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EUROPEAN UNION

Specialist Editors: Dr Vincent J G Power, Jason Chuah

THE EU'S PLAN TO REDUCE AIR POLLUTION FROM SHIPS: PROGRESS AND OBSTACLES

Jason Chuah

It might be recalled by EU maritime lawyers that the Commission's Communication to reduce the emissions of air pollutants from seagoing ships was adopted by the Commission in November 2002.¹ The Communication contains a number of objectives, proposed actions and recommendations for bringing about such reductions over the next five to ten years. The Communication was published in compliance with Article 12 of Directive 2001/81 on national emission ceilings. That Article requires the Commission to report to the European Parliament and the Council by the end of 2002 'on the extent to which emissions from international maritime traffic contribute to acidification, eutrophication and the formation of ground-level ozone within the Community'. Further, the report 'shall specify a programme of actions which could be taken at international and Community level as appropriate to reduce emissions from the sector concerned'.²

As far as the Commission was concerned, the cost of reducing emissions from ships is considerably lower than that of further abatement on land.³ The strategy takes an integrated approach to the reduction of such pollution: integrated, in that it does not consider unilateral action by any one party (be it the EU, the Member State, the international community or the industry) to be sufficient. The list of actions recommended therefore encompasses the following.

International action

The Commission makes it plain in the strategy document that it will continue to assert its influence in the International Maritime Organization to push for tougher measures to reduce ships' emissions. It recommends to Member States that they should ratify and enforce MARPOL Annex VI as soon as possible and support a co-ordinated EU position on more stringent international standards on the emission of sulphur and NO_x⁴ by ships. The Commission also draws attention to the finding that

¹ Communication from the Commission to the European Parliament and the Council: A European Union Strategy to Reduce Atmospheric Emissions from Seagoing Ships (COM (2002) 595 final, vol I).

² Directive 2002/81 on National Emission Ceilings for Certain Atmospheric Pollutants (2001 OJ L309, 22).

³ Comparison of the environmental damage caused by different modes of transport is difficult; but if a comparison is to be had on the basis of sulphates emitted, a ship will release 30 to 50 times more sulphur per ton-kilometre than a truck and when diesel becomes even cleaner in 2005, the difference will increase to 150 to 300 times (source: www.ntm.a.se).

⁴ Sulphur dioxide and oxidized nitrogen can be converted into sulphate and nitrate particles (abbreviated as 'PM') which the EU Environmental Agency warned was a significant cause of cardio-vascular and cardio-pulmonary diseases and morbidity ('Environmental Signals 2004' Report <http://reports.eea.eu.int/signals-2004/en>).

ship emissions are estimated to contribute between 20 and 30 per cent to the air concentrations of secondary inorganic particles in most coastal areas.⁵

EU regulation on emission standards

On the same date of the publication of the strategy document, the Commission also put forward a proposal to amend Directive 1999/32 to limit the sulphur content of marine fuels marketed and used in the EU.⁶ The proposal is not without controversy given that the methodologies relied on by the Commission for working out the cost-benefit analysis are not without their critics. The Commission estimates that the combined costs, when the technical measures to reduce sulphur content are implemented between 2006 and 2008, are in the region of €1.1 billion a year. Whatever the criticisms are about the rather optimistic picture of costs, the Commission also faces the criticism that it is not entirely clear by how much the annual emissions would be reduced. The Commission estimates that by 2008, the reduction would be about 10 per cent if compared to the emission level in 2000.

The key proposals are of a technical nature. They call for:

- (a) the introduction of a 1.5 per cent sulphur limit on marine fuels used by all seagoing vessels in the Baltic, the North Sea and the English Channel in line with the limits recommended by MARPOL Annex VI,
- (b) the recommendation of a 1.5 per cent sulphur limit on marine fuels used by passenger vessels in regular service to or from any Community port, and
- (c) the amendment of existing provisions for marine distillates used by seagoing and inland vessels by introducing an 0.2 per cent sulphur limit (the limit will be lowered to 0.1 per cent by 2008) on fuel used by ships at berth⁷ in ports within the EU.

The proposal means that in order to achieve the standards in (c) above, the sale of marine gas oils with more than 0.2 per cent sulphur (and 0.1 per cent from 2008) will be banned. Further, the sale of marine diesel oil with more than 1.5 per cent sulphur will also be banned. Although some quarters were concerned that these measures went too far, the European Parliament at the proposal's first reading in June 2003 took the view that the measures were too timid. They voted almost unanimously to demand a stricter standard, insisting on a proposed reduction of 80 per cent in ships' emissions. In order to achieve this, the European Parliament proposed to bring forward the imposition of the 1.5 per cent limit by six months for the Baltic, North Sea and the English Channel seagoing traffic and to extend its application to ferry traffic in all EU waters. Additionally, by 2010 the limit shall also be applied to all southern sea areas (the Mediterranean and the North East Atlantic). The Parliament also envisions a second phase to its ambitious plans – the lowering of the limit to 0.5 per cent for all ships in northern European waters and for ferries in all EU sea areas, and from December 2012 for all remaining European sea areas. These limits would apply to ships registered anywhere in the world, regardless of what port they originate from.

The Parliament's text also provides for pilot trials to test and develop new technologies for abatement⁸

⁵ Proposal for a directive of the European Parliament and the Council amending Directive 1999/32/EC as regards the sulphur content of marine fuels: COM (2002) 595 final, 2002/0259 (COD) vol II.

⁶ *ibid.*

⁷ It should not be ignored that when a ship is berthed, it will still emit pollutants. Although the propulsion engines are shut off, the ship's auxiliary engines are still operational to ensure the refrigeration, lighting, pumps and other equipment remain powered. These auxiliary engines are usually powered by high-sulphur marine heavy fuel oil or in some cases, marine gas oil. These fuels will inevitably emit pollutants into the air. One possible solution would be for the ports to provide shore-side electric power to the ships to run their auxiliary engines. The solution is not without problems – modifications need to be made to portside facilities and the vessels own engines and electrical circuits. All this calls for finance – a difficult order in the light of the very financial resource centred industry.

⁸ A new technology which impressed the Parliament was the use of sea water to scrub the ships' exhausts. The scrubber transfers sulphur oxides from the exhaust gas to the water. Once the scrubbing is completed, the water is filtered to remove particulates which will be collected for disposal. The filtered water is channelled back into the sea where the sulphur goes into the solution as sulphate which is a natural component of sea water. Trials however are still ongoing.

and it would then be for the Commission subsequently to decide whether these abatement methods should be used as an alternative or complement to low-sulphur fuels. The recommendation was thus for the Commission to make proposals for further revision of the draft directive in the light of these pilot trials.

In August 2003, the Commission responded by rejecting the very ambitious standards recommended by the European Parliament,⁹ including, the recommendations to lower the limit from 1.5 per cent to 0.5 per cent, and the extension of the regions in which those requirements are to apply. On 28 June 2004, the EU environment ministers met as the Council of Ministers and a political position was taken supporting the Commission's original proposal.¹⁰ The Council, however, suggested that ships berthed in EU ports and inland waters vessels should be required to use fuel containing no more than 0.1 per cent sulphur from January 2010, instead of January 2008 as proposed by the Commission. The common position will now be subject to a second reading by the European Parliament. Given the vehemence and unanimity shown by the European Parliament in the first reading, it is likely that the Parliament would not yield too easily. If that were to occur, the matter will then be brought within the EU conciliation processes before the directive can finally be adopted.

As far as the emissions of NO_x and CO₂ are concerned, the recently adopted Directive 2004/26 lays down tighter standards for new non-road engines marketed in the EU. These engines include those used aboard vessels operating on inland waterways. The directive provides that these standards are to be gradually tightened over the time period of 2006 to 2014.

The Commission has also committed itself to laying down a proposal for the reduction of global emission standards of NO_x by the end of 2006, if the International Maritime Organization fails or omits to do so. The standards being looked at by the Commission are those which have been proposed by the US Environment Protection Agency.

EU Regulation on Economic Instruments

The Commission's White Paper on the Common Transport Policy¹¹ proposed the development of EU-wide charging systems for the infrastructure used by the maritime sector which would take into account the marginal social costs generated by the different modes of transport. This 'infrastructure charging system', in the maritime context, will be developed on the basis of ships' environmental performance, including atmospheric emissions of SO₂, NO_x, PM, and CO₂. The charging system, if introduced, will be based on a mechanism detailed in the Commission's framework directive published in conjunction with the White Paper for the computation of marginal social costs. The charge will then be applied to a per kilometre basis throughout the Exclusive Economic Zones of all Member States.

The Commission has also expressed an interest in the development of an emissions trading regime (or regimes) to achieve incremental reductions in ships' emissions in EU sea areas, particularly for NO_x. This is likely to be controversial and the Commission has made it clear that it must be first be demonstrated that such an emissions trading scheme can actually work before any work on the details is undertaken.

Voluntary action by the sector

The Commission intends to launch a new Clean Marine Award Scheme to publicize best practice in low-emission shipping amongst operators in the maritime sector. Also, the Commission will encourage the international bunker industry to supply significant supplies of low level sulphur¹² marine heavy fuel oil in states bordering SO_x Emission Control Areas and also to make available at

⁹ That said, the Commission did accept a number of minor recommendations made by the European Parliament (the Parliament having made about 40 suggested amendments).

¹⁰ It might be mentioned that Sweden was the only Member State which voted in support of the European Parliament's position.

¹¹ White Paper 'European Transport Policy for 2010: Time to Decide' (COM (2001) 370).

¹² 1.5 per cent.

all world bunkering ports sufficient marine fuel of any grade containing low levels of sulphur so as to supply ships destined for an SO_x Emission Control Area.

The Commission also wants port authorities in Member States to introduce voluntary speed restrictions and to provide incentives to ships to use land-based electricity or clean onboard power whilst in port.

Conclusion

The proposals from the Commission and the Council are welcome to the extent that they recognize the increasing levels of air pollution caused by ships and the importance of an integrated approach to controlling these emissions. However, there is much concern as expressed by the European Parliament that some of the measures simply do not go far enough; for example, the estimated reduction in SO_x envisaged by the Commission, even if taken optimistically, was only about 10 per cent from levels in 2000. On the other hand, it is not surprising that the Member States were not persuaded by the economic case for an 80 per cent reduction recommended by the Parliament. The road to the adoption of the different measures proposed is long and hard but it is encouraging to note that the EU is leading the way where the IMO, to a large extent, has been impeded by its own voting system.