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RESPONSE TO EC CONSULTATION ON THE FUTURE OF CARBON CAPTURE AND STORAGE IN EUROPE

On 27 March 2013, the European Commission (EC) launched a Consultative Communication on "The future of Carbon Capture and Storage (CCS) in Europe", with the aim of initiating a debate on the options available to ensure its timely development. IFIEC Europe (IE) is glad to express the opinion of its members on the CCS issue in the broader framework of the future European industrial, energy and climate policy.

GENERAL REMARKS

Taking into account the fact that CCS may have a viable business case in the future, IE's vision is that CCS should be **one of the technologies leading to a low carbon economy**.

- CCS is an important long-term mitigation option because it is a major opportunity to maintain a diversified energy supply portfolio, such ensuring some security of supply. While US shifted to cheap natural gas, cheap coal and lignite should be part of the future portfolio for Europe.
- An advantage of CCS is that there is no problem of intermittency, it is base load.

However, this technology should be promoted provided that it is **cost-effective and cost-reflective** and that it **attracts new investments to Europe**.

- Consequential costs for industrial sectors exposed to global competition must be assessed and compensated whenever appropriate.
- An important hurdle is public acceptance, which should be overcome by demonstration-scale projects followed by the sharing of best practices.

The full costs for decarbonisation of society towards 2050 will be significant. **CCS has the potential to become cheaper than RES**, especially compared with wind off-shore and solar, when all RES costs including the costs for coping with intermittent RES supply are taken into account.

However, CCS on coal-fired electricity and gas-fired electricity is always significantly more expensive than coal-fired electricity and gas-fired electricity without CCS. Therefore a new Global Climate Agreement with equal carbon burdens for industry globally is essential. In absence of such an agreement CCS is too expensive to be applied on a large scale.

IE recommends the **preparation of decarbonisation roadmaps by all Member States (MS)**. This exercise will allow MS to learn while planning the future, and especially to evaluate the costs linked to decarbonisation, thus allowing them to treat CCS in a similar manner to RES. The abovementioned roadmaps should be submitted to EC for harmonisation and balancing across the EU. A detailed impact assessment at EU level should then be performed by the EC. Both steps must be made transparent to the public and opened for debate.

There should be **one long-term target: the GHG reduction target**. However, before a **new Global Climate Agreement with equal carbon burdens** for industry at world level, there is a high risk of sky-rocketing CO₂ prices, which must be avoided. IE also recommends that financing of CCS technologies be **independent of the carbon price**, thus avoiding further increase of power prices in Europe and endangering the global competitiveness of industrial energy users.

To avoid Carbon Leakage, policies aimed at promoting CCS have to be accompanied by mechanisms off-setting costs for industries exposed to global competition whenever appropriate.

SPECIFIC REMARKS

- 1) *Should Member States that currently have a high share of coal and gas in their energy mix as well as in industrial processes, and that have not yet done so, be required to:*
 - a. *develop a clear roadmap on how to restructure their electricity generation sector towards non-carbon emitting fuels (nuclear or renewables) by 2050, or*
 - b. *develop a national strategy to prepare for the deployment of CCS technology.*

IE recommends that all MS develop a clear roadmap on how to restructure their electricity generation sector towards low carbon fuels and attract investment to their industrial sectors, particularly in R&D of breakthrough technologies. The roadmap should contain **various scenarios**, in which the deployment of CCS including the required infrastructure (pipelines, storage sites) and the associated costs are included. The roadmap must consider the potential in the different industrial sectors. Among other issues, the industrial output should be included in the scenarios (many industrial plants are co-located near generation sites). It is essential that this roadmap also includes the development per scenario of stationary RES installations, notably wind on-shore, wind off-shore and solar, including all consequential costs for networks, storage and back-up capacity.

IE believes that CCS could be **one of the solutions** enabling Europe to become a low carbon economy by 2050 **after this technology has passed the demonstration stage, is proven to be feasible, especially from a commercial viewpoint, and is cost-efficient.**

It is our understanding that CCS is not applicable to all carbon sources and therefore its implementation is technically not feasible in all industrial sectors. This solution would need to be further developed and communicated in order to **properly evaluate the contribution of CCS to a low carbon economy in Europe in all the sectors.** Until such feasibility and reliability has been demonstrated, **IE does not recommend imposing CCS as the main low carbon technology in Europe.**

We remind that while CCS is a possible technology to achieve a low carbon economy in Europe, **no single technology should be made mandatory.**

The policy path leading to EU's 2050 climate and energy goals must fully take into account the **competitiveness of European industry** and endeavour to **achieve a global level playing field.** Any political choice to be made must be calibrated so as to safeguard the economic viability and sustainability of industry in Europe, which is already a low carbon champion. This is the best way to ensure a future leading position for the EU as the leading global low carbon economy.

- 2) *How should the ETS be re-structured, so that it could also provide meaningful incentives for CCS deployment? Should this be complemented by using instruments based on auctioning revenues, similar to NER300?*

IE is also contributing in the public consultation on the Green Paper on climate and energy framework for 2030, published on 27th March 2013, with among others recommendations to improve the EU ETS.

The structural reform indeed needed by the EU ETS should not be led by the desire to create more support for CCS and / or RES, which are both rather expensive technologies in the foreseeable future. Such a reform is mainly needed to make the EU ETS carbon leakage-proof, taking into account future increase of the carbon price and new investments. More generally speaking, **the overall objective of EU climate policy should be decarbonisation, achieved in the most cost-effective way.** In this sense, the long-term target pursued by EU industrial, climate and energy policy should be reduction of GHG emissions.

The future industrial, climate and energy policy should encourage the development of low carbon solutions such as CCS deployment after using other possibilities, such as demand response mechanisms, through an effective and functioning electricity market.

Financing through the carbon price without safeguards for industrial competitiveness will endanger European industry without giving a solution of viable CCS technologies and without ensuring global low carbon emissions. In any case, partial financing through carbon price must be restricted only until the development phase. **IE** will encourage such a solution during the pre-feasibility stage, and **opposes financing of CCS in the demonstration phase through carbon price.**

This can be complemented using **other instruments** (alternative financial instruments including Horizon 2020, the Coal and Steel Research Fund, structural funds, unused funding from the European Energy Programme for Recovery (EEPR) and national funds). On the contrary, NER300 has not proven effective in the past and the experience should not be repeated because then allowances are auctioned without an industrial activity with an emission (or with a very low emission).

However, such instruments must be envisaged only after **measures for maintaining industrial competitiveness and increasing industrial activity in Europe** have been put in place, as aimed by the EC's Communication of 10th October 2012 entitled "A Stronger European Industry for Growth and Economic Recovery". If not, higher carbon prices will impose higher costs for the industry and potentially increase the risk of carbon leakage rather than increasing the capacity of manufacturing industry to invest in new technologies.

To conclude, the financing of CCS deployment must be designed so as to be independent from the carbon price before a new Global Climate Agreement with equal carbon burdens globally is effective, thus avoiding further increase of power prices in Europe and carbon leakage in the sectors exposed to global competition.

- 3) *Should the Commission propose other means of support or consider other policy measures to pave the road towards early deployment, by:*
 - a. *support through auctioning recycling or other funding approaches*
 - b. *an Emission Performance Standard*
 - c. *a CCS certificate system*
 - d. *another type of policy measure*

Early deployment can only be considered after the economic feasibility of CCS technologies for different carbon sources has been demonstrated and after it is ensured that it will not affect global competitiveness of European industry. The development of **dedicated roadmaps prepared by MS**, followed by an evaluation at EU level performed by the EC in the form of a **detailed impact assessment** are two steps crucial for defining a sound policy.

Other types of policy measures must be thoroughly evaluated since they may directly or indirectly lead to **locally imposed cost burden on industries competing in global markets.**

An **Emission Performance Standard** is **not effective**, as there will be a dash for gas and this would be a huge interference in the market-based EU ETS. The Norwegian system (CO₂ tax of € 25/tonne CO₂ on top of the EU ETS inclusion) is also not recommended because of the interference in the market-based EU ETS.

A **CCS certificate system** as indicated in the EC Communication is **not clear**. In any case, any double pricing (CCS and EUA) must be avoided. Theoretically, a CCS certificate system could be

interesting if a limited number of CCS demonstration plants (industrial plants and power plants) would be supported from revenues out of CCS certificates, while there is no double pricing. However, it seems questionable whether this could be integrated in a well-functioning EU ETS. To be able to judge this, more details of such a CCS certificate system should be communicated. Anyway, such an ad-on system must never lead to windfall profits for electricity producers, which would increase the electricity prices in an unjustified way (this would worsen instead of improving the global competitiveness of EU industry).

- 4) *Should energy utilities henceforth be required to install CCS-ready equipment for all new investments (coal and potentially also gas) in order to facilitate the necessary CCS retrofit?*

IE observes that currently the investments in the manufacturing industry in Europe have stopped, due to the current economic climate and regulatory uncertainty. Any future legislation which would impact the manufacturing industry in Europe must be designed so as to **attract new investments**. Anticipated decisions with regard to the yet unproven CCS technologies would lead to a loss of investment efficiency and be counter-productive for their deployment in the future.

Should the EC consider the implementation of CCS in Europe, it would first need to assess its feasibility, especially from a commercial viewpoint.

CCS-ready requirements should **not go beyond the requirements of the CCS Directive** (Directive 2009/31/EC, Article 33). CCS technologies are still too expensive to demand further costly measures.

More specifically, in the power sector, any retrofit is very expensive and changing the design of already operating plants is less effective than a complete engineering solution foreseen from the start. In the manufacturing industry, it is far too early to go beyond the current legal obligations especially due to cost issues.

- 5) *Should fossil fuel providers contribute to CCS deployment through specific measures that ensure additional financing?*

Considering the energy dependence of Europe towards third countries, it is difficult to consider that fossil fuel providers could be submitted to specific CCS-related rules when entering the EU market.

CCS deployment may take place after its technical and commercial feasibility has been demonstrated. The commercial long-term deployment of CCS technologies and financing mechanisms for the same must be **left to the market**. The demonstration of CCS technologies should not come from fuel providers.

Specific measures to ensure additional financing would be a backdoor methodology to artificially increase the carbon price for CCS.

Although CCS should be part of EU decarbonisation policy, the measures ensuring additional financing must take into account the **global level playing field** and therefore be moderate before a Global Climate Agreement is signed and implemented.

- 6) *What are the main obstacles to ensuring sufficient demonstration of CCS in the EU?*

The first main obstacle is **public acceptance** (see answer to question 7).

The **financing** issue is another main obstacle to the demonstration of CCS in the EU. Financing in the pilot phase must be strengthened, otherwise none of the projects currently under way, or any other, will be initiated. As mentioned above (see answer to question 2), the financing of CCS must be independent from the carbon price. Financing instruments must be carbon leakage-proof. Alternative financial instruments should be considered, including Horizon 2020, the Coal

and Steel Research Fund, structural funds, unused funding from the European Energy Programme for Recovery (EEPR) and national funds. State Aid rules should also take into consideration a potential political choice to develop CCS in Europe.

Another issue is the **infrastructure and the State involvement**. The infrastructure needs of CCS (transport, storage) must not be overlooked, especially since they bring along important investment needs. MS should become the prime institution to explore in investing, supporting and developing the transport infrastructure.

Legal aspects must also be considered to ensure a prompt start of projects. The CCS Directive places all legal liability on the storage operator, which results in a disproportionate burden and creates with insurance problems.

Last but not least, the **high energy prices** in Europe do not help to creating a viable business case for the deployment of CCS technology.

7) *How can public acceptance for CCS be increased?*

IE believes that **transparency** is the first step towards public acceptance.

The following issues need to be considered:

- From the viewpoint of the **public opinion**, the most important issue is the health and safety risk. This aspect varies among the Member States (e.g. the acceptance will be better in countries close to the North Sea because the risk is off-shored) and must be evaluated on a case-by-case basis in order to propose management and corrective measures. A technology - based answer may help, as well as an evaluation of the consequences of importing energy in the roadmaps developed by Member States.
- From the viewpoint of **policy consistency and cost-effectiveness**, as well as for investments, it is necessary to evaluate and compare the commercial viability and the infrastructure needs of CCS vs. other energies, and especially RES.
- If the political choice is made to promote CCS, it is necessary to ensure that the **global competitiveness of European industry** is not affected and that the risk of carbon leakage is better alleviated instead of being further reinforced.

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IFIEC Europe represents energy intensive industrial consumers where energy is a major component of operating costs and directly affects competitiveness.