologies such as CCS, technologies for flexibility and efficiency), renewables (new technologies), storage, transport/distribution as well as more efficient consumption (demand side management, Smart grids, meters). No field of research and no technology should be discriminated against provided there are reasonable expectations of ultimate commerciality

However, in order to bring new technologies to the market, the lack of public acceptance forms a barrier. This is obviously true for CCS and the transport and storage of CO₂. EU can support companies to overcome this hurdle by transparent and broad information of the public.

Competitiveness and security of supply

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

Climate change policies must be affordable or they will not be deliverable. It is important for the EU to develop the necessary supply chains to ensure that it benefits from world-wide demand for low carbon technologies.

Climate and energy policies should rely upon market-based instruments wherever possible. In general, instruments can be designed efficiently to limit the pressures on the economy caused by the policies. This way economic development is restricted as little as possible. However, it is equally important to create stable and predictable conditions to encourage investments by companies and individuals. In contrast, short-term interventions in markets are highly disruptive.

Independent of a 2030 framework for climate and energy policies, the European economy would benefit from a further development of the Internal Market and the enforcement of a level playing field in the EU in general. This encompasses e.g. the abolition of regulated tariffs and the harmonization of national climate policy instruments. The limitation and abolition of inadequate and ineffective support schemes would also help.

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?

As long as other non-European countries do not commit to emission reduction efforts with comparable effort, competitiveness of European industries is at risk. To compensate for this, enterprises exposed to international competition should be protected by allocating certificates for free.

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

Energy costs for private households have risen significantly in the last decade with an increase above the rate of inflation. Various factors have contributed to this increase. Most of them are not within the direct influence of the EU and include national taxes, network charges, energy efficiency and fuel poverty measures or a general price increase of commodities.

The upward trend of energy costs development cannot be reversed but only limited by an improved Europe-wide approach. To achieve these further measures should be taken at a European level to profit from the scope offered by such a large market. One crucial step in any event will be the further development of the Internal Market. Measures in the non-ETS sectors to promote energy efficiency and demand-side management will be important to minimize the impacts of rising energy costs as well.

How should uncertainty about efforts and the level of commitments that other developed countries and economically important developing nations will make in the on-going international negotiations be taken into account?

The commitment of other nations to contribute to worldwide emission reductions should be reflected in the European energy and climate policy. As long as such commitments are still pending or not legally

binding, the competitiveness of the European industry could be affected if the burdens induced by a European climate policy are relatively too heavy. The EU's emission reduction targets should therefore adequately reflect the progress of international negotiations (see also next question).

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)?

It is important for enterprises and investors to have predictability and transparency around future business conditions. The EU's future energy and climate policy should reflect this. With regard to a future international agreement on climate action, conditional emissions reduction targets could be an option, as in the current Directive. In general, a stable and long-term oriented framework must be set by the EU to guarantee a reliable planning basis for all market participants. New measures and reforms of existing ones must therefore incorporate flexibility needs adequately. Short-term, selective measures to intervene in the market as a reaction to specific events influencing the energy markets are not a sensible option as they cause greater uncertainty in the market.

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

The development of new low carbon technologies in the manufacturing industry as well as in the utilities sector is decisive in reaching the EU's long-term climate policy goals. To speed-up the innovation processes, a significant part of the auction revenues should be used for supporting R&D projects in both sectors.

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?

A low import dependency will pay out in form of a more robust European economy. Indigenous energy sources can help to achieve this. The choice as to which indigenous energy source should be exploited should take into account the costs as well as whether their production is intermittent or not. For more than a century Germany has benefited from its indigenous lignite supplies. The country will continue to benefit, if none of the available indigenous resources will be discriminated in the future (e.g. lignite).

Low energy prices and a low import dependency are two targets which have certain connections. However, each indigenous energy source must be assessed against these targets on an individual basis. Where indigenous supplies will help reduce energy prices, the EU should encourage enterprises to further deploy such a specific energy source and work with national governments to facilitate this.

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?

In the preceding answers, the importance of further development of the Internal Market has been emphasized. A number of measures can contribute to this development. First of all, a more intense market coupling is recommended. Furthermore all regulations that handicap a level-playing-field should be progressively abolished. This applies to both the existence of regulated prices and to all non-market-orientated structures in the energy market, like the renewables energy law in Germany.

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?

The rules of a new framework should apply equally to all Member States. Instruments implemented under this framework should consider the different potential of Member States to deliver the EU's targets. The ETS is an important mechanism to ensure equitable distribution of effort. The ability to trade other targets (e.g. energy efficiency in the non-ETS sectors) should also ensure overall decarbonisation targets can be met at least cost.

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?

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

The energy sector will require significant investment over the next decade and access to capital will be a key requirement to deliver this investment. Development of new instruments or arrangements could be crucial for unlocking the necessary capital. In addition it will be necessary to attract new sources of finance (to compensate for the reduced financial resources of power companies) to cover the critical construction phase of capital intensive plants such as offshore wind and nuclear.