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SKEMA Coordination Action
"Sustainable Knowledge Platform for the European Maritime and Logistics Industry"

SKEMA Policy Study

The EU action to include maritime transport emissions in the EU's GHG reduction commitment

(EU Emissions Trading Scheme, Phase III, 2013-2020)

This SKEMA policy study looks at different options for inclusion of shipping emissions in the EU's GHG reduction commitment that the EC explored. The recently launched consultation process by DG Climate Action has opened the debate about the global emissions from ships and their reduction. One possibility is that the sector is integrated in the EU Emissions Trading Scheme that will start its new Phase 3 in January 2013.

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The EU Emissions Trading Scheme, Phase III, 2013-2020

All industrial sectors of the knowledge economies have to contribute to the mitigation of negative effects on the environment. Recent policy initiatives on regional and global levels have achieved a great deal as more industries are monitored and regulated in terms of emitting greenhouse gases (GHG). In Europe, the EU Emissions Trading Scheme (ETS) is a major instrument of the EU policy to combat climate change. It represents the commitment of all Member States and the Commission to reduce greenhouse gas emissions, and being the largest international scheme for trading GHG emission allowances, it inspired other regions to launch their own trading schemes. The changes to the EU ETS that will be introduced in 2013 will make further progress and enhance its effectiveness.

I. The New Phase III: 2013-2020

The Commission adopted a new directive[1] in 2009 that amended the current EU ETS for Phase III, which will start on 1 Jan 2013. The new Phase III is characterised with a more stringent emissions cap, and while in Phase I and II the emissions cap was determined by the individual Member States, now in Phase III, it will be set at the EU-wide level.

The scope of the EU ETS will be extended to include new sectors and gas emissions: (1) CO2 emissions arising from petrochemicals, ammonia and aluminium sectors; (2) NOx from the production of nitric, adipic and glyoxylic acid, and pertroflurocarbons emissions from the aluminium sector; (3) capture, transport and geological storage of CO2 emissions.

The new Union-wide cap on allowances will be determined by using the average total quantity of allowances issued by Member States in Phase II, and then applying a linear emission reduction factor of 1.74% for each subsequent year. The free allocation of emission allowances is based on the so-called "Benchmarking Decision" and the Commission issued in April 2011 guidance and templates to facilitate the application of the harmonised allocation rules. The benchmarks are simply a threshold for the level of free allocation and they are developed per product, taking into account the number of allowances per historic output. This principle aims to reward operators that have reduced their emissions using most energy efficient technologies.

Auctioning is set to become the basic method of allocating allowances from 2013. In this case, all allowances that are not allocated free of charge will be auctioned by Member States. In November 2011, two joint procurement agreements

[1] See: Directive 2009/29/EC for improving and extending the EU ETS

entered into force. The first one is about the common auction platform that will be used by 24 Member States, accounting for 60% of the allowances to be auctioned. The second one concerns the procurement of an auction monitor that will survey all auctions conducted on all auction platforms. The European Investment Bank will facilitate the auctioning.

New entrants joining the EU ETS in 2013 will be able to benefit from free allocation of allowances from the new entrants reserve (with the exception of new entrants involved in power generation activities). Approximately 300 million allowances in the new entrants reserve will be available until 31 December 2015 to support the construction and operation of up to 12 demonstration projects for the environmentally safe capture, transport and geological storage of CO2, as well as demonstration projects of innovative renewable energy technologies.

From 1 January 2012, the aviation sector joined the EU ETS. It covers all flights arriving at or departing from any EU airport and will apply to carbon dioxide emissions only. This year will serve as a preparatory year for Phase III. In 2012, the emission cap is set at 97% of the average and for the period 2013-2020, it will be set at 95% for the sector. 85% of the allowances will be issued free of charge and only 15% will be auctioned in 2012. The aviation sector will have to comply with the same general reporting, monitoring and verification requirements as all the other sectors and will be subject to the same financial penalties. Additionally the aviation sector will be subject to strict penalties in case of non-compliance.

II. Including the maritime transport emissions

The matter being for debate at the moment is how to include the emissions from ships in the EU GHG reduction targets - whether to integrate the sector in the EU ETS (phase III) or to take separate measures. After the inclusion of the aviation sector in the EU ETS from January 2012, the development with the maritime sector will follow later in 2012 and 2013.

In January 2012, the Commission began an initiative of launching a public consultation process in order to shape a proposal for the inclusion of maritime transport emissions in the GHG reduction commitment[2]. Currently there is no universal regulation of GHG emissions from ships. The International Maritime Organisation introduced the Energy Efficiency Design Index (EEDI) in 2011 as a set of technical standards for improving energy efficiency of certain categories of new ships, which will lead to less CO2 emissions. However, the Index will be mandatory from 2015 and will reduce the CO2 ship emissions by 25-30% until 2030 compared to business as usual, while the EU commitment is for reduction of total GHG emissions by at least 50% below the 1990-level.

[2] The consultation is run by DG Climate Action

In this respect, the EU authorities are seeking to formulate international agreement on global measures to reduce GHG emissions from maritime transport. The European Climate Change Programme has established a working group to allow for a formal technical stakeholder consultation. Their suggestions for policy options are as follows:

1) Levy/Compensation fund

1.1 Mandatory EU Levy/Compensation fund – a levy could be set on fuel;
1.2 Industry-managed compensation fund with penalties – the maritime sector could be encouraged to set their own compensation fund to reach the objective set by the EU;

2) Emission Trading Scheme – this will require either an amendment of Directive 2003/87/EC[3] or an introduction of a new directive for an independent ETS. Shipping ETS could be linked to the EU ETS, as reporting of vessel emissions will be required. Options for allocation and use of allowances, including auction and transfer of revenues to a global fund once agreed will have to be considered.

3) Taxation on fuel or GHG emissions – a fuel-based tax will require an amendment of Directive 2003/96/EC on taxation of energy products or another legal instrument.

4) Mandatory ship-level emission reductions

4.1 Mandatory emission reductions per ship – it would be applied to each vessel based on vessel characteristics.
4.2 Mandatory emission reductions per ship with incentives – mandatory reduction targets would be applied to each vessel based on vessel characteristics. The credits could be tradable on the credit markets.

At the EU level, all transport modes are covered by emission reduction targets. Also there is an EC Regulation for internalisation of external costs from transport activities within the EU[4]. The international maritime activities are excluded from any EU emission reduction regulations or directives.

III. Emission reduction targets for the maritime transport sector

The consultation process that began in January 2012 based its questionnaire on a few major studies – the second IMO GHG study 2009; the CE Delft Report 2009 and DNV study about maximum abatement cost curve.

[3] Directive 2003/87/EC set out the foundation for the current EU ETS. It was amended by Directive 2004/101/EC; Directive 2008/101/EC; Directive 2009/29/EC and Regulation No 920/2010.

[4] See also Directive 2001/14/EC covering the railway industry's external costs; Eurovignette Directive (first version of 1999/62/EC) amended in 2006 and 2010 to shape the way to the "polluter pays" principle for the road transport.

The IMO study 2009 suggested technical and operational measures for the reduction of GHG emissions from ships. According to their analysis the maximum abatement potential of measures that are taken into account is between 210 and 440Mt of CO2 until 2020, which is 15-30% of the projected total emissions of vessels considered. They proposed a range of other measures that will reduce the CO2 emission further up to 1115Mt by 2020.

The CE Delft report 2009 provided in fact the technical support to the current EU action. The study concluded that all measures taken, the maximum abatement potential (a fuel price at $700/t and an interest rate of 9%) is to reduce total 2030 emissions by 27-47% compared to "no technology change" scenario. Considering that the 2030 emission estimates would be 1447Mt, the possible emissions reduction targets would be between 767Mt and 1056Mt.

The DNV study published in 2010 concluded that the CO2 emissions by 2030 can be reduced by 30% below baseline in a cost-effective way and by almost 60% if all identified measures are included.

In addition, the Commission considers that the GHG emissions from the EU shipping sector can be reduced by 40% (50% if possible) until 2050 compared to 2005-CO2 levels. These expectations will be reflected in a potential proposal from the Commission to include maritime emissions in the EU GHG reduction commitment, which will be produced after the consultation process is finalised.

IV. Legal aspects of the EU action

Although there is general agreement that the shipping sector needs to take significant measures in order to reduce the GHG emissions, some experts[5] still argue that a potential proposal from the EU authorities will have to consider relevant areas of the international law such as the United Nations Convention on the Law of the Sea (UNCLS)[6] before any finalisation. Issues such as port State measures; coastal State requirements, covering passing ships; the international law principles on extra-territorial jurisdiction; international cooperation efforts based on international trade law; effects on navigational rights; effects on international maritime trade will all have to be deemed and balanced in the EU proposal. Regulation on the shipping emissions will affect many aspects of the maritime activities.

The international status of the rules in the maritime sector makes any regional legislation more difficult to formulate, however, with the appropriate consideration of all relevant points and issues, the EU authorities will be in a position to make further progress.

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[5] See more at: www.emsa.europa.eu

[6] See more details at http://untreaty.un.org/cod/avl/ha/uncls/uncls.html

V. Conclusions

While the debate is still ongoing and the DG CLIMA takes into consideration the public opinions from the EU citizens, stakeholders, NGOs, institutions and public bodies, there is still possible for the shipping industry to influence the outcome of the EU action. Nevertheless, the solid emissions reduction commitment of the Commission would make any industry-led actions less effective. The White Paper for Transport 2011 clearly defined the goals of the EU authorities to cut transport emissions radically. The inclusion of the aviation GHG emissions in the trading scheme before the start of Phase III ETS is a significant signal to the maritime sector that similar initiatives will be undertaken in regards to the emissions from ships. Moreover, DG CLIMA has officially stated that if IMO do not take the necessary measures to regulate shipping emissions, the Commission will proceed with European initiatives.

Although the EU action to reduce emissions from ships may look more like a regional regulation, in fact it is not, as the EU authorities have partnerships with many international organisations and other governments. The EU ETS has a global impact on mitigating negative effects from industrial activities. The EU actions are in tune with the move towards more global actions and developing global legal framework from 2020. A global and more ambitious UN legal framework to cover all countries will be adopted by 2015.

In fact, the conference in Durban at the end of last year already began this new initiative with the agreement for introducing a new legal framework, which will be more ambitious and involving all countries. Another key achievement of this conference was the agreement to make the Green Climate Fund[7] operational for the developing countries.

As a result of these high level agreements and initiatives, the introduction of more stringent emissions caps seems to follow its natural course. Shipping emissions account for approximately 3% of the global CO_2 emissions and are expected to double by 2050 if no additional measures are taken now. Such measures will have to be taken, as they will also limit the consumption of fuel, and hence, reduce transport costs. Such measures could also boost industry-led technological developments, as there is a trend towards providing "low carbon" and intranet-monitored services. The introduction of emission reduction targets will have a profound impact on the industrial structure of the maritime sector. The energy efficiency will become the primary driving factor for the sector as shipping companies that are not prepared for this structural change will lose their competitive advantages.

While the maritime industry asks for the worldwide recognition of the emissions reduction targets, and the IMO focuses on the market-based measures, the EU authorities will proceed with their policy options already offered for discussion

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[7] The Green Climate Fund supports projects, programmes, policies and other activities in developing countries. More at: http://unfccc.int/cooperation_and_support/financial_mechanism/green_climate_fund

through the current consultation process. The European Legislation compelled the EU to take action if no international agreement was in place by the end of 2011. As a result, the Commission launched this consultation and the follow-up will be a final proposal for the inclusion of shipping emissions in the EU's GHG reduction commitment.

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