

Input to the Public Consultation on the Green Paper “A 2030 framework for climate and energy policies”

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Vereniging Nederlandse Glasfabrikanten - VNG - unregistered

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1. Executive Summary

Executive summary

- The “2030 framework for climate and energy policies”, which aims at supporting the competitiveness of EU industry, should not be limited to setting just one or more ‘sustainable targets’, be it GHG, energy efficiency and/or renewable targets. The European Commission should propose additional targets to design a genuine industrial policy by looking at energy prices, share of industry in GDP, growth, jobs creation, etc.).
- All future targets and particularly those related to sustainability aspects should be set following a bottom up approach, instead of the current top-down approach to ensure that these targets can realistically be achieved on the basis of the contributions of the different sectors.
- Overall GHG emissions due to levels of EU consumption should be targeted, instead of emissions based solely on territorial emissions of the different Member States. This is essential to avoid EU policies leading to re-location outside Europe and to a global increase of emissions.
- Mechanisms to ensure effective protection against risks of carbon leakage must be designed for the period post 2020, by ensuring an adequate level of free allocation, which should no longer be capped by the cross-sectoral correction factor.

2. Introduction

The Glass Industry is committed to doing its part in helping the EU address global warming, environmental pollution and resource use and deliver an environment that is good to live and work in. The EU Glass industry continuously strives to apply state of the art technologies to improve energy efficiency, to lower emissions and to develop new glass products that contribute to energy savings. Regarding climate change mitigation, the Glass Industry supports the ETS, provided that effective provisions are put in place to avoid relocation of production outside Europe.

Environment is one of the three pillars of sustainable development and the current ‘2020 energy and climate policy only sets environmental / sustainability targets. VNG is of the view that targets need to be designed for additional aspects in order to achieve a sound industrial policy. Such a holistic approach is necessary to avoid a one-dimensional policy, focusing on climate, but ignoring growth, share of industry in the EU GDP, jobs creation, energy prices, etc. Only a healthy economic economy can provide the resources and means to establish an environmentally sound solution for mitigating climate change.

3. Background

Extract from the DG Climate website: “On 27 March 2013, the European Commission adopted a Green Paper on “A 2030 framework for climate and energy policies”. This document launches a public consultation lasting until 2 July, allowing Member States, other EU institutions and stakeholders to express their views; for example on the type, nature and level of potential climate and energy targets for 2030, but also on other important aspects of EU energy policy in a 2030 perspective. Contributions on the role of Carbon Capture and Storage in Europe can be submitted separately via the CCS page. Those views will feed into the

Commission's on-going preparations for more concrete proposals for the 2030 framework which will be tabled by the end of 2013.

Developing a 2030 framework for EU climate change and energy policies is necessary to provide certainty and reduced regulatory risk for investors and to mobilize the funding needed; to support progress towards a competitive economy and a secure energy system; and to establish the EU's 2030 ambition level for GHG reductions in view of a new international agreement on climate change foreseen for 2015.

The 2030 framework will build on the experience and lessons learnt from the 2020 framework and will identify where improvements can be made. Moreover, it will take into account the longer term perspective set out by the Commission in 2011 in the Roadmap for moving to a competitive low carbon economy in 2050, the Energy Roadmap 2050 and the Transport White Paper."

4. VNG input to the Consultation

4.1 General

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

VNG welcomes the approach adopted by the Commission which enlarges the scope of the consultation, focusing not only on climate change but also on energy. However, in our view, this should go much further. Indeed, one of the lessons to be learned from the current energy and climate policy is that its one-dimensional focus on sustainability aspects, created an unbalanced policy, detrimental to the development of a genuine industrial policy in the EU.

What Europe needs is a streamlined and stable industrial policy, encouraging growth and jobs creation while ensuring affordable energy prices and reducing greenhouse gases (GHG) emissions. This is explicitly acknowledged in the introductory text of the consultation *"...to support progress towards a competitive economy and a secure energy system"*

During the third trading period, the ETS will put additional direct and indirect costs onto the manufacturing industry. In the absence of a global agreement ensuring comparable burdens on industries around the world, more stringent unilateral reduction targets after 2020 will certainly further damage the EU competitiveness on the global markets. It has to be borne in mind that the EU represents only 11% of global greenhouse gases emissions. If we cannot achieve a global agreement, EU greenhouse gases reductions alone will be largely insufficient to achieve the maximum 2°C increase as recommended by the UNFCCC.

Therefore, if no global agreement is reached, the EU should not set absolute targets on industry (limiting growth and jobs creation) but should aim for relative CO₂ targets (energy efficiency) coupled with industrial targets, following a bottom-up approach based on technical and economical feasible solutions per sector for emission reduction.

We should avoid focusing on CO₂ targets in isolation and rather set industrial and environmental targets. One example of such an industrial target, which GAE fully supports, is given in the DG Enterprise communication “Mission Growth: Europe at the Lead of the New Industrial Revolution”, which urges immediate action to revert the current downward trend of industry’s share in total GDP and to promote the re-industrialisation of Europe. It sets out an aspirational goal to increase industry’s share of EU GDP to around 20% by 2020, up from 16% currently. However, this target is only aspirational, and not binding, revealing the priority given currently to climate policy vis-à-vis industrial policy.

Both targets (one on CO₂ emissions and one on industries’ share in GDP) could be set and should be achieved together. This would show the willingness of the EU to combat climate change, but not at the expense of industrial growth, which is needed as well to achieve a sustainable development. Similarly, a target on energy efficiency of non-commercial buildings is needed to grasp the numerous and cost-effective benefits of increase energy efficiency in buildings. This would also boost economic activity in Europe, which could profit Europe’s industries which are at the forefront of development and marketing of clean technologies for buildings.

Finally, targets should not be based on a top down approach with an overall target requiring all sectors to carry out the same efforts. On the contrary the definition of the EU 2030 energy and climate objective should be based on a bottom-up approach taking into account the real cost-effective emission reduction potential of each sector and share the efforts between sectors accordingly.

4.2 Targets

1. 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?

Targets should be set to encourage not only GHG emissions reductions, but also to support growth and competitiveness (see 4.1) and R&D. In the absence of a global agreement, VNG recommends to have:

- One relative target (not an absolute cap which limits growth) for CO₂ (emissions per unit of production)
- One industrial target, e.g. share of industry in GDP of more than x% by 2030
- One target for energy-efficiency in non-commercial buildings, as there is a large untapped CO₂ reduction potential in this sector

EU should also promote R&D for developing energy efficient and environmental sound processes and products. Many industrial sectors (especially energy intensive) hardly receive any R&D funding addressing these aspects.

Targets at EU level should be privileged to ensure a harmonized approach across the 27 Member States.

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

One big inconsistency is the focus on territorial emissions instead of on emissions linked with consumption in a certain territory. There is supportive evidence¹ that, even if territorial emissions in some European countries are decreasing, total emissions linked to the consumption in these countries are increasing. This simply means that production has been relocated elsewhere (or that EU is missing some new investments opportunities), and that GHG emissions are globally increasing. As a result, EU is de-industrializing, while global emissions grow.

It is therefore absolutely essential that post-2020 targets take this fact into account.

Another inconsistency stemming from the current framework on GHG emissions is the confusion about its goal, i.e. whether it is designed to achieve a CO₂ cap, or if it is meant to reach a arbitrarily pre-determined carbon price.

The unique objective of the ETS directive is to reduce GHG emissions by 20% by 2020 by setting a cap on greenhouse gases emissions and to do so in the most cost-efficient way. It is not the purpose of this market

¹ See e.g.

- “House of Commons – Energy and Climate Change Committee. Consumption-based Emission Reporting. Twelfth report of session 2010 – 2012. Volume 1”
<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/1646/1646.pdf>
- “UK consuming a third more CO₂ than in 1990”. Policy exchange.
<http://www.policyexchange.org.uk/images/publications/carbon%20omissions%20-%20oct%2010.pdf>

mechanism to provide an arbitrarily pre-determined carbon price – in that case, a tax would have been better adapted for this purpose. This is largely acknowledged in the recitals of the directive, e.g. in Recital 5² of the Emission Trading Directive.

Whatever the CO₂ price in the third period 2013 - 2020, it is almost certain (except if an unexpected growth happens, creating a shortage in allowances) that the overall EU cap will be achieved, because the number of CO₂ allowances is fixed by the directive and a linear reduction factor (-1.74%) applies every year.

It is therefore not the goal of the ETS to achieve a certain CO₂ price or to artificially prop up markets for low-carbon technologies and to stimulate the multitude of speculative CO₂ trading platforms. This clarification is essential to avoid future debates around the carbon price.

Finally the risk of carbon leakage should be better addressed in the future. Free allocation is a good principle, but, this principle alone does not guarantee an effective protection of industry. The very tough benchmarks (10% best), the extremely complex and unfavorable guideline documents for allocation, and the constant uncertainty around the ETS dossier (revision of the carbon leakage list, back-loading, set-aside, late allocation for 2013) undermine this general principle and favors carbon leakage. Furthermore, the ex-ante allocation mechanism causes a shortage of free allowances when the production increases compared to the historical reference period and the current framework for compensation is inadequate to cover the indirect cost of climate policies passed through in electricity prices.

3. 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?

It is fair that all sub-sectors take a share in the reduction of GHG emissions. Industry is currently the most impacted sector by the ETS, while it has continuously reduced emissions. Besides, best available techniques to reduce CO₂ emissions from glass manufacturing are already well implemented and currently there are no breakthrough technologies available to reduce dramatically CO₂ emissions from glass manufacturing (see e.g. Commission report³ on the competitiveness of the glass industry where it is stated that “*Since the 1960s, the glass industry as a whole has reduced specific energy consumption by approximately 1.5% pa. The rate of reduction is now slowing as the thermodynamic limits of the process are approached*”). Further reduction would require a major breakthrough in technology (but EU policy is hardly funding long term R&D in the manufacturing industries) or the CO₂-free electrification of the economy, for which specific policy and technological development beyond the glass industries is needed. CCS, which do not reduces CO₂ emissions but shifts them to another place seems to be very controversial.

The buildings sector however represents a largely untapped and potentially cost-effective CO₂ emission reduction potential which can be easily tackled if adequate policy instruments and ambitious objectives are

² “The Community and its Member States have agreed to fulfil their commitments to reduce anthropogenic greenhouse gas emissions under the Kyoto Protocol jointly, in accordance with Decision 2002/358/EC. This Directive aims to contribute to fulfilling the commitments of the European Community and its Member States more effectively, through an efficient European market in greenhouse gas emission allowances, with the least possible diminution of economic development and employment”

³ FWC Sector Competitiveness Studies - Competitiveness of the Glass Sector. Within the Framework Contract of Sectoral Competitiveness Studies – ENTR/06/054. Final report, 14 October 2008. Client: Directorate-General Enterprise & Industry. http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=4044

set out. VNG believes that policy objectives and measures on improving the energy efficiency of existing non-commercial buildings by way of ambitious national renovation plans will help tackling the large energy and CO₂ saving potential of that sector. At the same time, this would have positive effects for the European construction sector in terms of growth and job creation without harming (probably stimulating) the international competitiveness of the European economy. Technologies developed in the EU for energy efficient buildings can be exported worldwide.

VNG agrees that there seems to be potential in reducing CO₂ emissions in the transportation sector and could actively participate in improving fuel efficiency by innovation of more resistant and lighter weight glass for vehicles. However, it is likely that most gains in this sector will be achieved by changes in social behavior, fluidification of traffic and such like, on which our industry has no influence.

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| 1. How can targets reflect better the economic viability and the changing degree of maturity of technologies in the 2030 framework? |
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Targets should be set based on technologies which come on stream and which are economically affordable. Life time of investments should also be taken into account: applying technologies before the life span of a glass furnace is up (typically between 8 to 18 years), is not cost effective and renders a business uncompetitive. EU should stimulate and fund R&D in developing energy efficient and cleaner production technologies.

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| 2. 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? |
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Targets should be broader than what they are today and should encompass other aspects than just climate change (see 4.1).

4.3 Instruments

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

Over the last years, VNG has seen a large number of initiatives aiming to address energy efficiency and/or GHG emissions in the manufacturing industry:

- The Emission Trading Directive
- The Low Carbon Roadmap 2050
- The Energy Roadmap 2050
- The Energy Taxation Directive
- The Industrial Emissions Directive
- The Glass BREF (which contains several provisions on energy efficiency)
- The Energy Efficiency Directive also targets industry (mandatory audits)
- The Renewable Energy Directive
- The current work in DG ENT looks at the possibility to apply eco-design criteria to Industrial furnaces

This multitude of approaches is not effective and can sometimes lead to excessive administrative burden, particularly when these pieces of legislation overlap. Legislation should be less fragmented and much more focused. Impact assessments should look at the cumulative effects of all pieces of legislation affecting industry and not only piece by piece in order to have a global view of the total costs affecting industry in the EU.

Industry should be involved in early stages of new initiatives in order to find realistic and feasible solutions and use the technical expertise available within the industrial sector.

Climate change policy should ideally be set at EU level, and member states should refrain from taking additional measures.

On top of climate change policies, industry is also targeted by a lot of other environmental legislation (REACH, Industrial Emissions Directive, environmental taxes in some countries,...) which negatively impact its competitiveness compared to other regions in the world. Before developing new legislative instruments, an assessment of all these cumulative additional costs should be made to see how they impact industry and its capability to further invest in Europe.

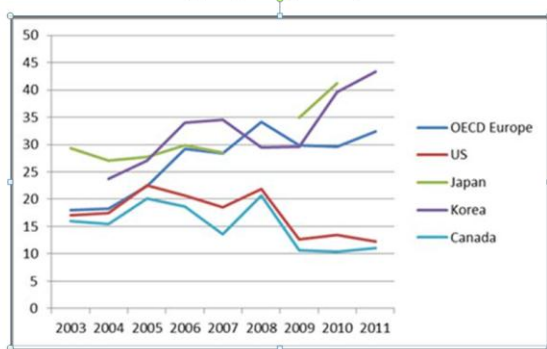
2. How should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?

Climate change policy should be set at EU level, and member states should refrain from taking additional measures.

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

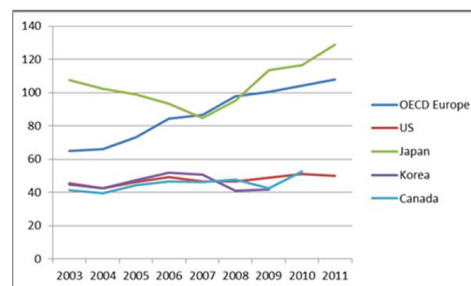
After Korea and Japan, energy prices in the EU are the highest in the world (see graph below):

**Energy prices for industry
Natural gas (EUR/MW)**



Source: Comm. Staff document industrial policy communication
IEA energy prices and statistics

**Energy prices for industry
Electricity (EUR/MWh; US data excl. tax)**



Source: Comm. Staff document industrial policy communication
IEA energy prices and statistics

There are also big differences in the cost of energy between Member States. Hence, there is no level playing field within the EU as regards energy costs, while they are one of the determining factors for competitiveness of industry. Energy policies (nuclear, coal power, wind and solar) are very different between the EU countries. With the shale gas revolution the outlook for energy prices in other parts of the world e.g. in the US has completely changed the game. To keep our industries in Europe, the EU should have a policy to reduce energy costs as well as impacts on climate change, both set at EU level. Member states should support a level playing field in a single market and refrain from taking additional measures which could distort that market.

4. Which measures could be envisaged to make further energy savings most cost effectively?
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Energy savings are important in industry in terms of saving costs and reducing resource use and emissions. However, such savings can only be garnered when new technologies are applied. Applying new technologies before the life span of a glass furnace is up (typically between 8 to 18 years), is not cost effective and renders a business uncompetitive. Consequently, VNG believes that investment cycles should be taken into consideration (e.g. imposing a 10% best performers benchmark to the glass industry from one year to the next does not take into account the fact that glass furnaces have a lifespan of more than 15 years, and that it is not possible to implement best available technologies before a next furnace repair).

The low carbon economy objective for the EU is based on having workable technologies that can be applied to industry and in other sectors. Energy efficiency technologies can be good for industry as it makes it less dependent on energy imports and price volatilities. However, these technologies are not necessarily mature enough for all sectors. In fact, the potential for further energy efficiency and CO₂ emission reductions in glass manufacturing is very limited, in some case even approaching the theoretical minimum level (based on first principle physics/thermodynamic limits).

Support for R & D and the funding of low carbon technology demonstration projects in industry is important. Thus revenues from auctioning should not disappear into the general budgets of the EU member states but should be earmarked for focused Research and Development.

Finally, in the glass industry, recycling goes together with energy savings. On a cradle-to-cradle basis, every tonne of post-consumer cullet recycled in a glass furnace saves 670 kg of CO₂. Investing in glass collection and recycling systems is therefore a good solution to improve energy efficiency and reduce CO₂ emissions while preserving natural resources.

5. How can EU research and innovation policies best support the achievement of the 2030 framework?
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Achieving a low carbon economy with 80-90% reduction in CO₂ by 2050 compared to 1990 is a huge challenge. Today there are no technologies that can be applied to the glass industry to achieve this. Hence, the EU research and innovation policies should be directed to achieving this aim. It is also important that major efforts are made by public authorities to finance directly R & D in industry and to support industry roadmaps, so that industry can adapt production to meet this objective.

4.4 Competitiveness and security of supply

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

Setting targets for all these different elements is one option (see 4.1).

It is also essential to design genuine protection against carbon leakage under the EU ETS post 2020 to protect EU industry from relocation, to ensure a global decrease of GHG emissions and to re-industrialise Europe with clean but competitive industries. In that sense, free allocation is a good principle, but, this principle alone does not guarantee an effective protection of industry. The very tough benchmarks (10% best), the extremely complex and unfavorable guideline documents for allocation, and the constant uncertainty around the ETS dossier (revision of the carbon leakage list, back-loading, set-aside, late allocation for 2013) undermine this general principle and favors carbon leakage. Furthermore, the ex-ante allocation mechanism causes a shortage of free allowances when the production increases compared to the historical reference period and the current framework for compensation is inadequate to cover the indirect cost of climate policies passed through in electricity prices

Energy efficiency of buildings and in particular the renovation of existing non-commercial buildings must be strengthened to better promote local job creation and growth.

Improving collection and recycling of end-of-life glass products from the various glass sectors is one means of reducing CO₂ emissions from glass manufacturing. It also represents a valuable business opportunity and is critical to the competitiveness of most of the glass sectors.

It would also be useful to compare the existing best practices in the different Member States regarding aids for investment in energy efficiency. E.g. some governments partially or totally support the CAPEX of energy-saving investments and get repaid with the savings over the years.

2. 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?

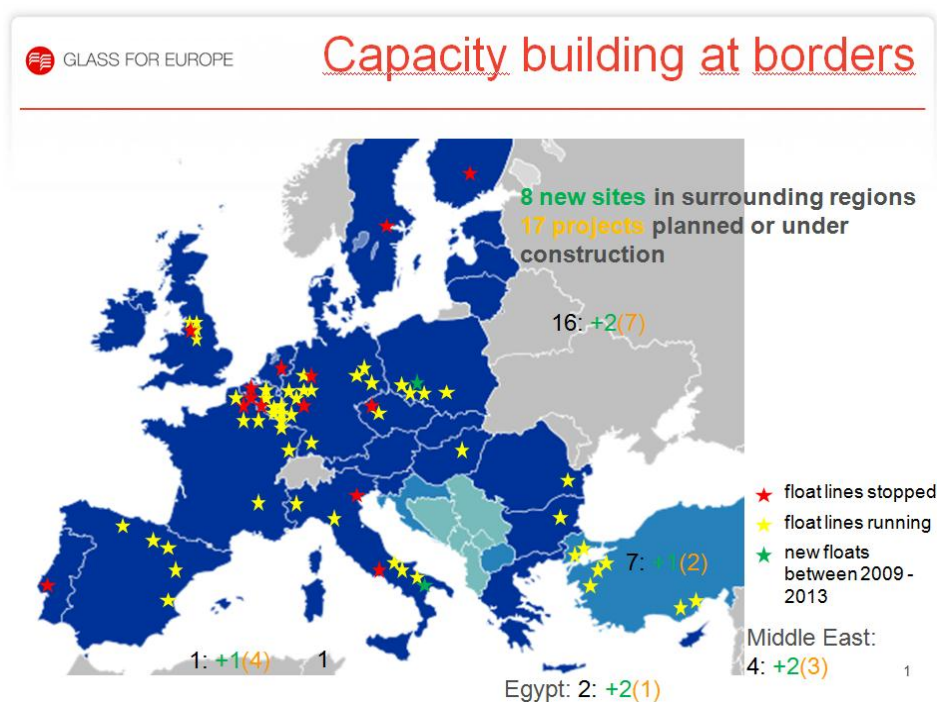
Closure and relocation of industry outside the EU is one aspect of carbon leakage. However, it is very difficult to demonstrate that this happens due to climate change policies only. As a matter of fact, the cost of carbon adds up to other costs which are higher in Europe than in the rest of the world (labour costs, energy prices, environmental compliance costs, administrative burdens...) and makes Europe less attractive for investors.

Another aspect, which is even more difficult to measure, is the lack of investment to refurbish existing installations. In that case, the installation may continue to produce, but its competitiveness will decrease compared to non-EU production sites.

Monitoring new investments in the EU and outside the EU, and monitoring closing of industrial sites, is one way to detect some trends. The following picture, made in 2009, shows that all new investments (blue dots) in glass bottles and jars production are located around The EU, with none in the EU.



The next map from the flat glass sector shows how manufacturing sites in the EU have closed over the last 3 years (red star), while new manufacturing sites were and are still being built at the immediate EU borders with only two in the EU.



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

See 4.3.2 and 4.3.3

4. 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?

It is important that all players who can do so take action on climate change. The EU accounts for only 11% of global CO₂ emissions. It is vital therefore that CO₂ emissions reductions are done by all regions in the world. In this context, it would be preferable that the EU does not make any new binding commitments as long as no binding international agreement on climate change mitigation exists. If such an agreement cannot be reached, the EU will need to ensure a complete restructuring of EU climate policy instruments and in particular the EU ETS to ensure a level-playing field between EU industry and its competitors.

5. 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)?

As explained above, binding targets should be set, not only reflecting progress towards mitigation of climate change, but also reflecting EU reindustrialisation (see 4.1). Moreover, the rules of the EU ETS should not be changed within a trading period. **The risk of carbon leakage should also be better addressed in the future.** Free allocation is a good principle, but, this principle alone does not guarantee an effective protection of industry. The very tough benchmarks (10% best), the extremely complex and unfavorable guideline documents for allocation, and the constant uncertainty around the ETS dossier (revision of the carbon leakage list, back-loading, set-aside, late allocation for 2013) undermine this general principle and favors carbon leakage. Furthermore, the ex-ante allocation mechanism causes a shortage of free allowances when the production increases compared to the historical reference period and the current framework for compensation is inadequate to cover the indirect cost of climate policies passed through in electricity prices.

It would also be useful to compare existing best practices in the different Member States regarding aids on investment in energy efficiency. For example, some governments partially or totally support the CAPEX of energy-saving investments and get repaid from the savings over a number of years.

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

Yes, revenues from auctioning should not disappear into the general budget of the member states but should be earmarked to be invested in focused Research and Development. See 4.3.4 and 4.3.5.

Innovation needs financial resources and long-term legislation. Therefore, the EU should assess the total burden on industry in terms of environmental legislation which is too fragmented at the moment, and compare this burden with requirements imposed on competitors from outside the EU. Environmental legislations are a good thing, but they come at a cost and limit the innovation potential of industry. None of the existing pieces of environmental legislation is per se damaging industry, but it is the accumulation which creates an unbalance compared to competitors outside the EU and therefore drives industry and innovation out of Europe.

The innovation capacity of manufacturing industries depends mainly on their profitability. When competitiveness of manufacturing industry deteriorates (i.e. when increases in production costs cannot be reflected in sales price because of 'unfair' competition from non-EU operators), profitability is affected thus reducing margin of manoeuvre to invest in R&D. Against this backdrop, measures need to be taken to safeguard and enhance the competitiveness of EU manufacturing industries, so as to keep the financial margin for investment in innovation.

Companies' investments in R&D are also heavily affected by the expected return on investment. Therefore, specific policy measures are necessary to ensure the market uptake of innovative products so as to reward innovation and foster new R&D programmes (for developing both innovative products and production methods).

Finally, due to its shrinking share in the EU GDP, manufacturing industry is less and less attractive for young talents in Universities wanting to invent new technologies. In the UK at least, the materials sector has shrunk tremendously over the last few years, with many university department having been shut down. There is certainly a role for the EU and member states to invest in universities and encourage research programs.

7. 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?

Today no one energy source is a panacea. Therefore the EU should keep all its options open by supporting all forms of energy that can drive down emissions while keeping a healthy and competitive industry in Europe. Developments of shale gas in the US have a positive influence on prices and security of supply. Europe should not miss the opportunity to assess the potential of this source of energy on its territorial emissions.

8. 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?

It is important for the EU industry that there is a well-organized supply of diverse types of energy within the EU, with a fair market price level of energy and to avoid speculation that may affect the energy prices levels and CO₂ prices. Differences in energy prices between different EU countries should be limited.

5. VNG

Vereniging Nederlandse Glasfabrikanten (VNG) represents since 1962 the different glass industries in the Netherlands that manufacture products needed for Europe to achieve energy savings and a low-carbon society, such as highly insulating windows or light weight reinforcement glass fibres for use in buildings, isolating glass wool. Being massively recycled, container glass also contributes to improve resource-efficiency (by helping saving natural resources) and to reduce CO₂ emissions.

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