Decarbonising smaller vessels

Introduction

Thank you for responding to our call for evidence regarding the introduction of emission reduction measures for vessels with a gross tonnage below 400, as mentioned in the maritime decarbonisation strategy [opens in a new window].

Closing date is 8 September 2025.

Accessibility statement

Read our accessibility statement for SmartSurvey forms [opens in a new window].

Confidentiality and data protection

Department for Transport is asking for the views on our call for evidence regarding the introduction of emission reduction measures for vessels with a gross tonnage below 400, as mentioned in the maritime decarbonisation strategy.

View DfT online form and survey privacy notice [opens in a new window] for more information on how your personal data is processed in relation to this survey.

In addition we are asking individuals:

- their existing status regarding working in the maritime, inland waterways or similar sector and if relevant the area of your current or previous work in this area, to gain an insight of your personal knowledge
- if you own a privately used maritime vessel plus, if so, the type of vessel, in order to ascertain the effect to yourself of this work

Do not include personal information in your responses unless specifically requested.

Personal details

1. What is your name? Pamela Smith

2. What is your email? secretariat@bargee-traveller.org.uk

3. Are you responding on behalf of an organisation?

X Yes (Go to ‘Organisation details’)

Individual details

4. You:

currently work in the maritime sector, inland waterways or similar sector

have previously worked in the maritime sector, inland waterways or similar sector (Go to ‘Worked in the maritime sector’)

have never worked in the maritime sector, inland waterways or similar sector (Go to ‘Maritime vessel owner’)

Works in maritime sector

5. What area do you work in?

[Now go to ‘Maritime vessel owner’]

Worked in maritime sector

6. The area you worked in was?

Maritime vessel owner

7. You:

own a maritime vessel for private use

do not own a maritime vessel (Go to ‘Call for evidence’)

Vessel type

8. What type of vessel or vessels do you have?

[Now go to ‘Call for evidence’]

Organisation details

9. What is the name of your organisation? National Bargee Travellers Association

10. Your organisation has:

X 1 to 50 employees

11. Your organisation is:

X within the maritime sector

X within the inland waterways sector

associated with the greater supply chain of maritime

a sector similar to maritime

not associated with maritime and sectors associated with maritime: (After answering go to ‘Switching barriers’)

Maritime sector

12. Which part of the maritime, inland waterways or similar sector do you work in?

X Vessel owners (Go to ‘Traditional vessel purchasing’)

X Vessel leasers (Go to ‘Traditional vessel purchasing’)

Vessel operators (Go to ‘Traditional vessel purchasing’)

Vessel builders

Ports (Go to ‘Traditional vessel purchasing’)

Trade association (Go to ‘Traditional vessel purchasing’)

Trade representatives (Go to ‘Traditional vessel purchasing’)

X Inland waterway organisation (Go to ‘Traditional vessel purchasing’)

Recreational craft users (Go to ‘Traditional vessel purchasing’)

Government bodies (Go to ‘Traditional vessel purchasing’)

Zero and near zero emission fuels (producers and infrastructure) (Go to ‘Switching barriers’)

Energy networks (Go to ‘Power use’)

X Non-Governmental Organisation (NGO) (Go to ‘Switching barriers’)

Academics (Go to ‘Switching barriers’)

Harbours (Go to ‘Traditional vessel purchasing’)

Marinas (Go to ‘Traditional vessel purchasing’)

Naval architects

X Another type of organisation: (After answering go to ‘Switching barriers’)

This consultation response is from the National Bargee Travellers Association (NBTA). The NBTA is a volunteer organisation formed in 2009 that campaigns and provides advice and support for itinerant boat dwellers on Britain’s inland and coastal waterways (“Bargee Travellers”). This includes anyone whose home is a boat and who does not have a permanent mooring for their boat with planning permission for residential use. The NBTA is the only national organisation in Britain dedicated to upholding and defending the rights of itinerant boat dwellers. The NBTA has members on all the major navigation authorities' waterways and beyond. The NBTA deals with at least 200 individual cases each year.

The navigable inland waterway system in Britain is home to an estimated 15,000 to 50,000 Bargee Travellers. There are as yet no accurate statistics for the number of people living on boats either with or without a permanent mooring in the UK. There are at least 21 inland navigation authorities in the UK. Canal & River Trust is the largest, with around 80% of the UK's inland waterways. Other significant navigation authorities are the Environment Agency; the Broads Authority; the Conservators of the River Cam; the Middle Level Commissioners; Peel Holdings (the Bridgewater Canal) and British Waterways Scotland (trading as Scottish Canals). An unknown number of Bargee Travellers live in coastal harbours and estuaries, some of which are controlled by harbour authorities.

Building and retrofitting vessels

13. Do you build and retrofit vessels to meet zero or near zero emission required?

Yes, both build and retrofit

Yes, build only

Yes, retrofit

X No (Go to ‘Call for evidence’)

Don't know (Go to ‘Call for evidence’)

Clean technology supply chain

14. When building zero or near zero emission vessels, where does the majority of your clean technology supply chain for clean technologies come from?

Within the UK only (Go to ‘Zero or near zero vessel fleet’)

Outside the UK only

Both within the UK and outside the UK

Clean technology supply chain: outside the UK

15. Where outside the UK?

Zero or near zero vessel fleet

16. How many, if any, zero or near zero emission vessels:

	0	1 to 10	11 to 20	21 to 35	Above 35
have you built to date					
do you currently have on order to build					

If "above 35" state how many?

17. Currently your vessel fleet is:

- mainly standard builds
- mainly bespoke builds
- an equal split of standard and bespoke builds

18. Do you expect your fleet composition to alter due to the addition of zero or near zero vessels?

- Yes
- No (Go to ‘Zero and near zero barriers’)
- Don't know (Go to ‘Zero and near zero barriers’)

Fleet composition to change

19. How do you expect the composition of your fleet to change regarding zero or near zero vessels and why?

Zero and near zero barriers

20. What, if any, are the barriers you face in building zero or near zero emission vessels?

Facilities

Skills

Major integration challenges

Cost

Supply chain constraints on low emission technologies

Lack of demand

Another reason:

21. What, if any, alterations are needed at your shipyard to build a greater number of zero or near zero emission vessels?

22. What, if any, types of investment are needed at your shipyard to build a greater number of zero or near zero emission vessels?

Zero or near zero emission vessel usage

23. Your zero or near zero emission vessels are for use:

within the UK only

outside the UK only

both equally within and outside the UK

both but mostly within the UK

both but mostly outside the UK

UK use

24. What percentage of the vessels that you produced were used in the UK over the 2023 calendar year?

25. Do you expect this to change in the next:

	Yes	No	Don't know
5 years			
6 to 10 years			

Change how?

Design

26. How long does it take to design a zero or near zero emission vessel in months?

Less than 3 months

3 up to 6 months

6 up to 8 months

Above 8 months:

27. How long does it take to retrofit an existing vessel to be zero or near zero emission vessel in months?

Less than 3 months

3 up to 6 months

6 up to 8 months

Above 8 months:

28. How long does it take to design a zero or near zero emission vessel propulsion system in months?

Less than 3 months

3 up to 6 months

6 up to 8 months

Above 8 months:

29. How long does it take to build a zero or near zero emission vessel propulsion system in months?

Less than 3 months

3 up to 6 months

6 up to 8 months

Above 8 months:

30. Building a zero or near zero emission vessel propulsion system is:

faster than building a traditional propulsion system

slower than building a traditional propulsion system

the same speed as building a traditional propulsion system (Go to ‘Traditional production’)

Build speed

31. How much is the percentage difference to build a zero or near-zero emission vessel propulsion system compared to a traditional vessel propulsion system’?

Traditional production

32. How long does it take you to build a traditional propulsion system in months?

Less than 3 months

3 up to 6 months

6 up to 8 months

Above 8 months:

Zero or near zero designing and building experience

33. Do you have any experience of designing and building zero or near zero emission technologies?

Yes, designing and building

Yes, designing only

Yes, building only

No (Go to ‘Your criteria’)

Don't know (Go to ‘Your criteria’)

Experience

34. What zero or near zero emission technologies experience do you have?

Your criteria

The refresh to the National Shipbuilding Strategy estimated that in 2020 ship and boat building, repair and maintenance contributed £2.8 billion in value added to the UK economy, from a turnover of around £6.1 billion and accounted for around 42,600 jobs. There were 1,685 registered business in this industry, 99% of which were Small and Medium Enterprises (SMEs).

The UK shipbuilding sector has many strengths, including the design and integration of warships, complex vessel design, leisure vessels, and vessel conversion1. Whilst not all of these shipbuilding activities may be relevant for this call for evidence, the opportunity to capitalise on this turning point in domestic shipbuilding is clear

In this section we are looking to understand the market for shipbuilding in the UK. We recognise that a large proportion of the vessels built in the UK are exported. We are committed to maintaining and improving the competitive advantage of the UK as a shipbuilding maritime nation, as such it is important for us to have a strong understanding of the capacity and demand for zero-emission shipbuilding in the UK.

35. The criteria you meet is as a vessel:

owner

operator

charterer

leaser

none of the above (Go to ‘Call for evidence’)

Traditional vessel purchasing

36. Your preference when purchasing traditionally fuelled vessels is:

to buy the vessels new

to buy the vessels second hand

neither a preference to buying new or second hand vessels

What factors do you consider when making this decision?

37. Your preference when purchasing zero or near zero emission vessels is:

to buy the vessels new

to buy the vessels second hand

neither a preference to buying new or second hand vessels

What factors do you consider when making this decision?

38. Overall the vessels in your fleet are built:

within the UK (Go to ‘Production reasoning’)

outside the UK

both equally within and outside the UK

both but mostly within the UK

both but mostly outside the UK

in an unknown areas or areas

Countries of production

39. What country or countries are your vessels built within?

Production reasoning

40. Why did you choose to have it built there?

Retrofitting of vessels

41. Will you be able to retrofit your vessels with zero or near zero emission capability?

Yes, all of our vessels (Go to ‘Retrofitted technology’)

Yes, some of our vessels (Go to ‘Percentage of zero or near zero emission fleet’)

No, none of our vessels

Don't know (Go to ‘Retrofitted technology’)

Not able to retrofit vessels

42. Why not?

[Go to ‘Technological readiness’]

Percentage of zero or near zero emission fleet

43. What percentage of your fleet is zero or near zero emission capable?

Retrofitted technology

44. What, if any, technology will be retrofitted in these cases?

45. Outline what, if any, steps you have you taken to understand the:

opportunities of retrofitting

challenges of retrofitting

46. Have you ever disposed of a vessel?

Yes

No (Go to ‘Fuels and infrastructure’)

Don't know (Go to ‘Fuels and infrastructure’)

Vessel disposal

47. How did you dispose of your vessels?

Scrappage within the UK

Scrappage outside the UK

Selling within the UK

Selling outside the UK

Another way:

48. What was the main motivation for getting rid of the vessels?

Fuels and infrastructure

We recognise that in order to implement policies to decarbonise the domestic maritime fleet, the infrastructure to support green technologies must be developed alongside. We need to improve our understanding of the current capacity for zero or near zero fuels and electricity, and how much this will need to be scaled up to meet future demand.

49. How much:

low carbon fuel would be required to decarbonate your fleet including which fuel you require

energy would it take to decarbonise your fleet including which energy source you require

50. You currently operate:

electric vessels [Answer ‘Electric charging’]

fuel vessels [Answer ‘Bunkering’]

hybrid vessels [Answer ‘Charging and bunkering’]

Electric charging

51. Will you, in the future, tend to charge at the same location?

Yes

No

Don't know

Why?

52. How much electricity would you require to charge a zero or near-zero emission vessel (in megawatts)?

53. How much choice do you have over where you charge?

Full choice

Some choice

No choice

Don’t know

Why?

54. What factors, if any, influence where you charge?

55. How, if at all, do infrastructure considerations influence investment decisions in reducing emissions?

Bunkering

56. Do you tend to bunker at the same location?

Yes

No

Don’t know (Go to ‘Bunkering for zero or near zero vessels’)

Bunkering reasoning

57. Why?

Bunkering for zero or near zero vessels

58. How much fuel would you require to bunker a zero or near-zero emission vessel (in tonnes)?

Charging and bunkering

59. Do you tend to charge and bunker at the same location?

Yes

No

Don't know (Go to ‘Zero or near zero: fuel and electricity’)

Location use reasoning

60. Why?

Zero or near zero: fuel and electricity

61. How much:

fuel would you require to bunker a zero or near-zero emission vessel (in tons)

electricity would you require to charge a zero or near-zero emission vessel (in megawatts)

Emission regulation

62. Are you currently subject to any emission regulations while operating your vessels?

Yes

No (Go to ‘Emission reporting’)

Don't know (Go to ‘Emission reporting’)

Type of emission regulation

63. Which emission regulations?

Emission reporting

64. Do you currently report your vessel emissions?

Yes (Go to ‘Emission report authorities’)

No

Don't know (Go to ‘Reporting emission: benefits and costs’)

Not currently reporting

65. Why not?

66. Do you intend to report your vessel emissions in the future?

Yes

No (Go to ‘Reporting emission: benefits and costs’)

Don't know (Go to ‘Reporting emission: benefits and costs’)

Future emission reporting

67. When do you plan to start reporting your vessels emissions in the future?

This year

Next year

In the next 5 years

In the next 10 years

Above 10 years:

[Now go to ‘Reporting emission: benefits and costs’]

Emission report authorities

68. Who do you report your vessel emissions to?

69. Do you use standard methodology when calculating your emissions?

Yes

No (Go to ‘Emission calculation’)

Don't know (Go to ‘Emission calculation’)

Methodology used

70. What methodology?

Emission calculation

71. How do you currently calculate your emissions?

Reporting emission: benefits and costs

72. What do you estimate, if any, are the:

benefits of reporting vessel emissions in the next 5 years

costs of reporting vessel emissions in the next 5 years

Traditional fuelled vessels

73. What in your view is the average cost, to the nearest £1,000 pounds, to buy a new traditionally fuelled vessel?

74. In comparison to a new traditional fuel vessel you think it would cost:

more to buy a new zero or near-zero emission vessel

less to buy a new zero or near-zero emission vessel

the same to buy a new zero or near-zero emission vessel (Go to ‘Second-hand traditionally fuelled vessels’)

Cost comparison

75. How much, as a percentage, do you expect the difference to be?

Second-hand traditionally fuelled vessels

76. What in your view is the average cost, to the nearest £1,000 pounds, to buy a second-hand traditionally fuelled vessel?

77. In comparison to a second-hand traditional fuel vessel you think it would cost:

more to buy a second-hand zero or near-zero emission vessel second hand

less to buy a second-hand zero or near-zero emission vessel second hand

the same to buy a second-hand zero or near-zero emission vessel second hand (Go to ‘Retrofitting traditional fuelled vessels’)

Second-hand cost comparison

78. How much, in percentage, would you expect the difference to be?

Retrofitting traditional fuelled vessels

79. As a percentage of the value of a vessel, how much approximately would it cost to retrofit a traditionally fuelled vessel to:

Answer

eliminate pollutants

eliminate greenhouse gases

Operating costs

We are asking about the operating costs of:

- traditionally fuelled vessels
- zero or near-zero emission vessels

When answering regarding operating costs we are ask that you are as accurate as possible although estimates will also be accepted. Figure supplied should be based on the operating costs incurred by a single vessel of either or both makes.

We are specifically interested in the calendar year of:

- 2023 period firstly
- 2022 period secondly

However if you do not have either of these dates similar yearly costs from other times may be entered.

80. Your operating answers are set for:

the 2023 year period

the 2022 year period

another yearly time period

81. You have operated a:

zero or near-zero emission vessel (Answer ‘Operating costs: percentages and factors’)

traditional fuelled vessel (Answer ‘Operating costs: other percentages, factors and emissions’)

Operating costs: percentages and factors

82. What is the percentage cost of:

electricity compared to the operating cost of the vessel

insurance compared to the operating cost of the vessel

registration compared to the operating cost of the vessel

mooring compared to the operating cost of the vessel

berthing compared to the operating cost of the vessel

staffing compared to the operating cost of the vessel

taxation compared to the operating cost of the vessel

maintenance compared to the operating cost of the vessel

any other costs compared to the operating cost of the vessel

83. What 3 factors do you think, if any, contribute the most significantly to overall operating costs of a zero or near-zero emission vessel?

First:

Second:

Third:

Operating costs: other percentages, factors and emissions

84. What is the percentage cost of:

fuel compared to the operating cost of the vessel

insurance compared to the operating cost of the vessel

registration compared to the operating cost of the vessel

mooring compared to the operating cost of the vessel

berthing compared to the operating cost of the vessel

staffing compared to the operating cost of the vessel

maintenance compared to the operating cost of the vessel

any other costs compared to the operating cost of the

vessel

85. What 3 factors do you think, if any, contribute the most significantly to overall operating costs of a traditionally fuelled vessel?

First:

Second:

Third:

To develop zero or near-zero policies, we need to have a comprehensive understanding of the emissions created by the current fleet.

We hope that by understanding the makeup of the current fleet, we can assess where regulatory interventions might be most impactful on emissions reductions.

When replying, GHG emissions should be provided in tonnes of CO2 equivalent (CO2e). If alternatively you use other measures then state what this measure, and the rationale for using this metric, is.

With regards air quality we ask that you use the metrics recommended in the Transport Appraisal Guidance Unit A3: Environmental Unit [opens in a new window].

86. What are the annual average emissions created by each of your different vessel types (in tonnes of CO2 equivalent (CO2e))?

87. How, if at all, does the aging of a vessel impact the emissions created (if possible provide specific examples)?

88. What is the annual average fuel consumption for each of your different vessel types (in tonnes of CO2e)?

To continue you must be vessel operator, vessel leaser, vessel owner, ship builder or academic.

89. You are a:

- vessel operator
- vessel leaser
- vessel owner
- ship builder
- academic organisation

another type of organisation (Go to ‘Switching barriers’)

Technological readiness

Through the responses to the course to zero consultation we have received evidence on the different types of technologies available and the potential they have for different types of vessels. We understand that there are varying technological needs for different types of vessels, some of which are closer to widescale commercial deployment than others.

We understand that there are differing technological needs for different types of vessels, some of which are closer to widescale commercial deployment than others.

We would like to understand what you think are the current timelines for rolling out zero or near-zero emission vessels in different sub-sectors.

The answers supplied should be based on the use by a single vessel of either or both makes.

90. What do you anticipate, if any, are the unintended consequences of retrofitting your vessel to zero or near-zero emission capable propulsion systems?

91. Do you believe it is currently possible to use technological solutions for reducing emissions for vessels within your sub-sector in the next 5 years?

Yes, for new builds and retrofitting (Go to ‘Negative consequences for new builds and retrofitting’)

Yes, but for only retrofitting (Go to ‘Negative consequences of retrofitting’)

Yes, but for only new builds (Go to ‘Negative consequences of selection’)

No

Don't know (Go to ‘Technology emission solutions in the next 5 years’)

Technological solutions for reducing emissions reasoning

92. Why do you think it is not currently possible to use technological solutions for reducing emissions?

[Now go to ‘Technology emission solutions in the next 5 years’]

Negative consequences of retrofitting

93. What do you anticipate, if any, are the unintended negative consequences of retrofitting your vessel to zero or near-zero emission capable propulsion systems?

[Now go to ‘Technology emission solutions in the next 5 years’]

Negative consequences of selection

94. What do you anticipate, if any, are the unintended negative consequences of selecting zero or near zero emissions capable propulsion systems for your new build vessel?

[Now go to ‘Technology emission solutions in the next 5 years’]

Negative consequences for new builds and retrofitting

95. What do you anticipate, if any, are the unintended negative consequences for:

new builds

retrofitting

Technology emission solutions in the next 5 years

96. What type of technological solutions for reducing GHG emissions do you anticipate will be in the next 5 years for vessels within your sector?

Fully Electric

Battery electric with an extender

Hybrid

Zero or near zero fuels

Other technologies:

97. In reference to the technological solutions you previously selected for reducing emissions in vessels what do you anticipate will be the associated:

vessel type

gross tonnage

operating sector

98. In your view the technology of:

	is available to purchase	is available to use	not available	don't know is available
fully electric:				
electric with an extender:				
hybrid:				
zero or near zero fuels:				

If "not available" when do you think it will be, in years, available?

99. Regarding:

	purchased this already	used this already	have this on order	have not had any contact with
fully battery electric technology you have:				
battery electric with an extender technology you have:				
hybrid technology you have:				
zero or near zero fuels you have:				

If 'have not had any contact with' why not?

100. What, if any, other:

technology solutions are you considering to reduce your emissions and wider environmental impacts

operational solutions are you considering to reduce your emissions and wider environmental impacts

Power use

101. What is the total power capacity of your site of operation currently (in megawatts)?

102. What, if any, is the spare power capacity of your site of operation currently?

We are asking you to specify the time of day during which your site experiences the highest energy demand, as well as the corresponding peak power usage during that period.

103. What, if any, is the peak:

period of power, in 24 hour clock time, for your site of operation currently

usage amount of power, in megawatts, for your site of operation currently

104. Do you support the production of zero, or near zero, emission fuels?

Yes

No

Don't know

Upgrading power abilities

105. Are you planning upgrading your capabilities in these areas?

- [ ] Yes
- [ ] No (Go to ‘Switching barriers’)
- [ ] Don't know (Go to ‘Switching barriers’)

Upgrading costs

106. What would be the additional cost, in Great British pounds (GBP), of upgrading your existing infrastructure to support near zero, or zero emission fuels?

107. What are the expected timelines for upgrading these capacities?

Additional cost of infrastructure

108. What would be the additional cost, in GBP, of upgrading your existing infrastructure to support energy carriers?

109. What would be the expected timelines for upgrading this capacity?

Zero or near zero: production and storage

110. What, if any, is your current ability for:

producing zero or near-zero emission fuels at your operating site currently

storing zero or near-zero emission fuels at your operating site currently

Switching barriers

111. What, in your view, are the barriers to switching to zero or near-zero emission vessels, for specific vessel types?

To covert all inland and coastal waterway diesel powered boats to electric is totally impractical as the infrastructure does not exist and space on board most inland waterway vessels is limited. The only viable transitional fuel is Hydrotreated Vegetable Oil in the short term. It is also an alternative in the long term as building the infrastructure for electric charging would have a catastrophic environmental impact.

Vessels

112. Does your organisation have any vessels?

- [ ] Yes
- [x] No (Go to ‘Call for evidence’)
- [ ] Don't know (Go to ‘Call for evidence’)

Types of vessels

113. What types of vessels do you have?

- [ ] Oil and gas operations and maintenance vessels
- [ ] Deep sea tugs
- [ ] Pilot Boats
- [ ] Pipe layer/cable layer vessels
- [ ] Research vessels
- [ ] Salvage vessels
- [ ] Lightships
- [ ] Fishing vessels
- [ ] Ferries - only travelling from UK port to UK port
- [ ] Aquaculture vessels
- [ ] Port service vessels
- [ ] Another type of vessel:

Call for evidence

Within this call for evidence we are attempting to collect information and data to:

- improve our understanding of the impact of a number of the considerations listed in the Course to Zero consultation [opens in new window]
- help future policy development to support the adoption of green propulsion systems

The areas being discussed are:

- the current barriers to the use of zero or near-zero emission technologies
- exemptions to future zero or near-zero emission vessel use
- views on our identified subsectors of having both clear and unclear technological pathways to decarbonisation

When answering we ask that you:

- highlight the sectors and vessel-types being discussed.
- provide actual data or estimates and specify which you are providing, including in estimates the details or assumptions and calculations used with ranges where applicable

We are particularly interested in gathering evidence on the sectors of:

- offshore wind operations and maintenance vessels
- oil and gas operations and maintenance vessels
- inland waterways vessels
- recreational craft
- ferries, only travelling UK port to UK port
- fishing
- aquaculture vessels
- port service vessels

Vessels: for the purpose of this CfE we will define a vessel to mean any watercraft designed for transportation or other purposes on water.

Domestic journeys: all journeys taken on inland waters are considered domestic. Domestic journeys also include all shipping between two UK ports, harbours, and marinas or between a UK port, harbour or marina and an offshore installation, for example, a domestic oil rig.

Inland waterways: inland waterways include any area of water not categorised as ‘sea,’ including rivers, canals, estuaries, lakes, and lochs.

Greenhouse gases (GHG): the emissions accounted for under the GHG protocol are the seven Kyoto gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). 4.5

Air pollutants: Air pollutants most relevant to the maritime sector include but are not limited to: particulate matter (PM2.5 and PM10), ozone (O3), nitrogen oxides (NOx), sulphur dioxide (SO2), non-methane volatile organic compounds (NMVOC) and ammonia (NH3). 4.6 Wider environmental impacts: For this CfE, we have defined wider environmental impacts to cover activities that will affect living organisms, their habitats, land, air and water, as well as wider natural processes, systems and cycles.

When we refer to ‘emissions’ within this CfE we are referring to just greenhouse gas emissions, rather than air pollutants.

Full information is available in the call for evidence material [opens in a new window].

114. What, if any, do you think are the main barriers to accelerating the use of zero or near-zero emission technologies?

- [X] Technology cost
- [X] Technology availability
- [ ] Operating costs
- [X] Energy availability
- [ ] Lack of government certainty
- [ ] Minimal incentives
- [X] Other issues:

  Practicality, cost and lack of space on the vessel

Exemptions

Maritime and inland waterways are a large transport sector and any policies developed following this call for evidence may not be appropriate for all sub-sectors, so we may need to offer exemptions.

On 3 July 2023 we published a government response titled "Developing the UK Emissions Trading Scheme: main response" [opens in a new window]. This responses states that UK government non-commercial maritime vessels as defined under the Merchant Shipping Act 1995 [opens in a new window] are excluded. This includes emergency vessels such as police boats and lifeboats.

There are certain parts of the maritime economy that fall outside of our jurisdiction for regulation (for example military vessels), many of which already have clear plans on how they will reduce emissions. The Ministry of Defence published a Climate Change and Sustainability Strategic Approach [opens in a new window] that sets out the route for defence to meet our net zero target by 2050.

We are asking which sub-sector bodies, if any, you think should be exempted from future environmental regulation.

115. What, if any, sub-sectors do you think should be excluded from potential future policy which aims to accelerate the adoption of zero emission and near zero vessels?

Inland and coastal waterway vessels especially those
that are people’s permanent and only homes.

We are asking you about your 3 main concerns regarding environmental impacts of transitioning to a zero emission fuels, this may include, but is not limited to water quality, biodiversity and air pollution.

116. What, if any, are the 3 environmental impacts that you are most concerned about in the transition to zero emission fuels?

Clear technological pathway for decarbonisation

We have identified that vessels with:

1. Short duty cycles.
2. Regular opportunity to recharge.
3. Space on board for sufficient battery or hydrogen storage.

Are considered to have a clear route to decarbonisation, particularly where this has been demonstrated by a representative technology demonstrator.

This includes:

- offshore wind operations and maintenance vessels
- inland waterways vessels
- boats that can no longer be moved under their own propulsion, but excludes fixed floating platforms and structures that are used for permanent dwellings and have no means of self-propulsion
- recreational craft (excluding personal watercraft, as per 'Recreational Craft Regulations 2017: Great Britain' [opens in a new window])
- ferries - only travelling from UK port to UK port
- aquaculture vessels
- port service vessels

117. Do you agree or disagree with our identified subsectors having a clear technological pathway for decarbonisation?

[ ] Agree (Go to ‘Unclear technological pathway for decarbonisation’)

[X] Disagree

[ ] Don't know (Go to ‘Unclear technological pathway for decarbonisation’)

Disagree with clear pathway

118. Why not?

To covert all inland and coastal waterway diesel powered boats to electric is totally impractical as the infrastructure does not exist and space on board most inland waterway vessels is limited. The only viable transitional fuel is Hydrotreated Vegetable Oil in the short term. It is also an alternative in the long term as building the infrastructure for electric charging would have a catastrophic environmental impact.

Unclear technological pathway for decarbonisation

We have identified the following subsectors as currently having an unclear technological pathway to reducing emissions, these are:

- oil and gas operations and maintenance vessels
- deep sea tugs
- pilot boats
- pipe layer and cable layer vessels
- research vessels
- salvage vessels
- lightships
- fishing vessels

119. Do you agree or disagree with our identified subsectors having an unclear technological pathway for decarbonisation?

[X] Agree (Go to ‘Other subsectors’)

[ ] Disagree

[ ] Don't know (Go to ‘Other subsectors’)

Disagree with unclear pathway

120. Why not?

77. Other subsectors

121. What, if any, other subsectors do you think should be included as having:

an unclear technological pathway for decarbonisation

Inland and coastal waterway vessels especially those that are people’s permanent and only homes.

78. Final comments

122. Any other comments?

Climate change and poor air quality are existential threats, but there must be justice in the transition to clean energy, including justice to itinerant boat dwellers and others who have no viable or affordable alternatives to fossil fuels for heating, propulsion and power. Under absolutely no circumstances whatsoever should people’s homes be under threat of becoming effectively uninhabitable or people be at risk of becoming homeless due to the impracticality of converting from fossil fuels to renewable energy.