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Borealis response to the European Commission's "Green Paper on a 2030 framework for climate and energy policies"

On 27 March 2013 the European Commission (EC) adopted a Green Paper which launches a public consultation on the proposed 2030 framework for EU climate change and energy policies. This Green Paper raises a set of questions e.g. relating to the main lessons learned from the 2020 framework; type, nature and level of climate and energy targets for 2030; coherence between different policy instruments; competitiveness and security of supply and distribution of efforts between Member States.

Borealis welcomes the opportunity to give its viewpoints on basis of the questions of the Green Paper concerning the development of a 2030 framework for climate and energy policies. Prior to addressing the specific questions, the **Borealis main messages** are outlined:

In order for Europe to be successful in designing a sustainable 2030 framework, it shall properly consider the three main objectives: security and stability of energy supply; a globally competitive cost of energy; and environmental aspects to tackle negative externalities.

Borealis asks the Commission to:

- **Harmonise towards a European energy policy aimed at lowering the cost of energy;**
- **Ensure predictability, security, affordability, coherence:**
  - Drive full **implementation of 3rd energy package and the completion of the internal energy market,**
  - **Diversify and use all energy sources** (including unconventional sources of energy),
  - Introduce a target to **reduce the cost of renewable energy by a certain %** instead of requiring a proportion of renewable energy.
- **Enable economic growth: Inclusion of a 20% industry share in GDP by 2020 and beyond & no absolute energy consumption cap** which threatens growth perspectives. Climate and energy policy must be linked with industrial policy and contribute to the "Industrial Renaissance" initiative.
- **Apply a realistic climate approach: Set a top-down climate target conditionally only in case of a substantial global agreement** with comparable burdens for industry worldwide. In the absence of a global agreement provide **bottom-up calculations to define a realistic, cost efficient range for a climate goal**, taking scenarios into account.
- **Support EU ETS beyond 2020:** Structural changes must be made to **make it carbon leakage proof** and maintain ETS as a **market based system**, introducing **more flexibility** and avoiding short-term fixes. **Allocation for both direct and indirect emissions should be integrated in ETS based on actual industrial output**. All carbon leakage mitigation measures should remain in place until enough other nations – reaching a critical mass of industry competing with European industry – implement a system with similar climate costs. Such **structural enhancement** shall allow EU ETS **to continue to deliver reduced carbon emissions at the lowest possible cost while preserving industrial competitiveness.**
- **Focus on innovation: Build on sector specific knowledge and ability to innovate.** Innovation incentives will allow to further increase energy efficiency, to reduce the cost of renewable energy, to address the intermittency of renewable energy through energy storage, to develop much more cost effective options for carbon capture and storage (CCS) and consider cooperative research programmes targeting breakthroughs in carbon capture and utilisation (CCU).

1. General

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

A 2030 framework must be redesigned to deliver an outcome that is environmentally effective and sustainable, but also economically and socially sustainable.

Today the EU has substantial energy intensive industries, it remains a net exporter of chemicals, but there has been very little new EU investment in basic chemicals production for many years. If the production of these chemicals were to be lost, then the knock-on effects up the value chain would be severe. These facts must necessarily be considered in designing the 2030 policies.

The global energy landscape is currently changing at an unprecedented pace, creating enormous energy cost differences between regions. It is clear that the fundamental assumptions which determined the EU 2020 policy framework - including the post 2020 roadmaps - are now outdated and no longer applicable. For instance, fossil energy costs have not surged, contrary to what policy strategy papers suggested. The exploration of shale gas in the US is leading to a massive investment shift away from Europe. The EU is strongly affected by events and developments around the world. The chemical industry is used to dealing with high energy costs in Europe. Companies make every effort trying to gain extra efficiencies but are increasingly exposed to growing cost gaps compared to major competing regions (EU: twice as high electricity prices, 4 times higher gas prices compared to US). EU costs including carbon costs can cancel out these efficiency gains and make efficiency leaders uncompetitive.

The EU unilateral targets, legislation and resulting policy costs strongly affect the competitive position of the EU economy. The choice for a purely European absolute and static target for CO_2 emissions reductions in ETS together with an *ex ante* allocation model and the lack of a bottom-up approach hampers the perspective of growth for efficient installations and new investments. In addition the EU choice for a fixed renewables target, regardless of the costs, leads to an excessive development of subsidized renewable electricity, increasing the energy cost disadvantage for European industry on top of the disadvantage due to energy price differences as such and distorting the fragile genuine liberalized market.

Moreover, unilateral targets have proven to be ineffective when dealing with a global problem. The EU represents only 11% of the GHG emissions. By choosing for an absolute unilateral target in ETS, the current EU climate policy for industry rewards the relocation out of Europe since every delocalisation leads to less CO_2 emissions in Europe and thus to the fulfillment of the EU ETS target, even though the CO_2 (and the added value of the production) has just shifted to other regions.

Overall, policies for 2030 must be redesigned to deliver an outcome that guarantees the balance between competitiveness, security of supply and environment reflecting global climate policy developments and economic developments. Indeed, Europe cannot pursue absolute environmental objectives in isolation regardless of the costs or the economic impact. Key in the transition to a global low-carbon and competitive economy will be the investment in innovation, leading to cost competitive technologies that will drive emissions reductions not only in Europe, but also in other regions and that positively contribute to EU's economy with net added value and international competitive position.

2. Targets

Which targets for 2030 would be most effective in driving the objectives of climate and energy policy? At what level should they apply and to what extent should they be legally binding?

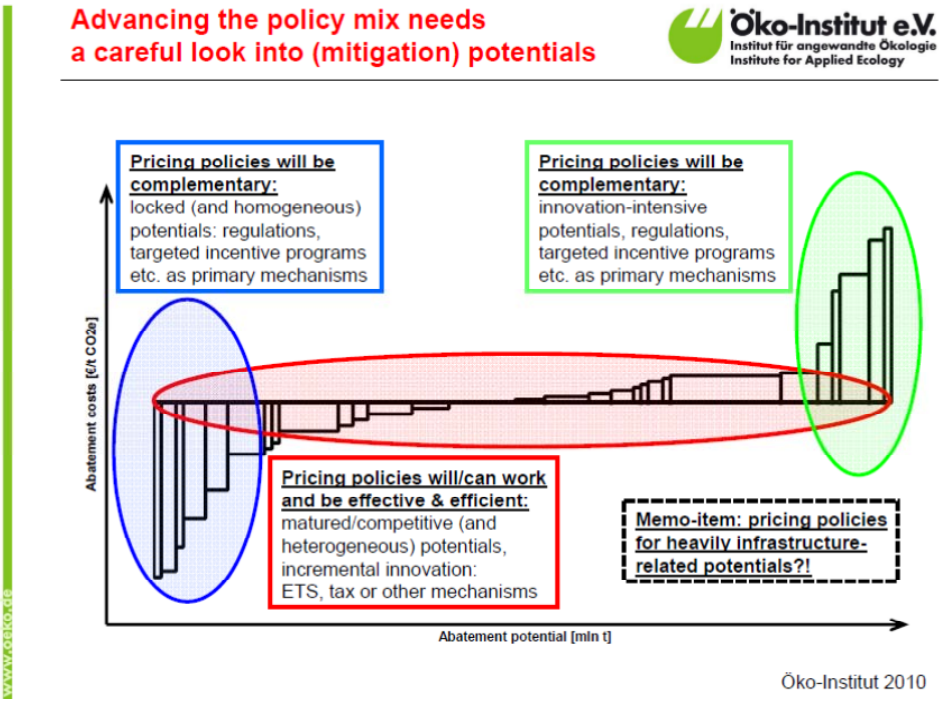
As far as climate policy is concerned, the objective is to limit the increase in temperature due to increased levels of atmospheric CO_2 by reducing carbon emissions. The objective, as far as energy policy is concerned, is to ensure competitive prices and security of supply. Industrial policy has the objective of securing economic growth and jobs. Any target discussion should recognise and reconcile all these objectives on an equal footing.

A top-down climate target can be conditional only - in case a substantial global agreement becomes reality with comparable burdens for industry globally. Any legally binding target for Europe must be directly depend upon concrete, measurable and verifiable progress of international climate change efforts.

A climate target must be technically achievable and cost-efficient, without putting in jeopardy the EU's industry competitiveness. Targets should be more dynamic aiming at added value and based on an economical and technological bottom-up analysis with a targeted focus on available potential. The European Commission now possesses extensive data as well as numerous roadmaps and is therefore well informed about technological emission performances and realistic reduction potentials of industrial installations and other sectors. Therefore, the Commission should be able to implement policies that remove barriers and risks for growth by **taking a bottom-up approach to define the cost-efficient abatement potential in different development scenarios** and providing a new burden sharing between ETS and Non-ETS sectors based on economic and technology potentials.

Borealis recommends:

- **The setting of legally binding targets must adjust to changing economic circumstances.** Long-term policies based on assumptions that ignore global developments or the future performance of the economy runs the risk of having major unintended consequences to the economy.
- **In the continued absence of an effective Global Climate Agreement with equal burdens for industry globally, a target approach based on bottom-up calculations for all sectors could provide a realistic, cost-efficient range for a climate goal, taking scenarios into account.**
- **A relative/flexible target for industry allowing for economic growth based on carbon intensity by a structural reform of the ETS system - instead of absolute yearly targets** - would incorporate both energy efficiency and the shift to lower carbon energy. Additional parameters should assure that the goal is not just reached by portfolio changes like carbon leakage of the energy intensive parts of a value chain, which puts the whole value chain at stake.
- **Economic target approach aimed at the impact on the energy cost**. For example, instead of a target requiring a particular proportion of renewable energy in the mix, there could be an economic, innovation target to reduce the cost of renewable energy by a certain %.
- **A cap on EU energy consumption is unsustainable** since growth and GDP are coupled with energy use. Such a cap can become a barrier for growth, innovation and economic recovery. Making use of big untapped efficiency potentials can give some relieve, but energy use cannot be simply de-coupled through a top-down policy decision when the EU economy relies e.g. on mature, efficient technologies.
- **RES and CCS represent rather costly abatement options.** In absence of a global climate agreement, abatement measures with extremely different abatement costs should not be primarily driven by the EU ETS; the EU ETS should just remain as a flanking support for RES and CCS. **Public funding support schemes should be technology-neutral, limited, harmonised and temporary in order to avoid picking expensive, uncompetitive technologies that depend on long-term subsidisation**. The following picture [Stakeholder meeting Structural Reform EU ETS on 19 April 2013, presentation by Dr. Felix Matthes of Öko-Institut] presents an impression of the abatement curve. On the left side are cost effective measures with a negative CO_2 cost, such as insulation of buildings which still need stimulating policies. The EU ETS is in the middle area. On the right side are much more expensive abatement options such as RES (wind, solar) and also CCS.



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

Yes, the three EU 20-20-20 targets for 2020 targets overlap and conflict. The renewables target and the energy efficiency target for 2020 are driving efforts that tend to reduce the demand for carbon allowances under the ETS. Accordingly, these abatement effects outside the EU ETS are leading to higher economic carbon costs. Costly abatement options often need long-term subsidy support that is affecting energy costs – these represent a misallocation of resources and cause economic losses. **The EU ETS is and should – after a proper review – remain the tool to reach the agreed emission reduction target at the lowest cost.** Reducing carbon emissions through innovation and technology will eventually result in reduced demand for carbon allowances.

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?

All sectors/ actors in society, including transport and households should be involved in climate protection efforts. Therefore, targets and specific instruments for emission reduction in non-ETS sectors could be useful. Setting of these targets should be based on a bottom-up analysis of economic feasibility. Non-ETS sectors should gradually - and based on feasibility analysis - be invited to join the EU ETS. The number of EUAs will have to be adjusted accordingly.

Technologies should not be imposed in order to give innovation a chance to explore the best solutions. The current single CO_2 efficiency target for passenger cars allows for innovation by automotive builders ranging from reducing weight, fuel efficient engines to hybrid or full electric vehicles. Moreover, such a CO_2 efficiency target allows for continuous growth within the automotive sector. Such a flexible framework should be taken as an example for resolving the current ex-ante ‘straight jacket’ allocation in EU ETS.

Moreover, the burden should be shifted from production towards consumption. This would avoid that carbon leakage can contribute to meeting EU targets (as under today’s EU ETS) and would have the advantage of sharing the responsibilities and incentives among all actors in society.
With the actual situation of burden on production, the EU industry is directly disadvantaged compared to its non-EU competitors causing carbon leakage of the production. The consumers of the products do not get any carbon signal. This incoherent approach leads to a decrease of emissions in EU due to relocation of production and an increase of emissions elsewhere, linked with increasing consumption of products imported in EU. A more coherent approach would avoid that carbon leakage contributes to EU targets (as happens today) and would have the advantage of sharing the responsibilities and incentives over all actors in society.

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

Targets that can only be met through the introduction of expensive, uneconomic technology will be felt through increases in the energy cost or through costs for measures in turn induced by high energy costs, and the impact on the energy cost will effectively determine their economic viability. If the introduction of such technologies results in increased energy costs which feed through into inflation and undermine the competitiveness of European industry, then they cannot be considered “economically viable”. Targets should, therefore, include a measure of the economic cost and the impact of these technologies.

The actual absolute targets should be redesigned into targets that aim to deliver a “win-win” outcome for an improved climate policy and enhanced competitiveness. Any proposal for a target will have to include accompanying impact assessment and measures to address the issue of competitiveness of Europe. It is recommended to introduce targets that i) keep the incentive for envisaged technologies to become competitive over time with conventional technologies and ii) take account of the available potential.

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

A reliable and affordable energy supply is essential for maintaining a competitive chemical industry and value chain in Europe. There is a need to refocus EU and national policies with a view to incorporate competitive energy costs and security of supply. A mix of critical policy implementation is required:

- **In the shorter term, a full implementation** of existing policies such as energy market liberalisation and completion of the internal energy market is required.
- Then, a **structural reform of the EU ETS** and assurances of industry supportive measures effectively preventing carbon leakage are essential. Furthermore the interference of renewable energy policy instruments with EU ETS and with the energy market functioning shall be addressed; this includes amongst others a cost efficient solution for the issue of renewables intermittency. The **development of unconventional energy sources** including shale gas is also increasingly important. All technology exclusions may increase policy cost burdens for European companies.
- Finally: a **long-term strategy for delivering the necessary investment and innovation** can be brought together into a coherent strategy that will result in a lower cost transformation towards a lower-carbon economy while ensuring globally competitive energy costs.

3. Instruments

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

The energy mix today remains a largely national matter. Due to the ever-increasing interdependence of European energy markets, national energy policies and measures have an effect on each other. The ongoing German 'Energiewende' and nuclear phase-out decision in Germany in 2011 are the most notable examples. The ongoing discussion about the future of shale gas in Europe equally shows national divergences instead of a European strategic approach, to lower costs and increase security of supply. Although a well-functioning internal market, and the harmonization of different policy instruments on European level will not solve entirely the challenge of energy prices in Europe, such harmonisation will be an important step. **European policy coordination on energy generation and security of supply is needed.**

Borealis considers following elements important in the context of other EU policy instruments:

- In general, **double regulation** with more than one instrument, targeting the same economic units for the same objective, **should be avoided**, meaning for example that ETS sectors should not be exposed to energy efficiency targets and instruments.
- **EU ETS requires a comprehensive structural reform package** to improve global competitiveness and thus to avoid carbon leakage.
- Furthermore changes are needed to other (interacting) policy instruments. Regarding **RES policies**, the cost pass-through to industry exposed to the risk of carbon and energy leakage, because of the high costs for feedstock (e.g. shale gas), natural gas for firing and electricity in Europe, should be carefully mirrored to the same cost pass-through in the major competing regions and countries. Moreover, there should be EU-wide certainty about this principle; otherwise the investment behaviour is not influenced positively.
- The **Energy Efficiency Directive (EED)** is a double regulation for the sectors falling under the EU Emissions Trading Scheme (EU ETS).This leads to higher overall costs. Partly their objectives are conflicting. One dangerous interpretation of the EED is that EU should have an absolute energy cap, which would be in conflict with the EC objective to increase manufacturing output.
- As a matter of principle, **support to RES-E should be phased out** and the driver should be the EU ETS target, to achieve the lowest overall cost. For technologies not mature for the market but with high potential, preference should be given to supporting research & development rather than large-scale deployment.
- Any revision of the **Energy Taxation Directive** must ensure that the global competitiveness is kept in mind by allowing that energy tax levels are lowered in the context of e.g. local voluntary agreements, and that effective carbon leakage measures as for EU ETS are applied for CO_2 taxation regimes.

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

Europe will be successful in designing a post-2020 energy and climate policy only if it sets an EU framework in which cost competitiveness, security of supply and climate objectives are placed on equal footing and if there is an EU energy policy. The incoherent choice to decide climate objectives and renewable shares on EU level but leave fuel mix choices and security of supply at national level, leads to uncompetitive, non-efficient choices in the field of energy. Longer term RES costs in several EU member states are increasingly unsustainable. The pace of introduction of intermittent generation should be adapted to the availability of grid and back-up capacity, avoiding that the stability of electricity supply is jeopardised. In addition, more storage facilities are also likely to be needed. Therefore, the economic features of all technologies applicable have to be improved.

Specific measures designed to meet climate objectives which are not economically viable today must not be linked to the EU ETS. The **objective of the EU ETS is to cut current emissions at the least cost for industry**, and it therefore cannot be linked to expensive additional mitigation solutions at the risk of jeopardizing manufacturing industry. Policymakers should consciously be seeking the most cost effective measures.

The regional nature of EU ETS has to be recognised by **establishing appropriate carbon leakage mitigation**. Allocation for both direct and indirect emission cost to industry strongly exposed to international competition should be integrated into the ETS system itself. Those measures should remain in place until international agreements have secured a global level playing field. Allocation for direct and indirect costs must be based on actual and not on historical production in order to secure the industrial base and growth.

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

Completion of the internal market for energy is a key strategy for minimising the cost of energy and securing supply. With Europe seeking to re-industrialise and to generate enough wealth to earn its way out of the current financial crisis, a programme to re-invest in the basic industrial infrastructure of Europe is required.

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

Energy efficiency is one of the key instruments to combat the disadvantages given by EU energy and climate policy. EU industry's track record in this respect is impressively successful: the EU industry has continuously been working to improve energy efficiency in order to improve inter-national competitiveness. **EU industry today is operating on a very high energy efficiency level. Further progress is limited to a level of about 0.8% per year or less in general, which is much lower than the 1.74% points per year decrease of the EU ETS cap.** In mature sectors the scope for improvement is much lower, e.g. for ammonia production. Some sectors work already close to the best achievable technology level. This makes further progress dependent on technological breakthroughs which can't be forced but influenced by pushing R&D. Long term predictable frameworks including carbon leakage

A **large share of energy efficiency and CO_2 reductions potentials outside EU ETS sectors are still untapped** (e.g. buildings). A focus on consumption of energy and products can tap these potentials. Such measures might in turn stimulate the EU economy to deliver competitive, lower carbon solutions to its customers, but an important prerequisite is that any type of such measures shall be some sort of "initial incentive" but not lead to "subsidy dependencies".

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

Research and innovation are essential if the EU is to reconcile its energy and climate goals with the need for competitiveness and economic growth. Moreover, such innovative solutions for low carbon and energy (efficient) technologies are not only advantageous for Europe, but will also abate emissions on a global scale. Therefore, Europe should stimulate innovation through creating R&I programs and facilitating new technologies in a temporary manner during the last phases before market introduction.

4. 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?

European industry needs a framework in which cost-competitiveness, security of supply and climate objective are placed on equal footing. While climate targets have been extensively developed at European level, but competitive energy costs and security of supply have not been sufficiently addressed – though being vital for European industry.
Where the "green economy" is dependent on subsidies, or on regulatory taxes on consumers or industry, it is unlikely to be economically sustainable. Where innovation creates new "greener" products for which there is a demand – or where new demand is created (e.g. for insulation, through public procurement) – then climate and energy policies can stimulate sustainable economic growth.

Borealis considers following elements important:

- The **internal energy market** (IEM) with the full implementation of the 3rd energy package **should become reality**. We would suggest that a second DG Competition Sector Study should be conducted in year 2016 to ensure that spirit as well as the letter of the laws are being respected. The first sector study was a landmark reference for all parties engaged in the energy business. We suggest a repeat will have many positive aspects in terms of momentum, transparency and legal enforcement.
- To keep gas intensive industries, EU must continue to **diversify its sources of energy supply** in order to strengthen our negotiation power while discussing with our key partners:
  - Infrastructure developments (LNG terminals, new supply routes) to make the IEM more competitive
  - Encourage indigenous production
- **Exemption for exposed industries of extra cost related to European climate policies**
  - The cost pass-through of subsidies for renewables and CCS to industry exposed to the risk of carbon and energy leakage **should be carefully mirrored** to the same cost pass-through in the major competing regions and countries.
  - With the present high prices for electricity, natural gas and feedstocks in the EU versus other major competing regions, this cost pass-through must be zero. This means that where there is now such cost pass-through, this should be ended.
  - Moreover, there should be EU-wide **certainty about this principle**; otherwise the investment behaviour is not influenced positively.
- **Renewable electricity (RES-E) support scheme costs shall be made more cost-effective** in order not to undermine the economy of the whole system.
- As far as the **EU ETS** is concerned, a **reform is required to make it growth proof**:
  - the financial compensation of indirect emitters through state aid must be transformed into an **EU wide harmonised full allocation for direct and indirect emissions**;
  - Ex-ante allocation should be changed to **ex-post allocation (= dynamic allocation)** to enable a sustained economic growth without curtailing production;
  - Certainty on these measures shall be guaranteed at least until globally equal carbon price burden for competing regions can be realized;
  - In the longer run, and in the continued absence of an international climate agreement by 2020, it should be recognized that a unilateral EU absolute emissions cap will block economic growth and therefore impact welfare levels.

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?

Competitive pressures have been high on the EU energy-intensive industries for decades. However, the European chemical industry has been affected by carbon and investment leakage due to the steep development of emerging economies and, more recently, the extensive surcharges on electricity, and the exploration of shale gas in the US. New investments worth an unprecedented $100 billion have been officially announced for the US for the coming five years. Once these plants come on stream, products will seek markets to the disadvantage of European operations.

Leakage is not only a concept to be acknowledged in connection with EU ETS as “carbon leakage”, but leakage also stems from other climate change policy measures in the EU as a whole, so there is also something which we could call “energy leakage” caused e.g. by high power prices due to costly RES-E support schemes and above mentioned impact of US shale gas.

Leakage already starts when investments in Europe are stopped and not only when industrial sides will have left Europe totally. In order to remain at par with competitors, industry must have access to capital and technology that allows them to make investment in new processes, new products and new locations. Very few new plants have however been established in Europe recently in industries that are exposed to risk of carbon leakage. This is a worrying trend.

To address carbon leakage in a 2030 framework, the first action is to monitor such change of trade or investment flows that indicate carbon leakage. In particular in the chemicals sector a decline in investment rate is a strong leading indicator for deterioration of the competitiveness in the longer run. Any change should then be the trigger to a range of actions preventing such carbon leakage.

It is clear that **the 2030 framework must exclude unilateral EU policy-driven cost increases for industry that would further weaken the competitive position of domestic producers and speed up relocation and divestment.** Europe should focus on balanced solutions in its energy and climate policy, taking into account all

technologies and where the speed of the energy transition is adapted to the speed of the development of innovative technologies regarding storage, new energy sources and energy efficiency.

As of today, the EU remains a net exporter of chemicals, but there has been very little new EU investment in basic chemicals production for many years. If the production of these chemicals were to be lost, then the knock-on effects up the value chain (to more specialised chemicals) would be severe affecting EU production, jobs and the economy. The Cefic Roadmap study[1] has looked at different policy scenarios:
Unilateral European climate action to reduce greenhouse gas emissions by 80–95% in 2050 compared to 1990 would have a deteriorating effect on production in Europe and the resultant trade ratio. The level of greenhouse gas emissions reduction achieved in Europe would, in case of increasing imports, be achieved at the expense of increased emissions elsewhere. There would be no overall reduction in global greenhouse gas emissions or even a potential increase.

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

The absolute target in renewables, regardless of the resulting system cost, inadequate energy market liberalisation, incomplete internal energy market lacking cross-border connections and competition, lack of accountability of intermittent electricity for the external costs to maintain security of supply, national policy mix decision (e.g. ban on domestic nuclear in Germany, exclusion of exploration of unconventional energy, etc.) drive trends in energy costs towards less competitive, more costly outcomes.

Assumptions that fossil fuel costs would increase significantly and make renewable generation profitable without support have not materialised. The period of significant cost disadvantages for the EU will last much longer than predicted. The long-term viability of RES policy must thus be reassessed. Electricity costs are strongly influenced by i) EU ETS emission allowance cost, ii) renewable support and iii) grid expansions due to these policies.

The EU could and should encourage i) sustainable exploration of unconventional energy, and ii) cost-competitive use of renewables that are fit to deliver energy in a market that serves economic demand.

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 EU shall have **targets and instruments which are flexible enough to react immediately** to changes not only in Europe but also elsewhere in the world.

The present lack of a global level playing field and the risk that this situation will not significantly improve for many years does constitute a huge challenge for European businesses competing globally. The EU will decrease its share of global emissions from about 16% in 1990 to about 8% in 2020.

Meanwhile it remains a valid effort to continue attempts towards establishing connections between regional cap-and-trade systems worldwide and apply improved features. Other ETS may have better compensation system for industrial cost than EU ETS, e.g. the Australian ETS includes an indirect allocation of 1.0 ton CO2/MWh, based on actual production thus preventing under- and over-allocation. At some point in time, international, multilateral negotiations will be necessary to reduce support reciprocally.

How to increase regulatory certainty for business while building in flexibility to adapt to changing circumstances?

As stressed already in several answers of this questionnaire, Borealis is convinced that the **EU ETS must be reformed towards a more flexible instrument**, adapting to global developments and economic growth, rather than pursuing the approach of short-term ad-hoc interventions.

There should be no deadline or end date for sectors' carbon leakage status, no cross-sectoral correction factor and no more single linear reduction factor since all these current provisions work against the interest of

[1] Cefic Energy Roadmap (2013): European chemistry for growth, Unlocking a competitive, low carbon and energy efficient future

companies wanting to invest in Europe - even with the best available techniques. Allocations shall be based on actual production (ex-post allocation) and cover both the direct and the indirect emissions.

The EU should maintain a conditional objective for EU emission reductions dependent on the level of ambition of an international binding agreement, taking into account the level of EU financial support and the economic impact on the EU. In the absence of a global climate agreement by 2020, it becomes crucial to revise EU ETS as instrument for emission reduction while safeguarding an international competitive framework. If such outlook for a global climate level playing field does not appear within the next years, then the EU ETS should be redesigned into a dynamic system allowing sustainable growth, whereby the emissions cap should be redesigned to correlate emissions to real economic activity. A bottom up approach, reducing emissions intensity over time (e.g. the automotive sector with gradual reduction of CO2/km emissions) instead of emissions as such, makes the link between the environmental aims and the economic circumstances.

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

EU manufacturing industries are delivering if they have **predictable and stable conditions**.

The revenues from auctioning allowances are monies that are being taken directly from the manufacturing industry and from consumers (indirectly through CO_2 costs contained in electricity). The auctioning of allowances is reducing the capacity of industry to invest and to innovate. The money from auctioning allowances should not be used to finance general state budget expenses. **Returning the full 100% of the EU ETS auctioning revenues would be a first essential step to support European businesses in the transition towards a low carbon economy.** EU ETS should not be designed to create revenues for other climate measures (e.g. financing of building renovation).

Industries tend to invest when there is a possibility of a return on that investment. The **best way to stimulate investment is to create a demand for the innovative products that assist in the transition to a low-carbon economy**. If the demand is there, then the investment will follow. Therefore a preferred way to stimulate investments is to create an incentivizing framework for the development of new products rather than a penalizing policy that might lead to inefficient allocation of resources.

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 development of unconventional energy sources assists to keep the price of energy (and feedstock!) competitive. The EU can contribute to this by ensuring a clear and stable regulatory framework that facilitates the safe exploitation of these resources.

Shale gas development in Europe might improve EU trade balance (through reduced imports of gas). Furthermore, by exploiting its indigenous reserves, Europe can diversify and add security to its gas supply. And development of shale gas would also strengthen Europe's negotiating position vis-à-vis gas exporters, such as Russia.

How can the EU best improve security of energy supply internally by ensuring the full and effective functioning of the international energy market and externally by diversifying energy supply routes?

- At first, security of supply cannot be secured cost effectively when certain important energy sources (e.g. unconventional gas, nuclear, etc.) would ex-ante be excluded, while renewable energy sources are heavily subsided but not yet sufficient in available quantities to fully meet energy demand. Hence **an EU energy policy and energy mix is a prerequisite**.
- An **increased diversification of external suppliers** will improve energy security and lead to more competitive prices for energy on the long term. The EU energy policy should also favour **infrastructure investments** that improve security of supply and diversification (e.g. pipelines and LNG terminals to secure gas from new sources)
- On the short term **fast implementation of the 3rd Energy Package** is needed. The target of implementation by 2014 should not be postponed. It needs close follow up by ACER and NRAs.
- Furthermore there is no logic anymore that gas price should be linked to oil. **Gas price should be defined by supply/demand balance and not by oil**.

- In longer term perspective the **safe and environmental friendly exploration and production of indigenous sources (shale gas and oil) should be encouraged in Europe**.
- **RES-E support schemes must be made much more cost-effective and RES-E should be integrated in the market as much as possible**; the responsibility of RES-E in the issue of intermittency shall be properly addressed, to begin with the responsibility for its own imbalance costs.
- To ensure that sufficient flexible capacity is available maximum opportunities must be provided for efficient solutions, such as **demand side response**.

5. Capacity and distributional aspects

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

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

Instead of developing yet another climate policy instrument, a better solution is to refine, adjust and improve the EU ETS (see substantial arguments and suggestions in several answers above), and then have an ETS-like system which is independent of MS borders and driven at EU level.

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

See previous questions. Instead of developing yet another instrument, a better solution is to refine, adjust or improve the existing instruments taking advantage of the experience gained until now.
Uncompetitive solutions or expensive technologies aimed at supporting the 2030 framework should be supported by dedicated policies that do not endanger the competitiveness of European industry or put an unnecessary burden on the existing industries.

Borealis concludes with underlining the policy recommendations which are supported by the Industry roadmap "European chemistry for growth", published by CEFIC in April 2013. These recommendations point to the following priorities:

1. **Reconcile energy, climate, environmental and economic EU policy agenda**: Policies that result in higher energy costs in the EU, relative to costs elsewhere in the world, cannot be reconciled with international competitiveness.
2. **Seek for Climate Change agreement on a global level playing field and exclude EU-centric policy-driven cost increases: No further unilateral EU policy-driven cost increases** that weaken the competitive position of domestic producers and speed up relocation and divestment.
3. **Europe needs a strong chemical industry to transition towards a low carbon economy**: Assess the impact of EU energy and climate policies on the **chemical manufacturing value chain**.
4. **Fuel the transition to a low carbon economy by investments in innovation**: A transition to a low-carbon economy will be affected by investment in innovation.

Yours sincerely,

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