



*European Economic and Social Committee*

**NAT/496**  
**Pro-climate investments**  
**after the crisis**

Brussels, 27 October 2011

**OPINION**

of the

European Economic and Social Committee

on

**The impact of the crisis on the ability of European firms to undertake pro-climate investments**  
(Exploratory opinion)

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Rapporteur: **Mr Zbořil**  
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On 30 November 2010, the future Polish EU Presidency decided to consult the European Economic and Social Committee, under Article 304 of the Treaty on the Functioning of the European Union, on

*The impact of the crisis on the ability of European firms to undertake pro-climate investments*

(exploratory opinion).

The Section for Agriculture, Rural Development and the Environment, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 6 October 2011.

At its 475th plenary session, held on 26 and 27 October 2011 (meeting of 27 October), the European Economic and Social Committee adopted the following opinion by 75 votes in favour, 3 votes against and 3 abstentions.

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## 1. **Conclusions and recommendations**

- 1.1 In late November 2010 – when the upcoming Polish EU presidency decided to consult the EESC on the impact of the crisis on the ability of European firms to undertake pro-climate investments, the question was aimed primarily at the effects of the European Emissions Trading System (EU ETS). Had the EU ETS – as the central pillar of the EU’s climate change policy – functioned adequately during the economic recession that the EU went through in 2009 after the financial crisis beginning in late 2008?
- 1.2 As the GHG and CO<sub>2</sub> emission data for 2009 and 2010 clearly show, it was the decline of business activity in 2009 that caused the reduction in emissions. Likewise, the economic recovery that set in during 2010 was accompanied by a surge in emissions. This would suggest that the price signals of the ETS are not sufficient to provide strong enough incentives to avoid carbon intensive processes and encourage long-term investments into more climate friendly technologies. Fortunately, the ETS was designed to be sensitive to such problems and is capable of being modified and revised to enforce a carbon price which will deliver reductions whilst compensating industries least able to adjust. In order to move towards a low-carbon economy, investments in green and resource-efficient technologies are required, instead of a decrease in industrial production.
- 1.3 The ETS was initially designed to optimise the costs of the mitigation process and is still considered the major emissions reduction instrument. The scheme requires urgent improvements in order to restore its effectiveness and environmental integrity.

- 1.4 Evidence is mounting that modifying the ETS cannot in itself ensure the successful implementation of a climate change policy that accelerates the transition to lower or no-carbon energy sources and sustains robust economic growth at the same time. By contrast, support for upfront investments in green and resource-efficient technologies in the European manufacturing industry and energy sector deserve much stronger public financial support. For instance the European Strategic Energy Technology Plan (SET Plan) and the EU's Cohesion Policy should deliver more support for development and deployment.
- 1.5 The EESC therefore recommends providing the necessary finance to ensure a significant and meaningful technology push. The funds required should be raised by using the EU ETS auctioning revenues of Member States. Furthermore, the EESC welcomes the Commission proposal to harmonise energy and carbon taxation in the EU. The EESC calls on Member States to dedicate the majority of additional revenues of carbon and energy taxation to industrial clean tech innovation.
- 1.6 Energy prices have been very volatile recently due to the ongoing turmoil in some of the OPEC countries. This development, together with the impact of the Japanese nuclear reactor accidents at Fukushima, has triggered a new turn in the debate on energy issues. Unilateral steps taken very recently by some Member States and speculative development in the commodity markets may have serious implications for the development of the EU energy sector and ought to be analysed in depth.
- 1.7 Impact assessment models used by the Commission (PRIMES, etc.) in the accompanying staff working document arrive at very optimistic results at the macroeconomic level which are at variance – if not in contrast – with findings of research at the microeconomic, i.e. operations/sector level. Macro assessments should therefore be reviewed and made compatible with bottom-up research before political conclusions are drawn.
- 1.8 The Committee urges Council, Commission and Parliament to ensure the full implementation of all existing carbon-related targets for 2020 and to reconsider tightening the 2020 GHG target to a 25% reduction based on achieved progress of the COP 17 negotiations and expected Community economic development on the way to the agreed 80-95% reduction by 2050. The Committee considers it essential to maintain roughly comparable economic conditions for global players. For such a deal to work, other developed countries would have to make comparable, parallel efforts, and other key players – mainly emerging economies – would have to agree on voluntary, higher emission reduction targets as part of a global, legally binding and comprehensive agreement on the post-Kyoto regime.
- 1.9 In the wake of the COP 15 and 16 it is more or less clear, that the climate change global negotiations have been changing course, opening much more room for the bottom-up approach. The EU Low Carbon Roadmap 2050 (COM(2011) 112) recognises this important change from setting new binding targets towards measures. It initiates a debate with the EU

member states, deciding if new targets have to be set or not. Both top-down targets and bottom-up technology innovation policy will have a role to play. The EU should not lose this opportunity for real progress and needs to set a positive example.

- 1.10 The post-crisis investment environment varies considerably across the EU and the situation is already getting worse with the foreseen second dip of the crisis. Public funding generally seems to be getting scarcer due to the ongoing debt crisis which calls for greater fiscal restraint. The SME sector will be more vulnerable to such changes as it depends more heavily on bank financings than larger corporations, which have access to the capital markets.
- 1.11 A new and vital wave of investment in infrastructure has not happened so far. Power and gas infrastructures should receive considerably more attention, especially in view of the single European energy market and require more extensive, deployment of RES. Without fully functional and interconnected grids, the chance for progress will be seriously impaired.

## 2. **Introduction, background**

- 2.1 The European Commission Communication on *Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage*<sup>1</sup> sets out the various options for achieving the new 30% target within the ETS (in sectors covered by the EU Emissions Trading Scheme) and other sectors (primarily transport, built environment and agriculture). As the European Commission's Communication does not analyse the impact of the economic crisis on the ability of European businesses to undertake additional pro-climate investments, the Polish presidency has proposed this issue as the subject of an EESC opinion.
- 2.2 It is widely recognised that mitigating CO<sub>2</sub> emissions will not be an easy task and that there will be no quick solutions given continued population growth and high levels of energy scarcity in developing countries. Another key factor is the transition process away from fossil fuel-based power, given supply security issues. It could be argued that the Copenhagen Accord and its successor the Cancún agreements abandon the concept of “legally binding targets”, – reducing the likelihood for global cap-and-trade – in that they shift the time horizon to 2050 and stress the importance of technological developments and innovation processes. The Cancún agreement lists a number of important objectives, including the following three key aims:
- to establish clear objectives for reducing human-generated greenhouse gas emissions over time, to keep the global average temperature rise below two degrees;
  - to encourage the participation of all countries in reducing these emissions, in accordance with each country's different responsibilities and capabilities to do so;

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<sup>1</sup> COM(2010) 265 final.

- to ensure the international transparency of the actions which are taken by countries and ensure that global progress towards the long-term goal is reviewed in a timely way.
- 2.3 There is a broad consensus that setting an appropriate, generally accepted price on carbon is key to a successful climate change policy (William D. Nordhaus, *Economic Issues in a Designing a Global Agreement on Global Warming*). If the price of carbon is not set appropriately and is not generally accepted, it cannot have an incentivising effect. A realistic regulatory framework is required: incentivising mechanisms must work in practice to ensure that political decisions are effective. Therefore the EESC calls on the European Commission to present options to strengthen the EU ETS, and consistent measures in the non-ETS sectors.
- 2.4 There has been some success (at relatively low cost) in reducing greenhouse gas (GHG) emissions by improving energy/fuel efficiency, but technological reorientation and progress is the only way to sustain a gradual transition to a non-fossil fuel era. Even efficiency measures require the large-scale deployment of existing technologies and the development of innovative solutions (McKinsey Global Institute: *The Carbon Productivity Challenge: Curbing Climate Change and Sustaining Economic Growth*).
- 2.5 Energy-intensive industries have increased energy efficiency as a result of constant efforts to reduce operational costs. No operators will emit carbon dioxide just because they have free/abundant emission allowances. The consequences of personal consumption efficiency measures are less straightforward, due to the "rebound-effect", which refers to the psychological phenomenon that leads people to spend their saving as a benefit, e.g. increased domestic heating temperature after having taken effective efficiency measures. This effect can easily derail even the most daring efforts to improve efficiency.
- 2.6 Renewable sources of energy will certainly contribute to the emission reduction process, though possibly to a lesser extent than is often believed. Physical, spatial and socio-environmental constraints of currently available renewable technologies are sometimes not fully taken into account and overcoming them through technological innovation has financial implications. Improving the operational and cost efficiency of currently known renewables also constitutes a financial challenge which is being addressed in some member states, though not in others.
- 2.7 Three aspects must definitely be resolved and none of them is likely to be satisfactorily settled before 2020. Firstly, intermittent resources need a fully integrated EU-wide smart grid with limited capability to integrate power from intermittent renewable energy sources (RES) above the expected 35–40% share. However, it should be noted that the German decision to rapidly phase out its nuclear generating capacity has greatly stimulated action in this area. Secondly, such integration needs considerable accumulation capacity. Thirdly, a mature CCS technology is needed for wide implementation in the longer term should fossil fuels continue to be widely used as an energy source. Before solving these three critical issues, necessary

traditional back-up power with accompanying emissions are indispensable for the wider deployment of existing RES.

- 2.8 Improving efficiency in the electricity/heat generating processes is so costly that it is unlikely that it can be achieved in the current climate, dominated by fiscal restraint. Therefore breakthrough inventions will play an important part alongside the wide scale adoption and improvement of existing RES technologies in achieving the expected 80–90% reduction by 2050 (International Energy Agency; Energy Technology Perspective 2010).
- 2.9 Further energy efficiency improvements to manufacturing technologies would also play an important role. Both incremental and radical innovations are therefore required across the full spectrum of low-carbon technology options. Without such innovation and improvement, the rapid pace and massive scale of low-carbon energy deployment required to meet global energy demand and avert potentially catastrophic climate risks will prove all but impossible to achieve. This central innovation challenge must be tackled directly and proactively.

### 3. **Analysis of EU emissions data results; impact of the crisis**

- 3.1 The Commission document presents a collection of arguments which, assessed in isolation, suggest that meeting the ambitious mitigation target would be difficult but, achievable. Empirical EU emissions data from recent years must be set alongside the fact that renewables accounted for 61% of new electricity generating capacity in the EU in 2009. In reality, the variability of some RES sources make achieving a secure base load supply quite challenging in the short-term.
- 3.2 The Commission's assumptions are based on optimistic expectations of deliverables from the RES directive and from the action plans of individual Member States. Furthermore, the 20% increase in energy efficiency is taken for granted, although information from the Member States indicates substantially slower progress in some cases. When the key element of energy efficiency in power and heat generation is considered – which could be referred to as carbon intensity – delays and postponements of power plant retrofits are likely to become a serious problem and could lead to energy shortages. In addition, IEA analyses show that 80% of emissions from the global power sector are, in fact, locked in until 2020. Therefore, also investments in the next decade, especially in CCS technologies, are critical to a low-carbon future.
- 3.3 Expert analysts have estimated that in 2010, GHG emissions increased by 4% and the installations under the EU ETS reported an increase of 3.2%. In 2009, global emissions dropped by 1.1% in comparison with the year 2008: the EU (-6.4%), the US (-6.5%) and Japan (-11.8% without emissions trading) all reported decreases, while China reported an increase of 9.1% (Richard N. Cooper, Harvard University, Europe's Emission Trading System, June 2010; Christian Egenhofer, CEPS, Brussels, The EU ETS and Climate Policy Towards 2050, January 2011). It is obvious that the drop in emissions in developed countries between 2008 and 2009 was primarily the result of the

economic recession. The preliminary results from 2010 confirm that emissions levels rise and fall in tandem with the level of business activity.

- 3.4 The most troubling finding from a careful review of the EU ETS, the world's largest cap-and-trade system, is its failure to reduce substantially CO<sub>2</sub> or GHG emissions. Total European CO<sub>2</sub> and GHG industrial emissions had already been on a moderately declining trend since 1990, and extrapolating this trend to 2008 indicates that the ETS has reduced emissions by just two percent compared to projected levels without the EU ETS. Moreover, if the effects of the 2008-2009 financial meltdown and recession are taken into account, the data shows that the EU ETS has had little – if any – independent effect on European GHG emissions.
- 3.5 All in all, the drop in emissions in the 4th quarter of 2008 and throughout the year 2009, together with the increase in emissions which started in the 2nd quarter of 2010, must clearly be attributed to the onset (in late 2008) and end (in mid-2010) of the economic crisis. There is scant evidence that system changes had led to emission reductions in that period of time.
- 3.6 It is also important to note the fact that the industrial sectors have already taken outstanding, exemplary action: steadily reducing emissions by switching to more carbon-efficient fuels and taking effective measures to improve energy-efficiency. This process can be accelerated in the next trading period until 2020 if breakthrough new technologies in nearly all sectors under the EU ETS are developed and employed.
- 3.7 Some energy-intensive industries, such as steel, lime and cement for example, are approaching their physical limits of carbon efficiency and larger emission reductions in the near future may only be achieved through reducing production (Sustainable steelmaking, Boston Consulting Group, 2009).
- 3.8 It should be noted that carbon leakage is associated with specific levels of employment in industries subject to this phenomenon. The exact level of employment is different in the various Member States – the EU average is estimated at 3%, while in Poland, for example, the level of employment in these energy intensive sectors reaches 9.5%.
- 3.9 As set out above in point 2.4, technology development on a wide scale and the deployment of new technologies are the key elements to ensure GHG mitigation. All documents on this subject point to the unresolved issue of obtaining the necessary finance. The proceeds from the ETS are a possible, albeit distant and insecure, source of funding, but otherwise there is nothing tangible on the horizon. Even the current R&D and deployment programmes in the EU are insufficient; this is also true for the SET-Plan initiative, including carbon capture and storage (CCS) activities.
- 3.10 As a result of the recent turmoil and continued unrest in several OPEC countries, together with the Fukushima nuclear plant accident, attitudes towards global climate change

negotiations have clearly changed. These changes may even present a window of opportunity for a meaningful international agreement. The EU should also take note of the recent, very ambitious US innovation plan (The White House: Strategy for American Innovation: <http://www.slideshare.net/whitehouse/a-strategy-for-american-innovation>).

- 3.11 All these indicators point to the urgent need to consider structural changes that would facilitate and accelerate the transition to an economy based on new, low-carbon energy sources. Although some experts and politicians wish to explore gradually moving away from the cap-and-trade concept towards a carbon consumption tax the feasibility of introducing any new form of taxation hypothecated to pro-climate investment at a meaningful level across the EU (let alone globally) seems remote, it should be closely investigated in preparation for the next steps of the climate change negotiations. The EU ETS therefore is considered as the best option in the EU but will require significant and radical reforms.
- 3.12 The post-crisis investment environment varies considerably across the EU and the situation is already getting worse with the foreseen second dip of the crisis. Public funding generally seems to be getting scarcer due to the ongoing debt crisis which calls for greater fiscal restraint. In the private sector, the availability of corporate finance has so far remained relatively stable, particularly for export-oriented industries. But the ongoing crisis of the European Monetary System, pending regulation (Basel III and Solvency II) and a possible clouding of the economic outlook might well impair the availability of bank loans before long. The SME sector will be more vulnerable to such changes as it depends more heavily on bank financings than larger corporations, which have access to the capital markets.
- 3.13 Some specific renewables have recently experienced a rather dynamic development. Whether this boom is healthy and sustainable is another question worthy of detailed examination EU-wide and in the Member States. The financial impact of guaranteed tariffs on energy prices may lead to longer-term distortions. Furthermore, the sudden surge in RES will certainly require significant investment in transmission infrastructure to maintain the grid's reliability and safety.



- 3.14 This new and vital wave of investment in infrastructure has not happened to a sufficient extent so far. Power and gas infrastructures should receive considerably more attention, especially in view of the recent decisions in Germany to phase out nuclear energy by 2022. Without fully functional and interconnected grids, the chance for progress will be seriously impaired.

Brussels, 27 October 2011.

The President  
of the  
European Economic and Social Committee

Staffan Nilsson

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