2nd July 2013

INEOS' response to the European Commission Green paper: "*A 2030 framework for climate and energy policies*"

EXECUTIVE SUMMARY

- A sustainable and viable policy for climate and energy for 2030 should focus on three main objectives:

    1. Security and stability of energy supply
    2. Globally cost-competitive energy prices
    3. Environmental aspects to tackle negative externalities

- A successful policy for 2030 should ensure predictability, security, affordability, and coherence. To succeed in this purpose, a new policy should

    1. Drive full implementation of a third energy package and the completion of the internal energy market;
    2. Diversify and use all energy sources, including unconventional sources of energy.

- Economic growth should be strongly encouraged and manufacturing promoted. The EU should aim for industry to constitute 20% of GDP by 2020. Moreover, no absolute energy consumption cap should be imposed, as it could undermine growth.

- The 2030 policy framework should be grounded in a realistic climate approach. A top-down climate target should be conditional upon a substantial global agreement with comparable burdens for industry worldwide. In the absence of a global agreement, INEOS recommends using bottom-up calculations to define a realistic, cost-efficient range for climate goals, taking various scenarios into account.

- Innovation plays a key role in delivering carbon abatement, while supporting growth and competitiveness. It should be a policy priority to build on sector-specific knowledge and ability to innovate.

- The EU ETS should be extended beyond 2020, and structural changes must be made to maintain ETS as a market based system, introducing more flexibility and avoiding short-term fixes like backloading.

Introduction

INEOS is a global manufacturer of petrochemicals, speciality chemicals and oil products. Our products are the raw materials used extensively by the manufacturing sector and can be found in a wide range of essential items including construction materials, medicine, clothing, vehicles, and computers.

The chemicals industry is leading developments in energy efficiency and emissions reduction. It is estimated that for every tonne of CO_2 used in the chemicals industry, more than two are saved downstream by its products, which include catalysts, insulation, components for wind turbines, and solar cells.

INEOS is committed to improving energy efficiency and reducing emissions. At our UK chlorine plant in Runcorn, for instance, we have reduced CO_2 emissions by over 33% since 1998 through replacing mercury cell rooms with the most up-to-date modern membrane technology. INEOS makes use of CHP technology at many of its sites across Europe, and is investing in new generation biofuel that can turn waste into fuel and energy.

INEOS is one of the largest chemicals companies in the world, with 36 sites across Europe. We operate in the, Belgium, France, Germany, Holland, Italy, Norway, Sweden and the UK. Worldwide we operate 51 manufacturing sites in 11 countries. We employ around 15,000 people and our sales in 2012 were $42 billion.

INEOS is a member of Cefic, the European Chemical Industry Council, and supports the Cefic roadmap 'European chemistry for growth' published in April 2013.[1] In particular, we endorse and align with the following priorities:

- 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.

- Secure a global climate change agreement to establish a level playing field. Avoid further unilateral EU policy-driven cost increases that weaken the competitive position of domestic producers and speed up relocation and divestment.

- Europe needs a strong chemical industry to transition towards a low carbon economy: Assess the impact of EU policies on the chemical manufacturing value chain. There has been very little new EU investment in basic chemicals production for many years. If production capacity declines there will be serious knock-on effects for the value chain (to more specialised chemicals).

- Fuel the transition to a low carbon economy by investments in innovation.

4.1 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.

It is clear that the fundamental assumptions which determined the EU 2020 policy framework - including the post 2020 roadmaps - are now out-dated 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. This is particularly true for sectors exposed to global competition such as the EU chemical industry.

The unexpected economic crisis has limited the EU's ability to shoulder unilateral policy costs, whereas a global climate policy agreement has yet to emerge. Setting unilateral targets for Europe has proven to be ineffective when dealing with a global problem such as climate change: while EU countries have reduced direct emissions from industrial installations, global emissions

[1] http://www.cefic.org/Policy-Centre/Energy/ Cefic Energy Roadmap (2013), *European chemistry for growth. Unlocking a competitive, low carbon, and energy efficient future.*

have risen exponentially at the same time. If unrevised, the EU climate policy rewards exporting emissions together with production and jobs.

It is necessary to continue with CO_2 reductions, but with a perspective of growth for efficient installations and new investments.

In this regard:

(a) Europe cannot pursue environmental objectives in isolation and “at any cost”. The goals of economic and social sustainability require the consideration of the potential impact on the wider economy and international competitiveness.

(b) Securing sustainable growth and jobs will depend on wealth generation. Investment in the transition to a lower-carbon economy will generate new jobs and added value when such investment can survive in market competition without subsidies. Equally, setting absolute caps for energy consumption is deteriorating growth and investment perspectives. Instead, access to diverse, competitive, carbon-efficient energy technologies is needed.

(c) A transition to a low-carbon economy will be affected by investment in innovation motivated by a realistic prospect of a return on that investment: Investment is more likely to result from the provision of incentives than from the imposition of burdens.

(d) Efficiency gains versus cost burden. 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.

4.2. Targets

Which targets for 2030 would be most effective in driving the objectives of climate and energy policy? At what level should they apply (EU, Member States, or sectoral), 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 competitiveness of both industrial producers and its customers such as SMEs.

- 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.

- The Cefic Roadmap study[2] has looked at different policy scenarios and identified technological potentials to reduce the emissions intensity by 40% in 2030 and 55% by 2050 (basis 2010 status). In the favourable policy scenario ('global level playing field'), a growing EU chemical industry could potentially reduce greenhouse gas emissions by 15% in 2030 compared to absolute 2010 levels.

- A set renewable target or any energy target that enforces a choice on the technology cannot be applied in the absence of a European energy generation coordination to mitigate the mutual influence of MS decisions on others.

Additional parameters are needed which allow to monitor and steer also economic and social aspects of the energy and climate policy, like industrial growth per year, costs of energy compared to other world regions or reliability/security of energy supply.

- 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 %.

- If Europe goes for unilateral goals beyond cost-efficiency, i.e. in the absence of a global scheme, globally competing sectors should be exempted from RES and CCS charges. RES and CCS represent rather costly abatement options. 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 ETS cap as well as the design of the ETS system should be revised. Better measures to prevent carbon leakage are needed.

- 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.

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.

[2] http://www.cefic.org/Policy-Centre/Energy/ Cefic Energy Roadmap Energy Roadmap (2013), *European chemistry for growth. Unlocking a competitive, low carbon, and energy efficient future.*

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

Yes, the three 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 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 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?

Additional instruments at sectorial level might be needed. Policies and instruments should be based on a bottom-up approach, focused on available potential. 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 ETS) and would have the advantage of sharing the responsibilities and incentives among all actors in society.

The building sub-sector is a good example where further improvements should be made in terms of energy efficiency. It is a fact that buildings account for about 40% of EU's energy consumption and greenhouse gas emissions. A few regulatory tools are in place already (Energy Performance of Buildings Directive, Energy Efficiency Directive).

However, the European Union could be more ambitious when it comes to the renovation of existing buildings and foster investment in an energy efficiency upgrade of the building sector. Not only such step would contribute to reducing the EU building CO_2 footprint but it would also boost European employment and reduce the EU's dependency on imported resources. A study by Copenhagen Economics shows indeed that between 760,000 and 1,480,000 jobs could be created depending on the level of investments (http://www.renovate-europe.eu/Multiple-Benefits-Study).

Finally, and more generally, experiences show that voluntary (bottom-up) initiatives bring realistic and innovative results as industry experts and policy makers striving for solutions together, e.g. energy efficiency initiatives of the chemical industry such as SPICE[3] or CARE+.[3] [4]

How can targets better reflect 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

[3] SPICE[3] (http://www.cefic.org/Policy-Centre/Energy/Energy-Efficiency/SPICE3/) aims to boost energy efficiency across the European chemical industry by developing a sectoral platform for good practise. It also offers workshops and tailored training for SMEs (11 countries participate in this project which runs under the IEE framework).

[4] CARE+ (http://www.cefic.org/Policy-Centre/Energy/Energy-Efficiency/CARE-/Care-Tools/) offers energy efficiency tools specifically for SMEs in several languages.

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.

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?

There is a need to refocus EU and national policies across the board so as to incorporate competitive prices 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.

- A structural reform of the ETS and assurances of industry supportive measures effectively preventing carbon leakage are essential. The development of unconventional energy sources including shale gas is also increasingly important. All technology exclusions may increase policy cost burdens for European companies.

- 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.

4.3. Instruments

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

- A true structural ETS policy reform is need to urgently resolve competitiveness issues: In the absence of a global carbon pricing policy, a strategy based on increasing EU carbon prices for industry until companies are obliged to invest in expensive, uncompetitive low-carbon or energy efficiency technology will inevitably lead to higher costs for energy and/or measures, a loss of competitiveness and investment carbon and energy leakage.

- ETS should not be designed to create revenues for other climate measures (e.g. financing of building renovation).

European policy coordination on energy generation and security of supply is needed. National decisions have an impact on other member states. National energy mix decisions require coordination and consultation with other member states - for example, the German ‘Energiewende’.

The transformation needed to achieve a globally competitive low-carbon economy will require an effective, synergistic effort between environmental policy, industrial policy, research policy and energy policy.

All these policies should be considered together, to see how their respective goals (low-carbon economy, economic growth and jobs, security of energy supply at competitive prices etc.) can be reconciled and achieved through coherent, synergistic actions.

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

Specific measures designed to meet climate objectives that are not economically viable today must not be linked to the ETS. The objective of the 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 measure.

The current "absolute target policy approach" for industry curbs growth and new investment. Absolute emission reductions can rather be envisaged through approaches that would encourage GHG efficiency gains via sustainable consumption policies, including, for example measures for the building sector. The chemical industry provides the products needed. Emerging, long-term RES costs in member states are increasingly unsustainable.

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 most cost effectively?

As an example, measures should be encouraging and incentivising non-ETS sectors, which in turn would stimulate the EU economy to deliver competitive, lower carbon solutions to their customers. Such measures should be kick-off type tools and must not lead to long-term 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. We support many research programmes already – and are hoping to gain EU support for a Public Private Partnership (SPIRE) to deliver solutions for energy and resource efficiency in the process industries.

We advocate a much more targeted approach to R&I policies, in which the key technical barriers to delivering a competitive low carbon economy are identified and projects (for instance PPPs) are developed to overcome those obstacles. Temporary financial support for bringing new technologies to market can be acceptable to stimulate innovation. Permanent long-term subsidies are not.

4.4. 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 competitive energy costs and security of supply. 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.

- As far as the ETS is concerned, the financial compensation of indirect emitters through state aid must be transformed into free ('indirect') allocation.

- Ex-ante allocation should be changed to ex-post allocation (dynamic allocation) to enable a sustained economic growth without curtailing production.

- The single market for energy with the full implementation of the third energy package should become reality.

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 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.

- Major chemical investments are made in other parts of the world and no longer in Europe.
- 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. Any change should then be the trigger to a range of actions preventing such carbon leakage.
- Carbon leakage is linked to energy costs and one of the major actions is to foster the safe exploration of shale gas in Europe.

It is clear that the2030 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. 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[5] study has looked at different policy scenarios: Unilateral European climate action to reduce green house 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 green house 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 renewables target, inadequate energy market liberalisation, incomplete internal energy market lacking cross-border connections and competition, national targets and policy mix decisions (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.

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

The EU could and should encourage sustainable exploration of unconventional and cost-optimised use of renewables (development at a speed that meets the adjacent development of market integration of renewables delivering energy for economic demand, harmonisation of support schemes towards temporary support leading to market competition).

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 aspires to lead the world in this area by its example. However, you cannot be a leader unless the others follow. If the EU gets too far ahead of the rest it will not be leading but will be alone and at serious disadvantage.

Three simple observations:

1. The EU will decrease its share of global emissions from about 16% in 1990 to about 8% in 2020.

2. If the EU were to try and achieve ambitious emission reductions through increased carbon prices (and hence energy prices), then the effect on EU manufacturing would be severe. The key factor in this is the relative cost of energy (and feedstock) vis-à-vis competing countries. The EU should therefore measure its activities by reference to the impact on the relative cost of energy.

3. On current trends, the increase in emissions elsewhere in the world means that, even if the EU were to meet its 80% reduction in carbon emission today, it would only delay the increase in atmospheric CO_2 by six months to a year.

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)?

The proposed above framework would give industry the required certainty and flexibility whilst avoiding short-term, “knee-jerk” interventions. The ETS must be reformed towards a more flexible instrument, adapting to global developments and economic growth.

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 companies wanting to invest in Europe - even with the best available techniques.

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.

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

Prima facie, 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). In the process, the auctioning of allowances is reducing the capacity of industry to invest and to innovate. Returning these monies to industry would be a first essential step.

The simple answer to the question is that industries tend to invest when they see the possibility of a return on that investment. The best way to stimulate that investment is to create a demand for the new products that are being developed. If the demand is there, then the investment will follow.

ETS should not be designed to create revenues for other climate measures (e.g. financing of building renovation).

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?

INEOS fully supports the development of unconventional energy sources as a means of keeping the price of energy competitive.

Extracting shale gas in the EU would also provide the petrochemicals industry with access to competitively priced raw materials (ethane and propane), which are vital to manufacturing various chemicals and plastics.

The EU can contribute to strengthen Europe's competitiveness by ensuring a clear and stable regulatory framework that facilitates the safe exploitation of these resources.

Moderation and dialogue between society, policy makers and industry is needed in order to ensure that most informed and relevant decisions are taken in Europe on this topic.

4.5. Capacity and distributional aspects

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

Instead of developing another instrument, a better solution is to refine, adjust or improve the existing instruments taking advantage of experience.

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