

THIRD REPORT OF THE HIGH LEVEL GROUP ON COMPETITIVENESS, ENERGY AND THE ENVIRONMENT

CONTRIBUTING TO AN INTEGRATED APPROACH ON COMPETITIVENESS, ENERGY AND THE ENVIRONMENT POLICIES

Helping energy intensive industries adapt to the energy and climate change challenges; incentives, innovation and technology policies

I) Introduction

1. The HLG is pleased to note that many of its recommendations have been considered by the Commission in its Action Plan on energy efficiency and its Climate Change and Energy package of January 2007. Endorsement by the European Council will give a clear and strong signal to the markets as to the level of ambition for Europe in the medium and long-term. This will provide industry with both new **challenges** and increased **certainty**.
2. Significant questions still remain on how the right market conditions can best be generated to stimulate the successful commercialisation and early deployment of new technologies. The HLG has therefore decided to focus the remainder of its remit on providing **practical advice** to policy makers and stakeholders on how best to respond to the Climate Change and Energy package through action in the context of the Lisbon strategy, with specific reference to energy intensive industries (EIIs). Meeting these policy goals will mean that additional incentives may be necessary to bridge the gap between conventional and emerging technologies, on a temporary basis as recognised by the HLG in its second report. The key issue is to **meet the level of ambition** while sustaining competitiveness and creating new opportunities. To face the challenge, the first mover advantages should be built upon in a balanced manner thus limiting the risk of detrimental impacts to **international competitiveness** in order to encourage other countries to follow the EU's lead. This includes:
 - Developing lead markets to stimulate leadership through **innovation** and technology deployment;
 - Developing **market conditions** to unlock the economic and environmental performance of enterprises engaged in the climate change challenge and creating a well functioning EU **internal market** with minimum barriers for energy efficient and new low carbon technologies including renewables;
 - Driving the development of **international benchmarks based on common standards**, for tapping global market opportunities and strengthening first mover advantage.
3. The High Level Group in this report **focuses** on the use of incentives, the potential positive and negative aspects of subsidies, notably the issue of environmentally harmful subsidies, and on how to stimulate innovation and accelerate technology deployment.

II) Improving incentives, innovation and technology policies

4. The HLG recognises that the integrated “broad based innovation strategy for the EU¹” presented by the Commission and endorsed by the December 2006 Council meeting provides a good framework to stimulate innovation in EIIs. Against this background, the **use of incentives**, including general purpose subsidies and state aids can be justified as a policy instrument. They may promote responsible social and environmental behaviour, regional cohesion, sustainable development and cultural diversity. However, they should only be used when there is a clear market failure, where subsidies prove to be the appropriate instrument for meeting a well defined **common interest** objective, and when they do not distort competition or harm the environment. The decision to use incentives should follow a thorough analysis of potential negative and positive effects which should include all social, economic (including security of energy supply) and environmental impacts. Alternatives should be considered, cost effectiveness of options should be compared, and the risks of imperfect implementation and unintended consequences should be carefully taken into account. In general incentives should be clearly limited in **scope and time**.
5. Member States should consider a comprehensive **reform** of subsidies insofar as a number of existing subsidy schemes may not be justifiable, in particular environmentally harmful subsidies, in which case they should be phased out. Dialogue with stakeholders would facilitate this process. Action is justified when such subsidies **undermine** other policy objectives such as fighting climate change, the Lisbon Strategy for Jobs and Growth, proper functioning of energy markets, or access to raw materials², without meeting their initial objective.
6. Those **energy intensive industries** that maintain global competitiveness will have an important role to play in enabling their downstream customers to innovate. Energy intensive companies located in the EU are competitive today because of a continuing process of innovation. They play a key role in catalysing innovation and technology developments throughout the value chain as well as at product level. With more urgent climate change challenges and heightened security of supply concerns, the expectations placed on them will become even more acute. This will compel them and the value chain they support to speed up their innovation process. The HLG is confident that – with the right framework, taking into account differing international levels of ambition – energy intensive industries are able to rise to the climate change challenge, while maintaining their competitiveness.
7. Europe has an extensive technology capability; numerous technology infrastructures and networks as well as highly skilled people. It also has multiple regional, national and community research and innovation programmes. However, these capacities tend to be scattered across our geography and sectors, and in many cases are sub-critical in terms of bridging the gap between the technology development and the market realisation. The gap needs to be bridged and this requires urgent action to speed up the technology developments and innovations to **manage the transition** towards a global lower carbon economy. A more competitive manufacturing base will also enable Europe to be more assertive in setting global standards for leaner and cleaner manufacturing in the 21st century. Such leadership by example will also set the standard for demonstrating value creation via low energy and resource use.
8. Innovation and technology deployment is fundamentally a responsibility of business, which needs to be supported by public policy and public-private partnerships. However, there are important complementary roles for all actors. Overall conditions for successful innovation including EU and international market demand, regulation, and technology

¹ COM(2006) 502final of 13.09.2006

² For example, for biomass this would mean preventing higher value-add uses of raw materials.

issues have to be addressed. The EU should encourage its **technology leadership** in energy efficiency and new energy technologies, by inducing Member States to facilitate lead markets for the application of these new technologies, thus supporting the EU growth and job agenda. This should be done on the basis of European industrial and technological strengths.

9. Ambitious but achievable common standards for developing successful lead markets are an important element and need to be set in partnership with EIIs. **Standards** can drive markets, raise the game of EIIs across Europe and increase overall competitiveness. This action needs to be complemented with initiatives aimed at delivering international sectoral benchmarks.
10. A specific focus for EII should be on where they can generate additional value in Europe via better integrated value chains or **cross-sectoral approaches**. Examples of this include:
 - a. Improving the economics for the integrated bio-refinery concept that could develop novel approaches to the production of paper, bio-chemicals, power, agricultural products and second generation bio-fuels;
 - b. Increasingly innovative uses of by-products and shared infrastructure between sectors and within sectors such as the chemical, food, and pulp and paper industries;
 - c. Innovative approaches to how waste is valued, in the first instance as a secondary material via recycling initiatives (e.g. paper, metal, glass, plastic) or, when appropriate as a material/energy source in applications such as cement production.
11. Action on the supply side is not enough. EII front runners need to be rewarded through ensuring markets for their more sustainable intermediate products. This should include learning from both best practice within Member States and globally on the innovative use of **soft measures** such as logos and labels referencing environmental impact, including carbon content and energy efficiency. This could be supported by fiscal measures complying with state aid rules, and by purchasing practices of the industries and governmental agencies that use these intermediate products, or influence their use.
12. An equally important objective is the deployment of technologies and in particular the transfer of environmentally friendly low carbon and energy efficient technologies between and within sectors, including across EU borders. The Clean Development Mechanism and Joint Implementation offer useful incentives for **technology cooperation** with third countries, but they should be improved and made more operational. Barriers that may exist should be removed and, where still needed the transfer of the best technologies should be incentivised, raising the game of less technologically advanced sectors within the EU economy.
13. Oil, gas, fresh water and other scarce resources will become increasingly valued by all regions of the world. Those regions that can use these resources in the most efficient manner will generate an even more valued capability. The **know-how** critical to deploying such resource efficiency at scale needs to be developed at the production plants and in alignment with progress in the laboratory. Ensuring such laboratories are in close proximity to the production plants will ensure that both breakthrough innovations as well as continuous incremental innovations are effectively exploited. In addition Europe should build on its strengths, e.g. highly effective integration, efficient use of by products and waste and new supply chain models. Europe has an opportunity to develop this resource efficiency capability into a global competitive advantage and become the “most Resource Efficient Region of the World” provided it does so in a quick and coherent manner that builds on the above strengths.
14. These ambitious policy objectives should be backed up by an equally pragmatic approach to developing an **innovation friendly framework** that builds on the updated Lisbon

priorities as part of the sustainable development strategy. This will stimulate the innovation required to meet our over-riding objectives without pre-judging how those objectives should be met. This does not imply more Community resources but does require a step wise risk management process that follows rather than prescribes the innovation route, measures that cater for incremental improvements within the process industries, and a change of priorities. In terms of the EIIs this includes:

- A shift in Community resources from protecting the past to **promoting future competitive advantage**;
- Stimulating improvements from both the **demand and production** side;
- Recognising the contribution to this more sustainable future that starts with the EIIs and continues with each step of the **value chain**;
- Carrying out within these value chains an objective sector by sector assessment of Europe's actual **competitive advantages** from a global perspective. These should build on the specific EII initiatives and Commission's Communications planned for 2007. Where needed this would be backed up by more coherent and better use of existing public-private-partnership instruments to foster identified strengths;
- Speed up the implementation of **better regulation principles**, including reductions in administrative burdens, streamlining regulations and improved harmonisation of individual country regulations will be critical to ensuring a supportive foundation for the above.

III) Recommendations

15. The HLG has identified three overall **domains for action** that should be addressed as a matter of priority: public support frameworks, technology leadership and innovation (backed up by faster deployment at scale) and increased demand for more sustainable intermediate products. Even though developed specially for EIIs and therefore focusing on energy use, these recommendations have a degree of applicability to the whole of industry.

Public support frameworks should move from protecting the past to investing in the future.

1. All direct and indirect subsidies should be assessed in their economic (including security of energy supply), social and environmental dimensions. Subsidies must **serve the common interest** while addressing market failures or otherwise they should be phased out. This is particularly the case for environmentally harmful subsidies. Member States should ensure that the application of any subsidy is supported by a strategic plan with milestones and clearly articulated sunset clauses.
2. Building on the broad based innovation strategy agreed at the end of 2006, Member States should use the new **flexibilities** in state aid framework for RTD and innovation; and look at **fiscal measures**; e.g. depreciation rules and tax credit schemes that could promote and accelerate innovation and early deployment of resulting technologies.
3. Any undue distortive effects of **support measures** on other markets should be taken into account in the **design** of such measures. This should consider the different applications of resources both as a material and as energy source, thus allowing the greatest value to be extracted from their sustainable use.
4. The HLG calls for continuous improvements to support life-long learning needed to ensure that Europe has a highly productive and trained workforce with the **skill sets and aptitudes** to match the evolving needs of EIIs in a more sustainable economy. This is a process in which EIIs better articulate their specific future needs and training plans, and the public bodies responsible for education and training respond with appropriate courses and tools.

16. This reorientation of incentives needs to be accompanied by an ambitious technology policy aiming at stimulating appropriate technology and innovation leadership in Europe. The HLG calls on the EU and Member States to ensure that technology policy is market driven, sets benchmarks to drive innovation, accelerates deployment of technology, and encourages demand for more sustainable products and processes enabled by these developments.

Enabling technology leadership and innovation

5. Longer term strategic research needs to be complemented by shorter term **market driven deployment**. In this context, the EU should take the European Technology Platform concept to the next level by adding a stronger market driven element. This next phase calls for new instruments for implementing research and deployment strategies, which should be aligned with the market opportunities presented by Europe's policy priorities. The European Strategic Energy Technology Plan will significantly contribute in delivering this.
6. The Commission and Member States should work together with stakeholders to make the EU the **lead market** for the application of energy efficiency and new energy technologies that can be supported by innovative EIIs. In this context ambitious but achievable benchmarks leading to global **standards** could be catalysts for innovation.
7. The Commission and Member States should work with EIIs in a more coordinated way. They should encourage and support initiatives by industry to set ambitious but achievable roadmaps to **develop international sectoral benchmarks** for energy efficiency and carbon emissions. Such benchmarks should be based on existing and future best available technologies in order to speed up innovation, drive competitiveness and help create lead markets. As markets mature such initiatives should become self sustaining.

Stimulating demand for more sustainable intermediate products

8. Member States should encourage and support project work by EII sectors that can contribute to Europe's more sustainable future. This would include, in the first instance, evaluations and validations of the direct and indirect **carbon footprints** within their value chains to help prioritise sectoral abatement cost options across these value chains.
9. Private and public procurement should take account of full lifetime costs with emphasis on energy efficiency. Member States and the EU should develop and **publish public purchasing guidance** on how to move beyond lowest price tendering of more sustainable intermediate goods in line with public procurement directives. Businesses should include information on purchasing practices as part of their sustainability reporting.

IV) Outlook

17. The time has come with the adoption of the Climate Change and Energy package, to commit and put further solutions into practice. With these opportunities in mind the work plan of the HLG has been revised, for the remainder of its period it will focus on the following issues:

- **Furthering economic and environmental performance of EU enterprises.** This will focus on identifying barriers/ incentives and measures to enhance the performance and the competitive position of EU enterprises;
- **Access to natural resources and secondary raw materials and waste.** This will focus on sustainable access to resources and secondary raw materials, which (together with energy) are key determinants of competitiveness, and on more effective uses of waste;
- **International action on climate change.** This will focus on identifying international responses from industry and NGOs on climate change, as well as ideas on how ETS could be linked or extended into a global system;

- **Better regulation and competitiveness.** This will look at how better regulation in these sectors could help efficient delivery of economic, social and environmental objectives.

The High Level Group will seek to develop mechanisms by December 2007 involving public authorities, private enterprises and civil society, at the appropriate level, to deliver concrete actions in these areas.

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