

Roadmap for a low carbon economy by 2050

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EURACOAL represents 33 Members from 20 countries and including national producers and importers associations, companies and research institutes. EURACOAL's objective is to highlight the importance of coal for security of energy supply within the enlarged EU and to contribute to an appropriate and reliable framework for sustainable and environmentally friendly coal extraction and utilisation in Europe.

Section B: Questions for organizations

7) The EU has put in place a regulatory framework related to climate and energy. Which of the following EU legislations you expect to be the most effective in terms of delivering emission reductions by 2020 and beyond? (select maximum 4) -multiple choices reply-

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|-------------------------------------|---|---|
| <input checked="" type="checkbox"/> |  | EU ETS (European Emission Trading Scheme) Directive |
| <input type="checkbox"/> |  | Effort Sharing Decision |
| <input type="checkbox"/> |  | Renewable Energy Directive |
| <input type="checkbox"/> |  | Eco-design of energy-using products Directive |
| <input type="checkbox"/> |  | Energy Labelling of products Directive |
| <input type="checkbox"/> |  | Directive on Cogeneration (CHP) |
| <input type="checkbox"/> |  | Directive on end-use energy efficiency and energy efficiency services (ESD) |
| <input type="checkbox"/> |  | Recast Energy performance of Buildings Directive |
| <input type="checkbox"/> |  | Fuel quality directive |
| <input type="checkbox"/> |  | Regulation to reduce CO2 emissions from passenger cars |
| <input type="checkbox"/> |  | Proposal for a Regulation to reduce CO2 emissions from vans |
| <input type="checkbox"/> |  | Proposal for a revised Eurovignette Directive |
| <input type="checkbox"/> |  | Proposal for a Car Labelling Directive |
| <input type="checkbox"/> |  | Aviation in EU ETS Directive |
| <input checked="" type="checkbox"/> |  | CCS Directive |
| <input type="checkbox"/> |  | Regulation on substances that deplete the ozone layer |
| <input type="checkbox"/> |  | Waste Framework Directive |

8) Do you have any comments on the policies evaluated in the previous question? Do you have any comments on any other policies? -open reply- (optional)

EU ETS – In an unparalleled experiment, the EU continues to develop the ETS as a central plank in the bloc's response to the climate challenge. Full auctioning of emission allowances during the third trading period from 2013 will see a major shift in the scheme's impact on fuel choice for power generation. The safety nets and national allocation preferences of the past will be replaced by harmonised rules, the details of which are currently being finalised between the Commission and Member States via the comitology procedure. Even with these new harmonised allocation rules, the scheme will remain subject to future political decisions (e.g. on targets and inclusion of JI/CDM credits) and uncertainties. The rules foresee fuel switching from coal to gas as a desirable outcome, without regard to the consequences of such a shift on economic competitiveness or security of energy supplies in the EU. By 2020, EU dependence on imported gas is likely to reach 73-79%, and rise to 81-89% by 2030, according to the

Commission (SEC(2010)1395). Faced with similar levels of energy import dependence, Japan turned to coal in the 1970s and is today the world's largest importer because, unlike gas, coal is available at competitive prices from diverse sources without cartel risks. In the EU, we have the added benefit of indigenous coal which reduces energy import dependence and offers long-term price stability. Unfortunately, given the unpredictability of carbon prices under the ETS, coal-sector investments, particularly in new coal-fired power generation capacity, have almost come to a halt. The plants being commissioned today are the result of investment decisions made over a decade ago, a time when government policy was less fixated on carbon emissions. The utility industry is like a super tanker – it takes years to find out if regulatory and investment decisions were beneficial or not. The ETS experiment risks leaving the EU short of secure base-load generation capacity at a time when it is most needed to balance a massive dependence on imported gas and to backup intermittent renewables.

CCS Directive – Without CCS available as a carbon mitigation option, the European Commission has estimated that the cost of a 30% reduction in GHG emissions by 2030 would rise by 40% (SEC(2010)1395). A similar analysis by the International Energy Agency shows that costs would be 70% higher in 2050 to bring GHG emissions back to 2005 levels. As such, CCS is a key technology in the arsenal of measures to reduce GHG emissions at an affordable cost. The European coal industry therefore welcomes the CCS Directive. A number of European coal mining enterprises and power companies are planning to commission the first CCS demonstration power plants by 2015, all over 250 MW. These projects will include the whole process chain: CO₂ separation at the power plants, transport and permanent storage in deep underground geological formations. The CCS Directive adopted by the EU should be transposed in all Member States to allow these projects to proceed quickly. Although the support for CCS under the European Energy Recovery Plan and ETS are both very welcome, additional support by Member States will also be required to ensure that projects proceed as scheduled. The European coal industry warns against mandatory CCS, either explicit or implied through CO₂ emission performance standards. A market-based approach would see CCS deployed in the most cost-efficient way, and policy makers should resist any attempt to interfere with the operation of the current ETS. CCS will be required at coal-fired power plants, gas-fired power plants and in the energy-intensive industries. We cannot today second guess where the cheapest CCS options will lie – that is the purpose of a carbon market and carbon reduction incentives (e.g. renewable feed-in tariffs). Mandatory measures would be incompatible with an efficient market-based solution which could include special incentives for CCS.

9) The EU will need a diverse portfolio of technologies to build a low-carbon future. Some examples of potential technologies and energy efficiency solutions are carbon capture and storage, renewable energy technologies, electric vehicles, fuel cells, smart grids, heat pumps, cogeneration, next generation nuclear power, zero emission buildings, etc. Which technologies do you think will be the most important in achieving a low carbon economy by 2050 and how can the EU foster their development and deployment? -open reply- (optional)

Efficiency measures are most important in the short and medium term to deliver CO₂ emissions reductions at the lowest cost. Government initiatives have focussed on end-users where the potential savings are greatest, but where life-style choices mean that savings are difficult to realise. Benefits are often taken in the form of greater services (e.g. more warmth, light or travel), rather than reduced energy consumption. Upstream energy efficiency, e.g. at power plants, can deliver CO₂ reductions with much greater certainty. Improving the efficiency of a coal-fired power plant reduces emissions, by 30% or more in the case of renewal of the oldest plants. Upstream efficiency is largely ignored by policy makers and industry is reluctant to invest to improve efficiency because of the uncertain market and regulatory environment within which coal-fired power plants operate today. Only short-term investments can be contemplated. Longer term, to 2050, the most important technology will be CCS.

10) What are in your opinion the most important initiatives the EU should pursue in the next five to 10 years to secure a successful transition towards a low carbon economy by 2050? -open reply- (optional)

More should be done to encourage high-efficiency coal-fired generation and the substantial CO₂ savings that could be made through the replacement and modernisation of older plants. Legislation for infrastructure development and energy efficiency is needed, including for CO₂

transport and storage. More attention needs to be given to the socio-economic aspects of CCS. Allaying public fears on CO₂ storage and securing adequate financial support will be crucial to move this technology forward. In the short term, decarbonisation should be only one objective and one that should not dominate, given the current weakness of international climate change negotiations and fragile state of the global economy. Industrial competitiveness and security of energy supply cannot be subordinate to sustainability. Evidence shows that the richest economies are also the cleanest, so economic development should go hand-in-hand with climate action.

11) The EU Emissions Trading Scheme is a central element of EU climate policy. The EU wants to foster international climate action by reinforcing international carbon markets, e.g. by making links among emissions trading systems and by further developing crediting systems. What elements do you think should go into the EU low-carbon roadmap? (e.g. bilateral agreements to recognise international allowances and credits, sectoral crediting systems, separate financing mechanism for the purchase of international credits from developing countries, etc.) -open reply- (optional)

This question sensibly highlights the major flaw in an EU-wide trading scheme: it isolates Europe in its efforts to tackle what is a global issue. High carbon prices are needed to drive deep cuts in CO₂ emission, but high prices are economically damaging, especially if industries in other countries are free to emit and export their products to the EU. It is therefore crucial that the EU ETS is open to emission credits generated elsewhere. This is likely to dampen emission allowance prices in the EU, but without compromising the global objective of significantly reducing GHG emissions (not just CO₂ emissions) at the lowest cost. Unilateral action in the EU does not address the climate challenge, so the EU must integrate the ETS with bilateral agreements, sectoral crediting and trade in international credits.

12) Achieving a low-carbon future means investing in the medium to long-term. How can the EU roadmap help to create a stable environment to encourage investment in low carbon technologies? Would it be a good idea to consider a mid-term objective for 2030 and, if so, in what form? -open reply- (optional)

In the EU roadmap to 2050, coal's future role should be scrutinised more closely as part of Europe's long-term decarbonisation goal and related energy policy decisions. Any assumption that the 2050 objective can be met without coal and without CO₂ capture and storage (CCS) for gas and coal use must be questioned from cost and security of energy supply perspectives. A mid-term objective for 2030 would not be helpful; it would potentially discredit the 2020 objectives which are already challenging enough and may not be met. The EU must earn political credibility if it is to influence the other major economies around the world on climate policy. This means that specific EU targets must be measurable, achievable and realistic. Today, they do not meet all these criteria.

13) We want to cut emissions in the EU by 80% to 95% by 2050. Some of the measures needed to achieve this could bring about more sustainable growth, extra jobs, accelerated innovation, cleaner air, increased energy security and lowering our vulnerability to external energy shocks. Which of these do you think should be top of the list? What should the EU do to maximise the benefits you think should be delivered in priority by future climate action? -open reply- (optional)

Increasing EU energy security and lowering our vulnerability to external energy shocks should be the most important measures. To achieve the benefits listed, more investment is needed to replace and modernise old coal-fired power plants. This can be justified initially by the cost-effective CO₂ savings from improved efficiency, and can include enough design flexibility to retrofit CO₂ capture and storage (CCS) and so meet longer-term targets. By promoting today, high-efficiency power plants that are CCS-ready, the EU could follow a "no-regrets" strategy that leads to a low-carbon end point without compromising EU competitiveness or energy security in the short term.

14) What sectors do you think may be most vulnerable to the negative impacts of climate change, and what policies do you think the EU should pursue to help them to adapt? Do you have any suggestions on the integration of adaptation policies in the Common Agriculture Policy, civil protection, environment, energy, transport, research and development policies? -open reply- (optional)

An important point to note here, and one that is largely ignored in the climate debate, is that the world must face all the predicted negative impacts over the next century, regardless of

what mitigation actions we take today. The cumulative effect of GHG emissions emitted over the last century, coupled with the large inertia of the global climatic system, means that mitigation measures can only benefit future generations, today's population will not live to see the benefits. In the interim period, the most vulnerable sector to the negative impacts of climate change is the built environment which is threatened especially by floods and rising sea levels. Wide-ranging R&D programmes and development policies should be adopted for areas most at risk of such natural disasters.

15) Do you have success stories that could lead to new initiatives for steering EU transition to a low-carbon economy you wish to highlight? Please add other further comments or suggestions here if you wish. -open reply- (optional)

The greatest success over the last decade is the remarkable speed with which CO₂ capture and storage (CCS) has moved from being an interesting mitigation option, discussed mainly by academics, to one that has been taken up with enthusiasm by industrialists to the extent that we are now on the cusp of building commercial-scale plants to demonstrate the viability of this technology. Government-sponsored programmes, such as the development of nuclear fusion and the Apollo moon missions, have rarely delivered so quickly (the Manhattan project being a notable exception) and we should now address ourselves to overcoming the remaining hurdles: public acceptance, financial viability and outstanding regulatory issues.