

Mr Philip Owen,  
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B-1049 BRUXELLES

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Delivered via email

Dear Mr Owen,

In considering additional measures to reduce hydrofluorocarbon (HFC) emissions as part of its review of *Regulation (EC) No 842/2006 on Certain Fluorinated Greenhouse Gases*, the European Commission should include measures that cover HFC emissions from the maritime sector.

The 3 July 2012 letter to Commissioner Hedegaard from a coalition of environmental groups called for the new proposal to display the appropriate level of ambition by adopting subsector-specific “placing on the market” (POM) prohibitions for new HFC-based equipment. It also outlined the reasons why relying on economy-wide quantitative limits without subsector-specific POM prohibitions is inadequate. Subsector-specific POM prohibitions are the only way to ensure the elimination of HFCs where there are technically feasible, cost-effective, energy-efficient and safe alternatives available or expected to be available in the near future. We believe there is a strong case to include the maritime sector in such provisions.

There are only a very few ship types for which any barriers exist that could warrant an exclusion from a POM prohibition. Where the penetration rate is under 100%, there may be a need for clearly defined exceptions for discrete applications where alternatives are inappropriate but these exceptions need not be adopted until just before the POM prohibition is to take effect. This will allow the Commission plenty of time to engage in a thorough analysis of the subsector to ensure the exception is truly necessary.

We strongly urge the Commission to expand the application of containment (Article 3) and ensure the application of recovery measures (Article 4) to the maritime sector given the extremely high leakage rates (up to 200% i.e. the entire system requiring refilling twice within one year) from equipment in the current fleet of ships. The maritime sector was evidently excluded from the recovery provisions at time of adoption of the current regulation in 2006 in the belief that marine HFCs would be better addressed under an anticipated EU GHG maritime measure (Öko-Recherche, 2011). It is now clear that no such HFC provisions are being considered in the current work program and moreover any such legislation is unlikely to be forthcoming for some time. The IMO has also indicated to us that they have no plans to address HFCs at present. Importantly no technical barriers to applying containment and recovery to the maritime industry have been identified in the various

studies. For these reasons, the containment measures in the current F-Gas Regulation should be extended to the maritime sector and the recovery measures should be enforced on the basis of port State control so that all ships entering EU ports are captured (see attached annex). These measures are now long overdue and we urge the Commission to address this omission in the forthcoming proposal.

The benefits of tackling HFC emissions in the maritime sector are many. The application of containment and recovery measures to equipment already on the market will bring a 40% reduction in maritime HFC emissions by 2020 compared to BAU. Further, this will cost just €22/tonne (BIPRO, 2008) which is well under the feasible reduction cost threshold and lower than the average cost of €41/tonne for other the HFC reduction measures (Öko-Recherche, 2011). Leakage rates could be substantially lowered even in rough seas by the maintenance of basic requirements for air conditioning/refrigeration equipment and the training of at least one crew member in basic techniques (Öko-Recherche, 2011 and Ecofys, 2007). In addition to their climate benefits, subsector-specific POM prohibitions will have a positive effect on jobs (CE Delft, 2009). Finally, it should be noted that POM prohibitions are less expensive than applying containment and recovery measures and thus should be the primary measure to reduce HFCs in the EU.

We urge the Commission to provide leadership on this important climate issue.

Yours sincerely,



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Jos Dings, Director, Transport & Environment  
on behalf of the Clean Shipping Coalition



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Eva Filzmozer, Programme Director  
CDM Watch



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Clare Perry, Senior Campaigner,  
Environmental Investigation Agency

## ANNEX

### Part I: Technical provisions in relation to the maritime sector

Subsector-specific POM prohibitions could easily be adopted for the maritime sector, as the penetration rate of alternatives with no or lower GWP potential are growing quickly. While it was previously found that there were possible technical barriers to POM prohibitions (CE Delft, 2009), recent analyses have concluded that there are no longer any relevant technical barriers to the application of subsector-specific POM prohibitions to any vessel types (Öko-Recherche, 2011). The three primary subsectors of concern in the maritime sector are refrigeration in fishing vessels and air conditioning in passenger ships and cargo ships. In thinking about when to set a subsector-specific POM prohibition for these subsectors, the Öko-Recherche study found the following:

**Table 1: Penetration Rates and Abatement Costs of Alternatives in the Maritime Sector**

Subsector	Penetration Rate (2020)	Penetration Rate (2030)	Abatement Cost of Alternatives (tCO <sub>2</sub> -eq)
Fishing Vessels	90%	95%	€ 3.36
Passenger Ship AC	20%	90%	€ 35.00
Cargo Ship AC	100%	180%	€ 16.74

In other words, the Commission could adopt POM prohibitions for each subsector. For fishing vessels, NH<sub>3</sub>/CO<sub>2</sub> is a viable alternative that could achieve a 90% market penetration by 2020 and 95% market penetration by 2030. As a result, the POM prohibition for fishing vessels should enter into effect in 2020 sending clear signals to the markets to transform this subsector. Given that the penetration rate is under 100%, however, there may be a need for clearly defined exceptions for discrete applications where alternatives are inappropriate. These exceptions, however, need not be adopted until just before the POM prohibition is to take effect, which allows time for the Commission to engage in a thorough analysis of the subsector to ensure the exception is truly necessary. For passenger ship AC, potential safety concerns relating to using NH<sub>3</sub> as an alternative can be solved by using XP10, which could achieve 90% market penetration by 2030 (Öko-Recherche, 2011). Thus a POM prohibition in 2030 would also be appropriate for passenger ship AC, with the provision that certain clearly defined exceptions may be necessary for discrete applications. For cargo ship AC, the POM prohibition should enter into effect in 2020 since 100% market penetration is achieved.

### Part II: Legal analysis of port State control

With any new regulation of the maritime sector the question always arises as to what the appropriate regulatory subject should be as there are three options: EU-flagged vessels, vessels in EU waters or vessels calling at EU ports. There is no thorough analysis of this question in the available literature on HFC regulation. One report only considered the application of Articles 3 and 4 to EU-flagged vessels (BIRPO, 2008). Another report contends that regulation within port State jurisdiction is possible, stating “within port state jurisdiction UNCLOS provides for the possibility for states to adopt requirements as a condition for the entry of vessels into their ports,” but then concludes that HFCs in the maritime industry should be regulated under the general GHG emissions measures for

the maritime sector (Öko-Recherche, 2011). Our own analysis concludes that the regulation of all ships calling at EU ports is the most appropriate approach, as explained below.

#### Option One: EU-flagged vessels

The application of a POM prohibition and containment measures could easily be applied to EU-flagged vessels. It is unlikely that any significant re-flagging would occur simply because of a minor F-Gas requirement when the EU already imposes a large number of safety, environmental and labour requirements. The most onerous requirement imposed would be to train at least one crew member in basic maintenance techniques.

#### Option Two: Vessels in EU waters

The use of coastal State jurisdiction to apply the measures to all ships in EU waters presents substantial legal obstacles. In the Exclusive Economic Zone (up to 200 miles from shore), the EU has jurisdiction for the protection and preservation of the marine environment but it is generally limited to accepted international rules and standards established through the competent international organization (IMO). In territorial waters (up to 12 miles from the coast) coastal States have general jurisdiction except with regard to construction, design, equipment and manning standards. These standards could be impacted by a HFC regulation applying to the maritime sector and thus this type of jurisdiction does not form a feasible legal basis for action.

#### Option Three: All vessels calling at EU ports

There are no legal obstacles to the EU imposing F-Gas requirements on all vessels calling at EU ports. States have unlimited jurisdiction over all ships in port as long as the regulation is in accordance with the general principles of non-discrimination, good faith and non-abuse of right (United Nations Convention on the Law of the Sea, Article 211(3)).<sup>1</sup>

Thus in order to avoid any reflagging (the potential for this is small) and to ensure that HFCs are eliminated across Europe, the EU should use port State control to impose containment and recovery provisions on all ships calling at EU ports. This is especially important as the IMO has told us that they have no plans to address HFCs in the foreseeable future. In addition we understand that the Commission has not yet confirmed how they will deal with imports of HFCs into Europe, but adopting subsector-specific POM prohibitions and extending containment and recovery measures to all ships in EU harbours will send a strong signal that the EU will not allow imports of harmful HFCs once a POM prohibition is in place.

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<sup>1</sup> For a full and detailed legal analysis of the scope of port, coastal and flag State jurisdiction see Client Earth, Legal implications of EU action on GHG Emissions from the International Maritime Sector (November 2011), available at: <http://www.clientearth.org/reports/maritime-ghg-measures-briefing.pdf> and Davies, Plant, Cosslett, Harrop & Petts for BMT Murray Fenton Edon Liddiard Vince Limited, Study on the Economic, Legal, Environmental and Practical Implications of a European Union System to Reduce Ship Emissions of SO<sub>2</sub> and NO<sub>x</sub>, No. 3623, August 2000, commissioned by the European Commission, especially Annex 4 Legal analysis: prescription, enforcement and observance, available at: [http://ec.europa.eu/environment/enveco/taxation/ship\\_emissions/pdf/app4final.pdf](http://ec.europa.eu/environment/enveco/taxation/ship_emissions/pdf/app4final.pdf)