Consultation Response to "Developing the Emissions Trading Scheme"

The government must ensure that all emissions from aviation and shipping are covered under the UK ETS

June 2022

Executive Summary

The Government's announcements and subsequent consultation on how to make the UK ETS net zero compliant are welcome. The UK has already committed to reducing emissions from international aviation and shipping by including those emissions in its carbon budgets from 2033 onwards. However, since then no actual regulations have been introduced to achieve this, and so the proposals outlined in the consultation are good first steps. Unfortunately though, they don't go far enough.

The decision to exempt international shipping will exempt 60% of UK shipping emissions, forego revenues and fundamentally undermine decarbonisation efforts. The decision to continue awarding free allowances to airlines, and not including all departing flights, whatever the destination, in the ETS also undermine decarbonisation efforts.

Therefore, the UK's shipping ETS should include the UKs share - 50% - of international shipping emissions within the ETS. It should also ensure an appropriate ETS scope, by regulating all relevant greenhouse gases (GHGs), all ships above 400 GT and all ship types, not just those carrying cargo and passengers. In a similar vein, free allowances to airlines should be completely withdrawn from 2024, and all departing flights should have to surrender allowances for the emissions they produce, whatever the destination, regardless of the airline.

Overview

This submission summarises Transport and Environment (T&E's) views in response to the questions posed in the Developing the UK Emissions Trading Scheme (UK ETS) consultation. T&E is Europe's foremost sustainable transport think tank and environmental group. Additionally it also acts as the secretariat for a federation of almost 60 national organisations across the UK and Europe campaigning for greener transport. Our work has informed and influenced key national and European Union policies and we regularly brief UK Government Ministers and ministries, other officials and other key stakeholders on the steps needed to decarbonise transport. It has had a UK office since 2019.

T&E coordinates the International Coalition for Sustainable Aviation, which has observer status at the International Civil Aviation Organisation (ICAO); and is also an active member of the Jet Zero Council's SAF Delivery, commercialisation and zero-emission plane policy groups. T&E is also a founding member of the Clean Shipping Coalition, which has observer status at the International Maritime Organisation (IMO). It is also an active member of the European Sustainable Shipping Forum, which acts as an expert group advising the EU Commission on technical maritime issues.

As such, the answers in this response are limited to areas we have deep expertise in.

The UK ETS is currently based on the EU ETS, but that itself is flawed: meaning the UK ETS is also currently flawed. This consultation, and the UK Government's plans to upgrade the UK ETS and make it net zero compliant are to be welcomed. Putting a price on carbon emissions is a major tool in the drive to achieve the nation's target of net zero by 2050, however there are far too many loopholes in the current scheme to make it an effective tool. If a producer of greenhouse gases is required to pay for those greenhouse gases, then there will be a direct incentive to avoid producing them. The loopholes in the current scheme all boil down to the same thing: they distort the market meaning that producers do not have to pay, and therefore there is no incentive. These should be avoided at all costs.

Since the UK ETS is the primary tool for pricing emissions, a policy mechanism needs to be applied that will ensure a predictable and increasing price on carbon. This will encourage businesses, including airlines and ship owners and operators, to invest in zero carbon solutions. The UK ETS already has such a mechanism, in the auction reserve price. Currently, it is the Government's intention to withdraw this, however that would be the wrong move. Instead, it should not only be kept, but increased annually.

Aviation

It is now well known that sustainable aviation fuel (SAF) and zero emission aircraft (ZEA) will be the way to decarbonise the aviation industry, and that these should be underpinned with a strong carbon price. However, under the UK ETS so far, that has simply not happened. In the first year of the scheme, the Government gave UK-departing airlines more allowances - for free - than they needed to cover their emissions: in effect, the Government not only allowed the industry to pollute with impunity, but also directly subsidised the industry. 4.4 million allowances were handed out - for free - to airlines, but only 3.4 million were required to be returned, meaning 0.9 million "excess" allowances were distributed to airlines. If these excess allowances were sold on the secondary market, then this was in effect a direct subsidy of up to £72 million from the Government to the industry.

Furthermore, the UK ETS only covers a small percentage of UK aviation's carbon emissions. Not only has the industry been allowed to pollute for free on the carbon that is included under the scheme,

but most carbon emissions are not even in the scheme. In pre-pandemic years, 70%–80% of carbon emissions came from long-haul flights. Additionally, the majority of aviation's climate impacts come from the non-CO2 effects that planes cause. Applying a cost to **all** of the climate warming caused by airlines would act as a direct incentive for airlines to investigate and invest in net zero solutions.

Shipping

The UK government is taking a positive step forward by committing to including the shipping sector in its ETS. However, the decision to exempt international shipping will exempt 60% of UK shipping emissions, forego revenues and fundamentally undermine decarbonisation efforts. In April 2021, the government recognised its responsibility for regulating its share of international shipping emissions by including the sector within its Carbon Budget. Without following through and regulating these emissions under the UK ETS, the government will fail to achieve its emissions reduction targets.

Therefore, the UK's shipping ETS should include **its share - 50% - of international shipping emissions** within the ETS, and at least link its shipping ETS to the EU's. It should also ensure an appropriate ETS scope, by regulating all relevant **greenhouse gases** (**GHGs)**, all ships above **400 GT** and all **ship types**, not just those carrying cargo and passengers.

Specific Answers to Individual Questions

Auction Reserve Price

37) On what timescale should we look to withdraw the ARP: as soon as possible; as part of the introduction of a potential wider markets policies package; alongside the introduction of the net zero consistent cap; or another timescale? If another timescale, what timescale? Why that timescale?

ARP should not be withdrawn. The initial stages of the EU ETS shows there is a reason to be concerned about extremely low prices. ARP is a useful tool that provides policy certainty to businesses involved in the scheme. Instead of being withdrawn, it should be raised annually, meaning that businesses have a predictable price and a credible signal of government intent, and can plan accordingly. Doing so would fit in with the Government's own ambitions.

Using aviation as an example, the original Jet Zero Consultation suggested that a carbon price of £231/tCO2 would be needed in 2050 to for its "High Ambition" scenario. To achieve this using the UK ETS only, the auction reserve price would have to rise at a linear rate of £7.74 per annum. However, BEIS published a new set of carbon values in September, meaning that the assumed 2050 "high ambition" carbon price that the second Jet Zero Consultation used was £568. To achieve this using the UK ETS only, then the auction reserve price would have to rise at a linear rate of £20.22. T&E fully supports not only keeping the ARP, but increasing it annually (as previously suggested in this policy

paper). Forward guidance on these figures, announced soon, would provide airlines and shipping operators with the policy certainty they need to ensure sufficient investment in zero emission fuels.

Additionally, removing a minimum price on carbon would clearly not be the actions of a climate leader.

38) Should the ARP be replaced by another mechanism? (Y/N) If so, what type of mechanism should replace it and why?

No. The ARP is simple and easy to understand, and provides policy certainty.

Carbon Leakage

46) Do you agree with the conclusion of the study that risk of carbon leakage is minimal for the UK aviation sector under the current UK ETS scope? (Y/N) Please expand on your answer and give evidence where possible.

Yes, agreed.

Carbon leakage refers to a situation where production of a product may be moved abroad due to the increased costs that carbon policies impose. For physical products, like steel, this would mean a company relocating a factory from the UK to a country that does not have many, or any, carbon policies. For airlines, the core product is the transport of passengers from A to B, and therefore the risk of carbon leakage is almost non-existent.

A briefing by The European Court of Auditors previously highlighted that free allowances to aviation "support carbon-intensive air travel to the detriment of rail transport". Furthermore, the European Commission highlighted that "a significant risk for carbon leakage for aviation due to the ETS has not been substantiated due to its very nature (difficulties or even impossibility to change/divert route due to the very nature of the traffic)". This "undermines the effectiveness of the carbon price signal thereby removing incentives for aircraft operators to decarbonise their activities".

T&E published research in January 2022 that proved that the risk of carbon leakage (under the EU ETS) was low. This was then backed up by the Frontier Economics report which found that "there is minimal risk of a trade-off between strengthening abatement incentives and reducing carbon leakage": i.e that there was a minimal risk of carbon leakage under the UK ETS. Furthermore, the report concluded that free allowances simply act as a subsidy to airlines - which in turn simply distorts the market. The below chart, published by the Energy Systems Catapult, amply demonstrates that the carbon price applied to aviation is already the lowest of all the sectors they studied.

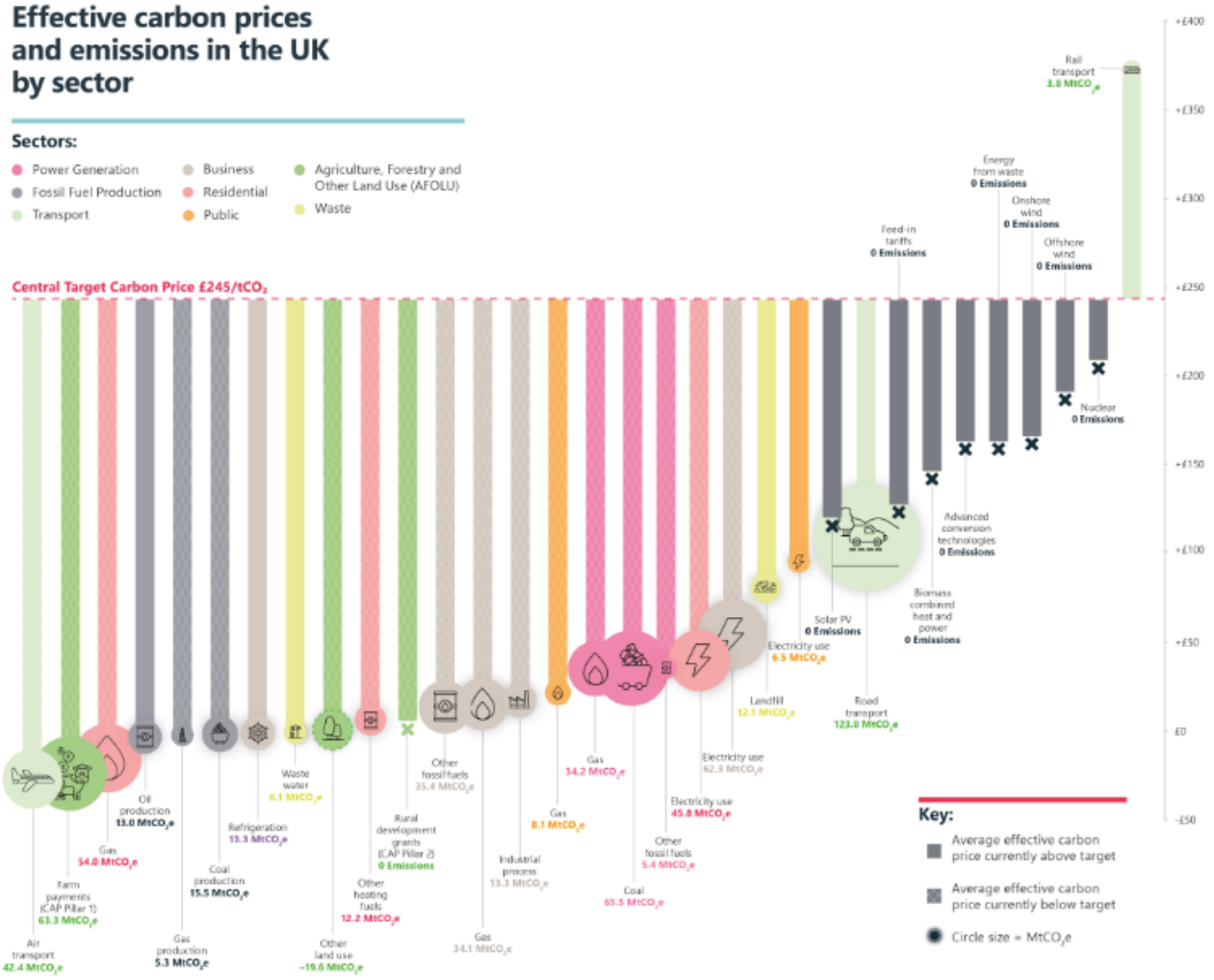


Figure 1: Effective carbon Prices and emission in the UK by sector

In conclusion, free allowances are being awarded to airlines for no economic or environmental reason.

48) Do you agree that if there are minimal risks of carbon leakage and competitiveness risks associated with carbon leakage from the UK ETS for the aviation sector, free allocation should be withdrawn or phased-out? (Y/N) Please expand on your answer and give evidence where possible.

Yes. There is no justification for awarding any free allowances to airlines.

49) Are there any other reasons for maintaining free allocation in the UK ETS? (Y/N) Please expand on your answer and give evidence where possible.

No. Allowances are commoditised products, meaning they have a value. Awarding free allowances to airlines is the equivalent of the British taxpayer subsidising airlines.

50) Please provide views on the three proposed options for aviation free allocation, as well as how the trajectory should be set, such as a linear or weighted approach?

Since it is well-established that there is minimal risk of carbon leakage, then free allowances should be withdrawn from 2024 onwards. There is no intellectually rational argument as to why the Government should keep on giving valuable commodities out for free post this date. Therefore, we question the three proposed trajectories.

Clearly the aviation industry will want the awarding of free allowances to continue for as long as possible, as they are a commodity with value. However, whilst the industry gets free allowances, it is less incentivised to decarbonise. This has been recognised in the European Parliament, which recently voted to end all free allowances for airlines from 2025.

51) Should the UK ETS Authority consider free allocation trajectory options that could maintain aviation free allocation entitlement past the first phase of the UK ETS (2030)? Are there other free allocation trajectories you think the Authority should consider? (Y/N) Please expand on your answer and give evidence where possible.

Absolutely not. The UK cannot allocate permits to pollute for free whilst claiming to be a climate leader.

TKM Reporting

55) How often should aircraft operators report their TKM data under the UK ETS? Alternatively, are there other appropriate data sources the UK ETS could use to monitor aviation activity? Please expand on your answer and provide evidence where possible.

T&E believes that TKM data should be open, transparent, and made publicly available, on a monthly basis - and ideally on a real-time basis. Commercially sensitive information should not be required.

56) How can we ensure free allocation entitlements, including in a transition to full auctioning, are proportionate and equitable for all UK ETS aircraft operators?

Indicative free aviation allocation amounts have already been communicated for 2023, and this consultation is consulting on changes that will be implemented by January 2024. To provide certainty to airlines, 2023 allowances should be kept at the levels already suggested, but then should stop after 2023. This will mean that all airlines start paying for the pollution they cause, and the more carbon emitted by an airline, the more they pay. This is both proportionate and equitable.

57) Are there ways we could mitigate any unintended impacts on regional connectivity that may arise due to changes to aviation free allocation, through the UK ETS or by other means? (Y/N) Please explain your answer and provide evidence where possible.

Market based schemes work best when there is no distortion, and in the UK ETS one tonne of carbon equals one allowance, therefore the route, size of aircraft, and other variables mentioned in the consultation document simply do not matter. The Government can enhance regional connectivity by ensuring that the rail, bus and ferry systems become increasingly better and better. Regional connectivity by plane should be reserved for flights that cross seas (eg Belfast-London) and less carbon intensive options such as sail & rail should be given government support.

Sustainable Aviation Fuel

58) How do we ensure that GHG emissions from SAF are accounted for appropriately with respect to aircraft operators' UK ETS obligations?

The SAF market in the UK is still in its infancy, and so the near-term policy focus should be to increase the amount of SAF supplied to UK planes. SAF costs will decline as production scales (due to learning effects and economies of scale), but for the next 15 years at least SAF will remain more expensive than (untaxed) fossil kerosene. Therefore there is no significant market for SAF without regulation, and the ETS should be part of that regulation.

However, it is also true that different types of SAF have different environmental effects. Only one pathway - green hydrogen combined with captured carbon - reduces net lifecycle emissions to zero. Consideration should be given as to how to reward those types of SAFs that are better environmentally than others.

Post 2035, SAFs should not be treated any differently to fossil jet fuel under the ETS. When burnt in a plane, SAFs produce the same amount of carbon as fossil jet fuel, and by 2035 policy should have started encouraging other propulsion technologies, such as hydrogen-powered planes.

One important point to clarify is that there should be minimum thresholds for fuel to qualify as a SAF. Should fuel not achieve a minimum of 70% lifecycle carbon saving, then it should not qualify as SAF, and therefore should not be rewarded in any way.

59) Should emissions reductions delivered through SAF supplied to comply with the proposed SAF mandate contribute towards reductions in UK ETS obligations for aircraft operators? (Y/N)

Yes, with a strict cut off date of 2035.

60) If so, how should supply of SAF and its emissions reductions be reported in a way that ensures SAF usage is only reported under one carbon pricing scheme, whilst minimising the administrative burden for aircraft operators?

There is no need to minimise the administrative burden for aircraft operators. The Government could simply streamline the SAF mandate and ETS systems to ensure that airlines only have to report on

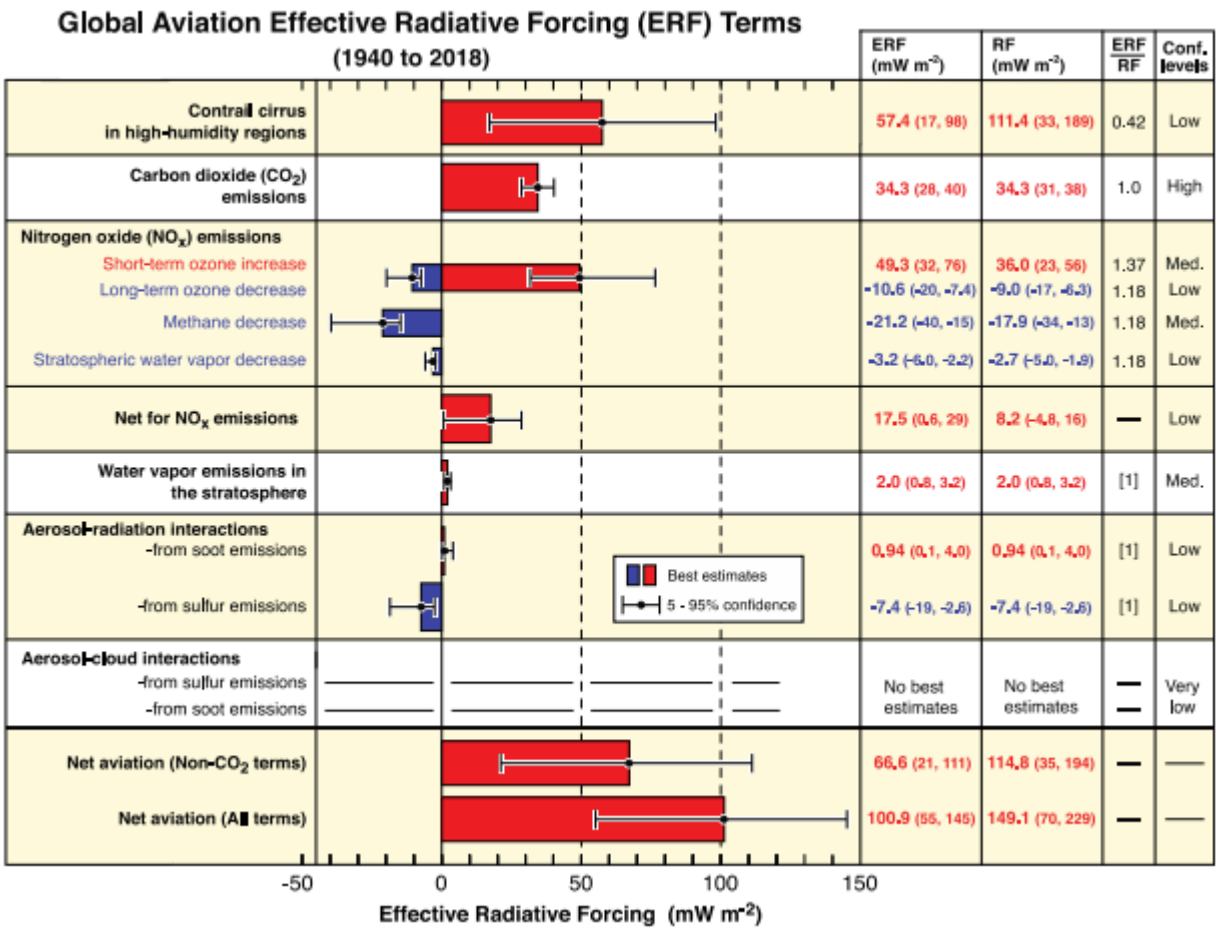
61) Do you agree that we should continue to ensure that UK ETS rules keep pace with the latest SAF sustainability criteria? This would include reflecting the latest amendments to the RTFO sustainability criteria. (Y/N) Please explain your answer.

Yes. The SAF mandate will have sustainability criteria in place, and this should be used as the criteria for qualifying SAF under the UK ETS.

Non-CO2 Impacts

62) Should we consider capturing aviation's non-CO2 impacts in the UK ETS? (Y/N) Please explain your answer.

Yes. It is now well-established that a significant amount of the climate impact that airlines cause comes from non-CO2 impacts. Whilst it is true that there is still not full scientific understanding of the exact size of the problem globally, it is also true that the evidence is incontrovertible that the problem is already very large, and the *potential* size of the problem is absolutely massive. This is demonstrated in the below table, taken from(page 28 of) the seminal EASA analysis of the non-CO2 impacts from aviation.



The potential range of the non-CO2 problem compared to the carbon problem is demonstrated by the bottom two bars.

63) How could we treat NOx in the UK ETS to reflect its differing climate impact compared to CO2?

64) How could we monitor aircraft NOx emissions, whilst seeking to minimise the additional administrative burden for airlines?

65) How could the UK ETS address additional non-CO2 aviation impacts, such as contrail cirrus? Please explain your answer and give evidence where possible.

66) Should we explore any other near term pricing measures, such as charges, to account for non-CO2 impacts whilst consideration is given to full incorporation into the UK ETS? (Y/N) How could these work in the UK ETS? Please explain your answer and give evidence where possible

Yes, near term pricing measures should be implemented. It is clear that further research is needed on how to price the effects of non-CO2 emissions and impacts, but it is also clear that putting a price on these impacts will encourage the industry to mitigate them. Research could, and should be funded by imposing

an additional non-CO2 charge on every allowance submitted, with the funds raised by this charge hypothecated directly back into research. The aim of that research should be to put in place a robust system within the ETS of putting a price on non-CO2 impacts (including contrails). There is already a UK precedent of imposing additional costs via the ETS: since 2013 UK power generators have been charged an additional £18 per allowance.

Outside of the ETS, other measures could, and should be considered. The aromatic content of jet fuel could be regulated (which would reduce the likelihood of contrails forming, and also improve local-to-airport air quality). Aircraft could be charged for flying through ice-supersaturated regions, or planes could simply be diverted away from these regions: a recent paper looking at flights in Japanese airspace concluded that diverting 1.7% of the flights could reduce the energy forcing from contrails by 59.3% with only a 0.014% fuel burn penalty.

Scheme Expansion

67) Do you agree that flights from the UK to Switzerland should be included in the UK ETS from January 2023? (Y/N) Please expand on your answer and give evidence where possible.

Yes. All departing flights should be included. There is no reason why certain flights should not have to pay to pollute, when others have to.

68) Do you agree that this aviation activity should be subject to the same free allocation rules and review outcomes as the rest of the aviation sector in the UK ETS? (Y/N) Please expand on your answer and give evidence where possible.

Yes, there should be no differentiation based on the end destination of a flight. All departing flights should be included in the UK ETS.

69) Do you agree that we should not adjust the current UK ETS cap to account for the inclusion of UK to Switzerland flights? (Y/N) Please expand on your answer and give evidence where possible.

Agreed.

70) Are there any other flights departing the UK mainland that are not covered by carbon pricing schemes that we should seek agreement with the destination state or territory to include in the UK ETS? (Y/N) Please expand on your answer and give evidence where possible.

To ensure fairness across airlines, and to ensure that all airlines are incentivised to reduce their emissions, all departing flights to any destination should be included in the UK ETS, including to Switzerland. Agreement from the destination country is not required under international law.

Maritime ETS Design

112) Do you agree with our proposal for calculating emissions, based on volume of fuel multiplied by the carbon intensity as per the most recent UK Government greenhouse gas reporting conversion factors? (Y/N) Please explain your answer considering:

- **Whether additional marine fuels need conversion factors developed**
- **What consideration needs to be given to blended fuels, or renewable and partly renewable fuels.**

Firstly, fuel volumes must be multiplied by CO_2 equivalent factors, rather than CO_2 factors, to take into account non-CO_2 greenhouse gases such as methane (CH_4) and nitrous oxide (N_20).

Furthermore, the conversion factor for LNG must be revised to account for different engines (low-pressure 4 stroke, low-pressure 2 stroke and high-pressure 2 stroke), which have varying emissions of unburnt methane from the engines (**methane slip**). Similarly, it is of huge importance to account for the climate impacts of methane on a 20 year basis (20-year **global warming potential, GWP**) . This is because the next 20 years will be key for achieving the Paris Agreement goals and the climate impact of methane is much higher compared to CO_2 over 20 years (87x) than over 100 years (30x), 100-year GWP being the traditional, but misleading accounting method.

It is positive that the conversion factors include methane and nitrous oxide, but the Department for Transport should devise a methodology to account for Black Carbon emissions, which account for up to 21% of shipping's climate impact.

113) Do you agree that our lead option to extend emissions trading to domestic maritime based on vessel activity is the most appropriate? (Y/N) Please explain your answer considering:

- **Whether you agree with the proposed definition of a domestic journey, and whether this creates any loopholes which need to be addressed.**
- **Whether the scheme should be applied to ship owners or ship operators.**

No. The proposal to exempt international shipping emissions is hugely problematic for the climate. Exempting international emissions would exempt 15 $MtCO_2$, or 60% of emissions from ships calling at UK ports, and dramatically reduce revenues generated, which are sorely needed to decarbonise the shipping sector. Similarly, the reduced scope will mean that the market signals needed for decarbonisation will apply to some domestic ships, such as ferries, which have limited means to reduce their emissions in the short term, but not internationally-operating ships, often run by larger companies (such as containerships) that have much greater financial and operational capacity to reduce emissions in the near future.

Assuming a carbon price of £80 (under the June 2022 ETS price), a revenue of £1.08 billion would be generated from an ETS covering 50% of international voyages. A domestic ETS would cover £600 million less. The government would therefore be foregoing yearly revenue worth 3 times the multiyear UKSHORE maritime investment programme. If all this revenue is invested in shipping decarbonisation, it could fund

innovating projects like those in the Scottish islands. Alternatively, it could prove a very useful funding source for the general Treasury budget.

Regulating international emissions has not only been proven to be legal, through the principle of Port State Control, but is in fact obliged by international maritime law, as the NGO Opportunity Green demonstrates:

> The UN Convention on the Law of the Sea (UNCLOS) imposes a positive obligation on states to protect and preserve the marine environment… Countries have nearly unlimited sovereign jurisdiction over their ports and thus can impose a very broad range of conditions on the entry of vessels into their ports… Once vessels voluntarily enter the port of a state party, they are thereby agreeing to submit to the conditions of entry to that port, and this can extend to where these conditions have extraterritorial consequences.

The UK's shipping MRV Regulation is a clear example of regulation of international shipping emissions. The UK must now build on the MRV with an international ETS.

The UK government recognised in its 6th Carbon Budget that it is responsible for its share of international shipping emissions. Exempting international voyages undermines the UK's obligations under the Paris Agreement to reduce emissions from all parts of our economy. It would also diverge from the scope of the UK's aviation ETS, where the UK regulates departing flights to the EU. The shipping ETS should regulate domestic emissions and half of emissions from voyages to and from non-UK ports.

Turning to the issue of responsibility for international shipping emissions, the IMO has proved itself incapable of setting the necessary climate ambition, so delegating the UK's responsibility for its shipping emissions to the IMO is akin to exempting these emissions from climate action. Moreover, the UK regulating its share of international emissions does not mean abandoning the IMO. On the contrary, the EU's decision to regulate its share of international shipping has in fact pushed the IMO to move quicker, setting a model for how decarbonisation policies can work.

On the technical details, the policy option of regulation based on activity is most adequate as it would avoid loopholes that would occur where fuel suppliers would be regulated. The regulated entity should be the ISM company, with an obligation for commercial operators to reimburse shipowners for payments (in the case that the shipowner and the commercial operator are different entities). This would align with the approach taken by the EU, thereby ensuring consistency for shipping companies, as well as improving enforceability.

114) Do you agree with the proposed threshold for the lead option of 5000GT? (Y/N) Please explain your answer considering:

• Whether there be a de minimis threshold within this, based on emissions or number of journeys, for example.

• What other thresholds could be used instead, or in the future.

No. The 5,000 GT is an arbitrary threshold. As well as exempting a significant amount of emissions, it runs the risk of creating competition problems for ships operating around this threshold: some shipowners might be incentivised to reduce crew spaces or spaces necessary for environmental and social protection so that their ships fit under the GT limit (this is because gross tonnage is about volume within a ship, not weight or size).

A threshold of 400 GT would be more suitable and is in line with all pre-2018 IMO legislation (EEDI, EEXI and the SEEMP). Shipowners have called for a 400 GT threshold and studies have shown that this would not cause administrative burden. In order to address concerns about administrative burden, the Government could implement a carbon threshold - where all ships above 400 GT report their emissions, but only those that report more than 1,000 CO2eq are subject to the ETS - or limit the reporting requirements for ships between 400 and 5000 GT.

115) Would applying MRV requirements on an activity basis be possible and practical within existing processes and data collection? (Y/N) Please explain your answer considering whether additional processes would be required to identify domestic journeys.

Yes. The MRV has proved itself successful since 2017 as a good basis for an ETS. However, to ensure environmental integrity, the MRV will need to be expanded to other ship types and vessels under 5,000GT. For other ship types, such as offshore vessels, a vessels' deadweight tonnage (DWT) can be used as a proxy for its cargo carried, in order to complete the reporting requirements in the MRV. For the sake of completeness, the MRV should also be revised so that shipping companies report and publish each vessel's GT and the type of fuel used.

116) How high do you consider the risk of gaming/non-compliance to be under the lead option? In your answer, please consider:
• How could it be designed out of the system
• Whether the risk is lower under either of the alternative options.

Given that all states geographically close to the UK (the EU and EEA countries) will implement an ETS for shipping within the next two years, the risk that companies game under an activity-based system is next to nothing.

However, if the government chooses the 'fuel supplied' approach, potential for gaming and non-compliance would increase exponentially. This is because it is extremely easy for ships to bunker fuel at non-UK ports (for example the large bunker ports of Antwerp or Rotterdam), then sail to the UK, thereby avoiding the UK ETS. The activity-based approach - at least for ships above 400 GT - is therefore the only sensible option.

117) Do you think there should be any specific exemptions to applying emissions trading to domestic maritime? (Y/N) Please explain your answer including what, if any, exemptions there should be.

No. Firstly, because the ETS serves to implement the polluter-pays principle, any exemption would be an unfair subsidy for polluters.

Secondly, there will be no incentive to move to cleaner vessels if the external costs of pollution remain unregulated. For ferries, an exemption would not make sense given that the majority of ferries (for example to the Scottish islands) operate under Public Service Obligations (PSOs), meaning (local) governments can subsidise the cost of the ETS. The ETS in this case would ensure that shipping companies are incentivised to improve their environmental performance to win these contracts.

Finally, ETS costs will only be a small percentage of normal fuel costs (if very important as a marginal price signal). So no companies or routes could complain that the ETS cost will be unmanageable.

118) Do you prefer one of the alternative options? (Y/N) Please explain your answer. It would be particularly helpful to understand:
• For the fuel supplied approach, whether MRV requirements are possible and practical within existing processes and data collection.
• For the hybrid approach, how the split between the two approaches would be determined, and how a mechanism to avoid 'double charging' of emissions could be designed.

All ships above 400GT should be included in the MRV under an activity-based system. For shpis under 400 GT there is a good case for including these ships under a fuel-supplied approach, as the risk of bunkering in other jurisdictions is very small for ships under 400 GT. Moreover, the fuel-supplied approach should be used for ship types not covered by the ETS (e.g. yachts, fishing, service and military vessels).

Wider Maritime Impacts

119) Do you consider that providing carbon pricing will drive decarbonisation in the domestic maritime sector as outlined above? (Y/N) Please explain your answer.

No. The ETS on its own will not drive decarbonisation to a significant extent. It is important for applying the polluter-pays principle and generating revenues, but it will not bridge the price gap between conventional and clean fuels.

It is therefore key that the ETS revenues are used appropriately, for example to subsidise clean fuels through (Carbon) Contracts for Difference, and that other policy instruments - such as a stronger clean fuel requirement under the UK's Renewable Transport Fuel Obligation (RTFO) - are put in place to improve the energy efficiency and/or reduce the GHG intensity of shipping fuels.

Moreover, if the government chooses the domestic geographical scope option, exempting 60% of UK emissions, the effect of the ETS on reducing emissions will be negligible. The ETS can help catch some 'low-hanging fruit' of emissions reductions, such as slower speeds and pushing some companies to invest in emissions-reduction technology, but only if international voyages are regulated.

120) Besides carbon not being fully priced into the market, what other market failures and barriers are present and what policies would be needed to support the UK ETS in decarbonising domestic maritime? In your answer, please consider how this may change over time.

The UK must present a policy framework that supports first-movers, while ensuring that green technologies can be scaled up as soon as possible.

For first-movers and the UK's green commitments, Contracts for Difference (CfDs) or Carbon Contracts for Difference (CCfDs) represent a golden opportunity to ensure the deployment of clean technologies. Fossil fuels will still be much cheaper than the clean alternative - marine synthetic or e-fuels - for the foreseeable future. This means that dedicated financial instruments like CfDs are needed to make sure e-fuels are deployed on ships and that e-fuel supply chains are built up to ensure economies of scale for these fuels.

Then, to ensure these clean technologies are scaled up urgently, a dedicated policy mechanism, such as an e-fuel mandate, is needed as a means to regulate the pathway to zero-emission shipping by 2050.

121) How might the UK ETS interact with existing and planned policies in the maritime sector, including any relevant non-decarbonisation policies?

An environmentally-ambitious ETS can interact with a wide range of other policies. In particular, the ETS will be instrumental in helping the UK achieve its commitments under the Green Lanes commitment by helping to create a business case for environmentally-friendly shipping, but only if the ETS regulates the UK's share of international voyages.

The ETS can also support the National Emissions Ceiling Regulations and Air Quality Standards Regulations by increasing the price of fossil fuels and encouraging a shift towards clean fuels and technologies, especially around port areas.

122) How would application of the UK ETS to the domestic maritime sector impact participants (including ship owners, ship operators, fuel suppliers) and consumers? In your response, please provide evidence where possible and consider:

- **Small and medium size operators**
- **Island communities**
- **Competitiveness impacts and carbon leakage risks**
- **Decarbonisation impact for different vessel types and maritime sub-sectors**

The ETS would have minor impacts on all participants because it will be marginal compared to the existing, day-to-day costs of the shipping industry. Studies have shown that the shipping ETS would have negligible impacts on consumer goods. The shipping industry is also very adept at passing on costs. This is evidenced by the wide fluctuations in bunker fuel prices, which are passed onto consumers.

Turning to the effect on shipping companies: the ETS costs should be paid by ship operators, incentivising them to operate ships more efficiently (the most recent charter contracts from BIMCO confirm that the charterers, or operators, should be responsible for costs from carbon markets). They will also have the incentive to charter more efficient ships, something which does not happen in the market. The effects on fuel suppliers will be limited, given that the ETS price will be too low to incentivise a fuel switch.

In relation to small and medium sized operators, the ETS costs are only a small margin of fuel costs, which operators are adept at passing on to consumers, meaning financially there will be no significant effects. This also applies to those island communities, where ETS costs will be a minor part of total ferry costs well within the normal range of change in fuel prices.

Looking at different vessel types, the ETS should increase the incentive for containerships - the ship type travelling at the highest average speeds - to slow down to save ETS costs. Both containerships and ferries may also have an extra incentive to plug in at berth. Other ship types will also have more of an incentive to invest in energy-saving technologies like exhaust heat recovery, wind power or air lubrication. It should be remembered that all emissions savings, especially in ports, mean better air quality and health for citizens.

Finally, in relation to competition, studies have shown that ETS do not lead to carbon leakage or competition issues. This is especially pertinent given the EU is in the process of establishing an ETS (which will also include EEA ports), meaning there is no risk of competition issues.

123) Have you identified any other impacts, distributional or otherwise, arising from this proposal, which have not been captured by other questions? (Y/N) Please explain your answer, including how any concerns could be addressed.

The government must consider how best to use the revenues generated by the ETS to accelerate shipping's long-delayed transition. Contracts for Difference may prove the most efficient financial tool to guarantee the financial viability of new fuels such as e-ammonia so the government should already set out a path to apply this instrument to the maritime sector.

Maintaining the auction reserve price is useful to solve operator/owner issues in shipping, where the operator of a ship will not necessarily be the owner of the entity responsible for payment of the ETS. A stable price will ensure clarity for each operator about how much they should be paying.

Finally, the ETS can accelerate hydrogen demand and renewable electricity production, ensuring a market for green hydrogen. To ensure this happens, the ETS should be as ambitious as possible, including an international geographical scope and a high price.

Further information on Aviation

Matt Finch
UK Policy Manager
Transport & Environment
matt.finch@transportenvironment.org
Mobile: +44 (0) 7881812398

Further information on Shipping

Jacob Armstrong
Sustainable Shipping Officer
Transport & Environment
jacob.armstrong@transportenvironment.org
Mobile: +32(0) 47083 5517