Bellona Europa / The Bellona Foundation

Troonstraat 61

B-1050 Brussels

Transparency Registry # 29934726424-76

Europe@bellona.org / info@bellona.org

http://www.bellona.org

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The Bellona Foundation: Response to the European Commission's Green Paper on a 2030 Framework for Climate and Energy Policies

Key messages:

Bellona promotes

- a structural reform of the EU Emission Trading System (ETS) to provide a stable and increasing price of carbon and incentivize emissions reductions, low carbon investment, and innovation in clean technologies;
- clear, ambitious and legally binding targets for renewable energy, energy efficiency and CO_2 Capture and Storage (CCS) for 2030 in order to increase their competitiveness and ensure political predictability for investors;
- a holistic approach that ensures that the measures for reaching the EU's targets of reducing greenhouse gas emissions by 80-95% by 2050 are mutually supportive and reinforcing.

General remarks:

As the Commission acknowledges in the objectives of this consultation, the EU 2030 framework for climate and energy policies needs build on the experience and lessons from the current framework. Bellona welcomes the Commission's underlining of the need to also take into account the longer term perspective set out in the 'Roadmap for moving to a competitive low carbon economy in 2050', the Energy Roadmap 2050 and the Transport White Paper.

Under the EU 2020 framework there has been a tendency towards trade-offs between the various measures that support the emission reduction, renewable energy and energy efficiency targets. Thus,

the European Commission ought to approach the 2030 strategy in a manner that ensures that the measures for reaching its target of reducing greenhouse gas emissions by 80-95% by 2050 are mutually supportive and reinforcing. It is imperative that these measures are met with a holistic approach; low-carbon energy production, energy efficiency and greenhouse gas emission reduction should be seen as processes which together can ensure that the EU reaches its long term climate objectives.

Significantly, the current portfolio of market measures to address the EU's three headline targets (GHG reductions, renewable energy and energy efficiency) have the potential to interact with each other and the ETS, rather than providing synergies or complementary improvements. The Commission should consequently ensure that all policy measures for climate change complement and reinforce one another.

Further to this point the future of CCS in Europe should not be treated in parallel to the 2030 framework, but rather as an integral part of the overarching 2030 strategy. Bellona sees the need to note this point specifically, as the consultative CCS Communication – to which Bellona has provided separate, comprehensive input[1] – was launched simultaneously with this Green Paper, yet the Green Paper falls short of mentioning it. Notably, the Commission in its listing of key findings from the abovementioned Roadmaps fails to make any mention of CCS. This seems curious when the technology figures as a key decarbonisation route in all scenarios of the EU Energy Roadmap 2050. The EU Low-Carbon Economy Roadmap 2050 moreover clearly points to CCS as a key technology for decarbonising EU energy-intensive industries. Bellona would add that a recent report[2] from ZEP shows how CCS is in fact the only available technology for deep emission cuts in several energy-intensive industries, which made up 25 % of EU CO_2 emissions in 2010.

The current state of the carbon market:

Introduced in 2005, the EU ETS is the bloc's flagship policy to address climate change and the largest carbon market in operation worldwide. Unfortunately, the price of CO_2 has not been as robust as originally forecast. At the time of writing, ETS Emission Unit Allowances (EUAs) are trading at around €4.30/tCO_2. This compared with forecast prices of around €30/t from mid-2008.[3] Moreover, the low price of EUA futures for delivery in 2020 (€5.74 at the time of writing[4]) indicates that the market currently does not see the price of EUAs increasing dramatically in this time window.

The ETS is a market-based tool to reduce GHG emissions, with an anti-cyclical design feature to help it adapt to broader fluctuations in the real economy. As such, the ETS is responding predictably to contemporary developments in the European economies. The unexpectedly deep and long recession, combined with the interaction with other carbon reduction policies, has led to a significant

[1] http://www.bellona.org/articles/articles_2013/1372752806.81
[2] http://www.bellona.org/articles/articles_2013/1372671200.85
[3] Energy and Climate Change Committee (2012) "the EU Emissions Trading System: government Response to the Committee's Tenth report of Session 2010-2012
[4] http://www.eex.com/en/Market%20Data/Trading%20Data/Emission%20Rights/European%20Carbon%20Futures%20%7C%20Derivatives 2020 Futures price retrieved 2nd July 2013, at 14:30 CET.

oversupply of allowances in the market. Notably, this oversupply of allowances is expected to accelerate further in coming years, subject to specific regulatory provisions being processed alongside the transition into the ETS' phase 3.

The EU ETS is perceived to have lost relevance as a mechanism to promote emissions abatement for the following reasons:

- The low price of allowances makes it overly easy for the affected industries to comply with the original emission reduction targets, providing an unfortunate symbolic signal of climate policy priority.
- The low price of allowances causes uncertainty among RES investors on their long-term competitiveness against other sources, particularly unabated coal.
- The cost-effectiveness of quota systems such as the ETS fails to promote other desired impacts, such as triggering the necessary large-scale shift from a fossil-based to a clean energy portfolio. The lowered cost of emission reductions diminishes the need for more fundamental innovation into low-carbon technologies.
- National and regional funding streams that were based on the carbon price (e.g. NER300) have fallen short of expectations, setting back the development of key technologies for climate mitigation, such as CCS.

The current situation of the EU ETS theoretically working as intended, but in practice failing to provide a realistic price on carbon, is providing policy makers with an unsustainable excuse for not taking further climate action at the national level.

Bellona accepts that, with the assistance of the economic crisis, the ETS is likely to achieve its primary objective of a 20% reduction in CO_2 emissions by 2020. However, Bellona seriously questions the scheme's ability in its current form to stimulate the up-front investment and innovation necessary to meet the ambitious emissions reductions proposed in the Commission's 2050 low-carbon roadmap.

Under the current conditions, market actors will not deploy low-carbon technologies as a matter of course. Whilst some may argue that the low price of CO_2 illustrates that the cap-and-trade system has been effective in lowering EU emissions, there can be no doubt that the ETS in its present form fails to provide a satisfactory price signal – now or projected – to encourage the development and deployment of new low-carbon technologies that do not benefit from other targeted support measures under the Renewable Energy or Energy Efficiency Directives. In that respect, the ETS has failed to achieve an important policy objective.

In the short- to medium-term, the European Commission's so-called backloading proposal, to delay the auctioning of EUAs, could increase the incentive to invest and deploy low carbon technologies as well as the amount of funds available to fund CCS in the second round of the NER300.

In the longer-term, however, significant institutional reform is necessary to address the two following major inter-related shortcomings of the EU ETS that prevent it from providing an effective price signal for low-carbon investment:

1) The over-generous allocation of emissions allowances. The political decision-making process that gave rise to the ETS Directive resulted in compromises that meant the final form of the legislation was based on a conservative collective understanding of achievable CO_2 emissions reductions. This led to a generous supply of allowances and international credits – in particular, the grandfathering of an excessively large number of allowances to heavily polluting industries in a move that aberrantly resulted in windfalls for many who were able to sell on their unused allowances. These effects were exacerbated by the reduced economic activity caused by the global financial crisis, and the fact that allocation of free allowances has been based on historical, pre-crisis activity rather than actual production levels.

According to one study, a total of 1.4 billion allowances are expected to be carried over to Phase III of the EU ETS which starts in 2013. The excess of 1.4 billion allowances will have been built up over the course of Phase II of the ETS (2008-2012) and is equivalent to approximately 70% of the European demand for allowances in 2009.[5]

2) The EU's lack of a monopoly on policymaking in fields that may have an impact on the scarcity of allowances. Parallel energy policies at both the national- and EU-levels – FiTs, carbon floor prices and the Renewables and Energy Efficiency Directives, for example – have the potential to distort the market price of EUAs. Because 30 countries share a common pool of allowances, policies enacted by any one of them can have unintended consequences in others. Moreover, the weaker the CO_2 price becomes, the greater the temptation to enact parallel policies that weaken it further.

This situation has led to some unfortunate situations where the policy makers responsible for administering the ETS have been critical of other climate policy initiatives with the potential to (further) undermine the EUA price. Examples worth mentioning would be the EU Energy Efficiency Directive and the UK Government's proposed floor price for CO_2, both of which sparked unfavourable comments from the Commission's DG CLIMA.[6] [7]

The way forward:

Structural reform of the EU ETS

Bellona believes that it is necessary to create new mechanisms in order to improve the current EU ETS. Lessons learnt since 2008 indicate that new ways must be found to respond to significant peaks and dips in the price of allowances due to 'external' influences such as the current economic situation in some EU Member States. As for the backloading proposal, the Commission has on several occasions stated that this, if adopted, is a "one-off" solution that may not be viewed as a tool for repeated use.

The perception of future scarcity and price stability are important factors for a well-functioning CO_2 market. Bellona supports a structural reform of the ETS that will allow it to respond to situations of

[5] Mulder, A.J., Bos, C.F.M. (2010) "Current design of EU ETS clashes with its own objectives", EDI Quarterly, vol. 2 issue 2, pp. 12-16
[6] http://www.euractiv.com/energy-efficiency/brussels-disarray-energy-directi-news-505654
[7] http://uk.reuters.com/article/2012/07/10/us-eu-ets-idUKBRE8680KW20120710

over-supply, as in the current market context. To this end, Bellona calls for a reform of the ETS to put in place governance arrangements for discretionary adjustments to the supply of allowances e.g. in the form of a price management reserve as briefly described in COM(2012)652.

This discretionary price-based mechanism should be regulated by an independent bank; the ***European Central Bank of Carbon***.

Because carbon markets are government-created, they can be regarded as artificial markets. The functioning of a carbon market is reliant on the quality of the administration of the market. Currently, adjusting the supply of EUAs requires a proposed amendment to the ETS Directive by the European Commission, which the European Parliament and Council both then need to approve. This is a lengthy and uncertain political process. Addressing climate change is too important for each market decision to be subject to lengthy political discussions, as indicated by the Parliament's plenary vote on backloading in April 2013[8]. The carbon market should be entrusted to a regulator to make the necessary decisions to enable the market to function, such as to regulate over-supply.

The creation of a carbon bank would be a shift from the logic of allowing the scarcity of a pre-determined limit on emissions to determine the carbon price. Many would view this as a breach of the current political mandate granted to the EU on how climate change should be addressed.

However, such a reform would allow the EU Institution with executive responsibility for the system to react to inherently unpredictable changes in carbon demand that could lead to excessive price movements affecting the orderly functioning of the market.

Because the executive institution will need the authority to act decisively when required in order for the market to function effectively, it needs to be assured of both a strong mandate and the political independence to execute this mandate. This would allow it to operate without undue political influence and insulate it from rent-seeking by powerful market actors or specific interest groups.

In order to ensure stability and predictability, effective and transparent criteria for intervention will also need to be drawn up. Bellona recommends that these criteria be based on achieving the ambitious EU 2050 decarbonisation goals at the least cost to society.

Providing such arrangements can be politically agreed at the EU-level, the resulting changes would be a great step forward for all low-carbon technologies.

A particular positive effect would be the improved alignment with policy measures addressing complementary EU headline targets. Notably, the on-going debate on removing targets and subsidies on renewables to reduce their hampering effect on ETS functionality would be silenced through such structural reform, as the carbon market would automatically readjust upon renewable energy production replacing unabated fossil sources. There is an undeniable need to promote action along both the GHG emission and the renewable energy path.

[8] http://www.europarl.europa.eu/oeil/popups/summary.do?id=1260015&t=e&l=en

Continued technology-specific targets and sector-specific measures:

Targeted support can create early markets for emerging technologies, effectively 'buying down' the cost of these technologies so that they can be deployed more cost effectively in the future. This is because such targeted support has dynamic effects: it fosters innovation, yields increasing returns to adoption and helps low-carbon technologies move along their learning curve. Therefore, in order to cost-effectively facilitate the deployment of new technologies, it is necessary to develop a system which combines carbon pricing and targeted support. The proposed arrangement, with discretionary price adjustment executed by an independent carbon bank, would provide for such a system, in which targeted support for low carbon technologies does not interfere with the ETS in a detrimental way.

Renewable Energy Sources (RES)

In order to ensure future investments in the renewable energy sector, Bellona supports setting a clear and ambitious target for the European Union's renewable energy share for 2030. However, this support is conditional to the role of biomass and related sustainability criteria for attaining such a 2030 RES target, as outlined below.

The current portfolio of market measures to address the three EU headline targets (GHG reductions, renewable energy and energy efficiency) negatively interact and do not provide synergies or complementary improvements to one another. Bellona argues that this can only be tackled through structural reform to the ETS mechanism, as outlined in the section on ETS reform. There is an indisputable need to promote action along the lines of both GHG emission reductions and further renewable energy uptake. Bellona strongly rejects the weaknesses of the current ETS model becoming an argument for reducing efforts on renewable energy progress.

The 2020 targets for renewable energy have proven their value through investments in research and development, innovation and large scale deployment in the sector. This has contributed to significant reductions in the cost of renewable energy technologies. However, the Energy Roadmap for 2050 has shown that the share of renewables in the energy system must continue to increase after 2020. While the 2010 progress report[9] by the Commission showed that the EU was on track to reach its 20 % target, the phasing-out of Feed-in Tariffs (FiTs) and other measures in several MS as result of the crisis has led to this milestone potentially being jeopardised, as showed by the subsequent 2013 progress report[10]. In any case, this development indicates that RES will need continued support measures also after 2020.

Whether or not the EU 2020 renewable energy target is reached in full, there is little doubt that it has been instrumental for encouraging MS to implement strong support mechanisms for RES uptake across the EU. An ambitious and binding 2030 target should therefore be considered a vital regulatory tool and a much-needed commitment.

[9] http://ec.europa.eu/energy/renewables/reports/2011_en.htm
[10] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0175:FIN:EN:PDF

Current biomass policy has the potential to undermine overall EU RES policy

It must in this context be duly noted that the current EU RES policy, i.e. the RED and its implementation on MS level, has led to a massive increase above all in the use of biomass. Of the 8.7 % RES share in gross EU inland energy consumption in 2010, 6 % or more than two thirds of RES was made up by biomass and renewable wastes.[11] The assumption that biomass conversion to energy and fuels is a fully renewable alternative to fossil fuel-based conversion is, at best, arbitrary. Currently, there are no mandatory criteria in place to ensure that the biomass produced in, and perhaps more importantly, imported into the EU is sourced in a sustainable way. In practice, when Member States drew up their National Renewable Energy Action Plans (NREAPs)[12], they were obliged to make realistic plans for deployment of wind, solar and other renewables on their territories. For biomass however, they could simply assume a share of heating, cooling and power in existing plants.

Bellona would here note that large-scale utilisation of *sustainable* biomass must be a crucial part of climate mitigation strategies, in the EU and globally, as shown by all serious scenarios for long-term emission reductions to date. Sustainable biomass conversion, when combined with CCS, is the only technology route that allows for large-scale *negative emissions*, i.e. processes where more CO_2 is removed from the atmosphere than released, as also recognised by the Commission's EU Energy Roadmap 2050. Bellona led the work on a joint report by two EU Technology Platforms to show in which ways such solutions could be attained, and to give relevant recommendations to EU policy makers.[13] The *carbon-negative* values of Bio-CCS however, just like the assumed carbon-neutral values of bioenergy, depend on biomass sustainability.

It is therefore imperative for the EU to ensure that adequate sustainability criteria for biomass and waste used for electricity, heating, cooling and fuels production are put in place before any steps are made toward increased targets for renewable energy use, lest the large share of biomass within the RES portfolio continue to grow unchecked, potentially undermining EU RES policies and climate policies alike.

Moreover, funding and support must be made available for facilitating the development of novel sources of biomass for the abovementioned purposes, including but not limited to marine biomass which has a huge theoretical potential, such as (micro- and macro-)algae, as well as the utilisation of currently arid, damaged or for other reasons unutilised lands for biomass production. A large-scale development of such sources could be a contribution to EU energy security while ensuring the credibility of EU climate measures and commitments.

Biofuels and Indirect Land-Use Changes (ILUC)

For biofuels used in the EU, sustainability criteria do exist. However, another connected and controversial issue for such fuels, which somewhat surprisingly was not mentioned by the Commission in its 2030 Green Paper, has a similar potential to undermine EU climate credentials. Biofuels are not sustainable when their production leads to large emissions elsewhere. This issue,

[11] http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Renewable_energy_statistics
[12] http://www.eea.europa.eu/data-and-maps/figures/national-renewable-energy-action-plan-1#tab-hard-copy
[13] http://www.bellona.org/articles/articles_2012/1340380044.27

largely connected to the use of edible agricultural crops for the production of biofuels, is known as ILUC and refers to the hard-to-trace displacement of food production when former food crops are turned into energy crops. Several reports over the last years, including modelling used by the Commission, indicate that for some crops, the changes induced elsewhere by the displacement of crops may in some cases that cancel out their biofuels' greenhouse gas savings compared to fossil fuels, or worse, even make their carbon footprint heavier than that of their fossil-derived equivalents.[14]

This challenge has been growing steadily as a consequence of the transport sector sub-target of 10 % RES introduced in the Renewable Energy Directive (RED); this sub-target has so far mainly contributed to increasing the use of conventional biofuels in Europe, and according to the NREAPs, this is not going to change before 2020.

The Commission's proposed revision of the biofuels policy from October 2012[15] fell short of proposing a mandatory methodology to factor in ILUC-caused emissions in biofuel sustainability calculations. The ILUC factors are merely a part of the reporting exercise and fuel suppliers are moreover not prevented from using food-based biofuels to meet the 6% target under the fuel quality directive. Bellona recognises that this is a challenging issue given the difficulty to model ILUC-effects with any certainty, as well as the many investments made to date in conventional biofuels capacity in the EU, and due to the need for investors to have a reliable and stable climate policy framework. For this reason, Bellona would be inclined to support the grandfathering options as outlined by Ecofys in its 2012 report,[16] flanked with much stronger incentives for the development of advanced biofuels production routes (and, as mentioned above, the exploitation of novel biomass sources).

Notwithstanding the challenges connected to ILUC, the above examples clearly show the importance of a more holistic approach to biomass supply and sustainability. Bellona would support the Commission in continued efforts to convince Member States and Parliament of the necessity of strict sustainability criteria for biomass, if it is to continue counting toward future EU RES targets.

However, should no agreement to introduce sustainability criteria for biomass – and on factoring in ILUC where relevant – be possible, Bellona cannot support a 2030 RES target toward which the use of biomass is counted. In such a case, a RES target without bioenergy is preferable.

The EU Transport Sector

The EU transport sector has so far been exempt from the ETS, with the exception of aviation, a move applauded by Bellona. Instead, other measures have been introduced to reduce emissions. Bellona strongly supports the Commission's proposals to reduce average emissions from European car fleets, and regrets the resistance from some MS in this respect. Bellona would also support a unilateral move by the EU to include shipping in the ETS. This now seems justified, as recent proceedings in the

[15] http://ec.europa.eu/clima/policies/transport/fuel/docs/com_2012_595_en.pdf
[16] http://www.ecofys.com/files/files/ecofys_2012_grandfathering%20iluc.pdf

IMO[17] indicate that there is little hope of major progress on a global agreement on CO_2 cuts in the sector.

Further to emissions from international shipping, Bellona has been vocal in advocating a more ambitious use of EU port state authority to reduce hazardous consequences from the on-going increase in shipping in Arctic areas. Notably, Bellona has asked for the EU to take action on short-lived climate forcers such as *black carbon* and to work for a ban on the use of heavy fuel oil in those areas. Those calls have been echoed by the European Parliament in its 2011 Arctic Resolution.[18]

The other main transport-related EU policy currently in place, as mentioned above, is the sub-target for 10 % RES in EU land transport by 2020. As mentioned, this target will largely be met by an increased use of conventional biofuels. Aside from the already discussed ILUC issue, Bellona would ask the Commission to assess the need for a prioritisation of the limited available biomass feedstocks, to ensure that Europe has a holistic approach to its biomass resources. Such a prioritisation might be needed to ensure that sectors for which no near-term alternative decarbonisation options exist – e.g. the aviation sector – receive priority.

Bellona would moreover recommend that the Commission continues efforts to facilitate a large-scale energy shift in the transport sector toward clean energy. Efforts to move toward an electrification of the EU transport sector may not be undermined by short-term concerns that the electricity utilised might entail higher emissions than conventional combustion engines, as electrification must be seen in a long-term perspective with full power sector decarbonisation. The short-term health benefits of electrification in Europe's cities should also not be ignored in this context. Energy efficiency incentives must however be ensured also for electrical vehicles, as discussed below. Infrastructure for large-scale electrification could increasingly be included in other transport strategies, such as the TEN-T. While not an EU MS, Norway has done significant progress on the roll-out of electric vehicles, and Bellona would be pleased to facilitate increased sharing of knowledge and best practice to support a similar development in Europe as a whole.

Energy Efficiency

Bellona believes that, in order to attain a largely carbon-free society by 2050, a clearly defined 2030 target for energy efficiency is needed. This is particularly important for the built environment where change takes time and depends on large investments. Long-term targets would encourage EU Governments to put in place instruments that incentivise investments in energy efficiency by industry, service sectors, home owners and the public sector. Bellona therefore promotes ambitious, legally binding targets for energy efficiency for 2030.

The indicative system, where each Member State may decide in which sector and where in the energy chain the efficiency takes place, has proven too lenient. Member States should be obliged to

[17] http://shippingwatch.com/carriers/article5483173.ece
[18] http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0024+0+DOC+XML+V0//EN
Points 27 and 28

develop policy measures that stimulate end use efficiency. Therefore, the energy efficiency targets should be set for end use, rather than in primary energy. Other, designated incentives should be directed towards efficiency "upstream" in the energy production sector. If primary energy use were to remain the basis for energy efficiency measures, it should only be as a means to keep track of the progress towards reaching the goals across the EU. Furthermore it should be mandatory rather than optional as today, to develop realistic national primary energy factors. This would enable a more correct stocktaking of energy efficiency progress across Member States, compared to when utilising common primary energy factors. Bellona holds the opinion that this is not comparable with the instruments *Ecodesign* and *Energy labeling of products,* for which internal market considerations favour or even require the use of common factors.

In addition to an overall EU target, new national quantitative sub-targets on energy efficiency for the building sector should be agreed and made legally binding and be supplemented by efficient national policy instruments and measures. Each MS's target should be based on its final energy use, potentially adjusted for its financial capacity (GDP) and the state and efficiency potential of its building stock.

In order to ensure further investments into energy efficiency, mandatory measures with the emphasis on existing buildings should be established for the entire public sector (not only the governmental sector as is promoted in the current Energy Efficiency Directive).

Under current legislation, the split incentive challenge often poses an unsolved hindrance for energy efficiency investments; real estate owners don't undertake efficiency measures because tenants pay the energy bills. Therefore, there is no financial gain for the owners in making the building more energy efficient. Financial incentives aimed at sparking energy efficiency measures in corporate buildings should therefore require green lease deals in order to overcome the split incentive challenge.

Resource efficiency; hence also *energy efficiency,* is a benefit in itself, rather than just a means to counter climate change. This is valid all across Europe. Resource efficiency will become an increasingly relevant issue in the EU as the Member States transition towards higher renewable shares becomes a reality. Norway makes an interesting example in this respect, with hydropower dominating the energy mix used in buildings, and hence limiting the reduction potential of direct climate gas emissions derived from energy efficiency measures. When the EU power sector is increasingly decarbonised, this will hold equally true for e.g. electric vehicles, which cannot be allowed to serve as a disincentive to innovate in energy efficiency for such vehicles. Bellona recommends that this long-term perspective be kept in mind also for EU-wide policy planning, although only a few EU MS currently have shares of RES that approach Norwegian levels.

CO_2 Capture and Storage (CCS)

At the EU-level, Bellona recommends that the Union makes a CCS milestone (similar to the '20% by 2020' renewable energy target) an integral part of its 2030 Energy and Climate Package.

EU and IEA studies show that in order to maintain standards of living whilst limiting global temperature rises to 2°C at the lowest cost, CCS will need to account for 32% of gross power generation in the EU by 2050,[19] whilst 328 $MtCO_2$ will need to be captured annually from EU industrial sources.[20] To be on track to meet these 2050 volumes, by 2030 at least 60GW of CCS generation capacity will need to be installed and 80 $MtCO_2$/year of non-power industrial emissions captured and stored.

A legally binding EU requirement for Member States to hit these 2030 targets would be a politically salient and mobilizing goal, driving CCS deployment in both the power and non-power sectors. It would reassure investors of the political commitment to CCS, but still be flexible enough to complement other policy initiatives at the EU- or national-levels. It would also accommodate Member State differences in ability and willingness to deploy CCS.

Should a CCS milestone prove too difficult to agree, however, a constructive fall-back option would be the adjustment of the current EU renewables target to allow it to be met through CCS in the future. For example, instead of a 2030 renewable energy target, a low-carbon energy target would grant Member States increased freedom to choose a decarbonisation trajectory that best matched their strengths. It would permit CCS to compete on a level playing field in the EU, allowing it to find a suitable niche in the energy mix.

See Bellona's response to the Consultative Communication on CCS for more information on this issue.

Emission Performance Standards

Emissions Performance Standards (EPSs) have long been a key tool in achieving desired environmental goals. EPSs are attractive to policy makers due to their simplicity of implementation, predictable results and low direct cost to the state. EPSs should be an add-on to the ETS which can minimise the risk of the ETS not delivering the decarbonisation that is needed.

EPSs have effectively promoted CCS deployment outside the EU. Most notably, the Canadian government finalised performance standards affecting coal electricity generation in 2012. All new coal facilities post 2015 and existing facilities over 50 years will be mandated to reduce CO2 emissions to the level of Combine Cycle Gas Turbine (420kg/MWh), requiring the application of CCS. This legislation has strongly motivated provincial authorities to work together with industry to keep coal and oil sands resources relevant in the future, leading to bold action to realize CCS on both their parts.

In the US nearly a dozen states have already implemented or are implementing their own market-based programs to reduce carbon pollution. In addition, in his recent climate speech President

[19] As per the 'Low Nuclear' scenario in the 2050 Energy Roadmap, in line with events since Fukushima.
[20] Necessary CCS deployment in the energy intensive Iron & Steel, Cement, Chemicals, Pulp & Paper, Refining, Biofuels and Gas Processing. International Energy Agency, 2012. Energy Technology Perspectives, Paris. Industrial emissions in the EU amounted to 940 $MtCO_2$ in 2010. Source Eurostat.

Barack Obama called on the American Environmental Protection Agency to put an end to the limitless carbon pollution from power plants and to develop new pollution standards for both new and existing power plants. Further to this point; and in addition the fact that Obama confirmed that he wants the US administration to direct their efforts to limit coal-use and support for coal-use overseas; American policy will have an considerable effect on the coal industry in Europe and the rest of the world. For one thing this will lead to an abundance of coal in the European market, which the EU will have to react to by implementing EPS or similar programs.

An EPS would reaffirm the political commitment to incremental decarbonisation in, reassuring market actors of the long-term necessity of CCS for continued fossil fuel use in the EU as well.

Bellona strongly support an EPS as a valuable part of a suite of policies aimed at energy system decarbonisation more generally. For example, a modest carbon EPS could ensure that that a transitory surplus in carbon allowances does not lead to the most highly polluting generation sources being run. More information can be found in our 2030 Communication response. [21]

[21] http://www.bellona.org/articles/articles_2013/1372752806.81